

## OptiMOS™3 Power-Transistor

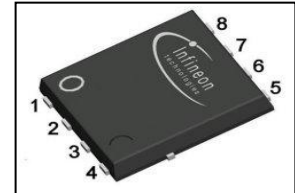
### Features

- Very low gate charge for high frequency applications
- Optimized for dc-dc conversion
- N-channel, normal level
- Excellent gate charge x  $R_{DS(on)}$  product (FOM)
- Very low on-resistance  $R_{DS(on)}$
- 150 °C operating temperature
- Pb-free lead plating; RoHS compliant
- Qualified according to JEDEC<sup>1)</sup> for target application
- Halogen-free according to IEC61249-2-21

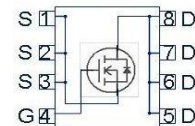
### Product Summary

|                  |     |    |
|------------------|-----|----|
| $V_{DS}$         | 100 | V  |
| $R_{DS(on),max}$ | 7   | mΩ |
| $I_D$            | 90  | A  |

PG-TDSON-8



| Type           | Package    | Marking  |
|----------------|------------|----------|
| BSC070N10NS3 G | PG-TDSON-8 | 070N10NS |



**Maximum ratings**, at  $T_j=25\text{ °C}$ , unless otherwise specified

| Parameter                           | Symbol            | Conditions                               | Value       | Unit |
|-------------------------------------|-------------------|------------------------------------------|-------------|------|
| Continuous drain current            | $I_D$             | $T_C=25\text{ °C}$                       | 90          | A    |
|                                     |                   | $T_C=100\text{ °C}$                      | 58          |      |
|                                     |                   | $T_C=25\text{ °C}$                       | 360         |      |
| Pulsed drain current <sup>2)</sup>  | $I_{D,pulse}$     | $T_C=25\text{ °C}$                       | 360         |      |
| Avalanche energy, single pulse      | $E_{AS}$          | $I_D=50\text{ A}$ , $R_{GS}=25\text{ Ω}$ | 160         | mJ   |
| Gate source voltage                 | $V_{GS}$          |                                          | ±20         | V    |
| Power dissipation                   | $P_{tot}$         | $T_C=25\text{ °C}$                       | 114         | W    |
| Operating and storage temperature   | $T_j$ , $T_{stg}$ |                                          | -55 ... 150 | °C   |
| IEC climatic category; DIN IEC 68-1 |                   |                                          | 55/150/56   |      |

<sup>1)</sup>J-STD20 and JESD22

<sup>2)</sup>See figure 3

| Parameter | Symbol | Conditions | Values |      |      | Unit |
|-----------|--------|------------|--------|------|------|------|
|           |        |            | min.   | typ. | max. |      |

**Thermal characteristics**

|                                        |            |                                              |   |   |     |     |
|----------------------------------------|------------|----------------------------------------------|---|---|-----|-----|
| Thermal resistance, junction - case    | $R_{thJC}$ |                                              | - | - | 1.1 | K/W |
| Thermal resistance, junction - ambient | $R_{thJA}$ | minimal footprint                            | - | - | 62  |     |
|                                        |            | 6 cm <sup>2</sup> cooling area <sup>3)</sup> | - | - | 50  |     |

**Electrical characteristics, at  $T_j=25\text{ °C}$ , unless otherwise specified**
**Static characteristics**

|                                  |               |                                                                   |     |      |     |               |
|----------------------------------|---------------|-------------------------------------------------------------------|-----|------|-----|---------------|
| Drain-source breakdown voltage   | $V_{(BR)DSS}$ | $V_{GS}=0\text{ V}$ , $I_D=1\text{ mA}$                           | 100 | -    | -   | V             |
| Gate threshold voltage           | $V_{GS(th)}$  | $V_{DS}=V_{GS}$ , $I_D=75\text{ }\mu\text{A}$                     | 2   | 2.7  | 3.5 |               |
| Zero gate voltage drain current  | $I_{DSS}$     | $V_{DS}=100\text{ V}$ , $V_{GS}=0\text{ V}$ , $T_j=25\text{ °C}$  | -   | 0.01 | 1   | $\mu\text{A}$ |
|                                  |               | $V_{DS}=100\text{ V}$ , $V_{GS}=0\text{ V}$ , $T_j=125\text{ °C}$ | -   | 10   | 100 |               |
| Gate-source leakage current      | $I_{GSS}$     | $V_{GS}=20\text{ V}$ , $V_{DS}=0\text{ V}$                        | -   | 1    | 100 | nA            |
| Drain-source on-state resistance | $R_{DS(on)}$  | $V_{GS}=10\text{ V}$ , $I_D=50\text{ A}$                          | -   | 6.3  | 7   | m $\Omega$    |
|                                  |               | $V_{GS}=6\text{ V}$ , $I_D=25\text{ A}$                           | -   | 8    | 14  |               |
| Gate resistance                  | $R_G$         |                                                                   | -   | 1.5  | -   | $\Omega$      |
| Transconductance                 | $g_{fs}$      | $ V_{DS} >2 I_D R_{DS(on)max}$ ,<br>$I_D=50\text{ A}$             | 36  | 72   | -   | S             |

<sup>3)</sup> Device on 40 mm x 40 mm x 1.5 mm epoxy PCB FR4 with 6 cm<sup>2</sup> (one layer, 70  $\mu\text{m}$  thick) copper area for drain connection. PCB is vertical in still air.

| Parameter | Symbol | Conditions | Values |      |      | Unit |
|-----------|--------|------------|--------|------|------|------|
|           |        |            | min.   | typ. | max. |      |

**Dynamic characteristics**

|                              |              |                                                                                 |   |      |      |    |
|------------------------------|--------------|---------------------------------------------------------------------------------|---|------|------|----|
| Input capacitance            | $C_{iss}$    | $V_{GS}=0\text{ V}, V_{DS}=50\text{ V},$<br>$f=1\text{ MHz}$                    | - | 3000 | 4000 | pF |
| Output capacitance           | $C_{oss}$    |                                                                                 | - | 520  | 690  |    |
| Reverse transfer capacitance | $C_{rss}$    |                                                                                 | - | 21   | -    |    |
| Turn-on delay time           | $t_{d(on)}$  | $V_{DD}=50\text{ V}, V_{GS}=10\text{ V},$<br>$I_D=25\text{ A}, R_G=1.6\ \Omega$ | - | 15   | -    | ns |
| Rise time                    | $t_r$        |                                                                                 | - | 10   | -    |    |
| Turn-off delay time          | $t_{d(off)}$ |                                                                                 | - | 29   | -    |    |
| Fall time                    | $t_f$        |                                                                                 | - | 8    | -    |    |

**Gate Charge Characteristics<sup>4)</sup>**

|                       |               |                                                                            |   |     |    |    |
|-----------------------|---------------|----------------------------------------------------------------------------|---|-----|----|----|
| Gate to source charge | $Q_{gs}$      | $V_{DD}=50\text{ V}, I_D=25\text{ A},$<br>$V_{GS}=0\text{ to }10\text{ V}$ | - | 13  | -  | nC |
| Gate to drain charge  | $Q_{gd}$      |                                                                            | - | 7   | -  |    |
| Switching charge      | $Q_{sw}$      |                                                                            | - | 12  | -  |    |
| Gate charge total     | $Q_g$         |                                                                            | - | 42  | 55 |    |
| Gate plateau voltage  | $V_{plateau}$ |                                                                            | - | 4.3 | -  | V  |
| Output charge         | $Q_{oss}$     | $V_{DD}=50\text{ V}, V_{GS}=0\text{ V}$                                    | - | 55  | 73 | nC |

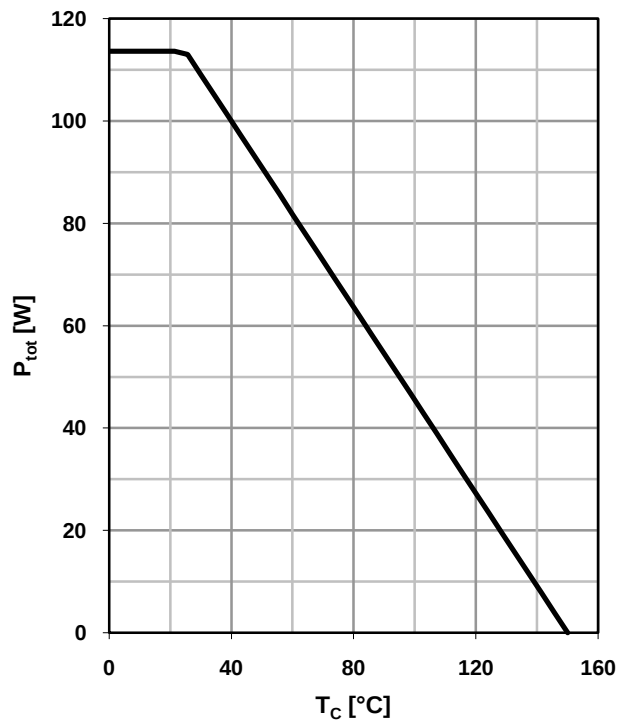
**Reverse Diode**

|                                  |               |                                                                           |   |     |     |    |
|----------------------------------|---------------|---------------------------------------------------------------------------|---|-----|-----|----|
| Diode continuous forward current | $I_S$         | $T_C=25\text{ °C}$                                                        | - | -   | 90  | A  |
| Diode pulse current              | $I_{S,pulse}$ |                                                                           | - | -   | 360 |    |
| Diode forward voltage            | $V_{SD}$      | $V_{GS}=0\text{ V}, I_F=50\text{ A},$<br>$T_J=25\text{ °C}$               | - | 1   | 1.2 | V  |
| Reverse recovery time            | $t_{rr}$      | $V_R=50\text{ V}, I_F=25\text{ A},$<br>$di_F/dt=100\text{ A}/\mu\text{s}$ | - | 61  | -   | ns |
| Reverse recovery charge          | $Q_{rr}$      |                                                                           | - | 112 | -   | nC |

<sup>4)</sup> See figure 16 for gate charge parameter definition

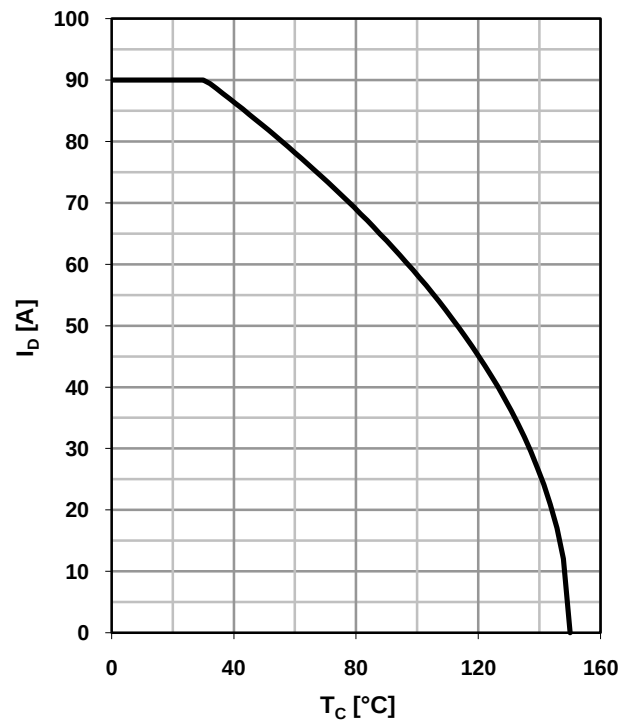
### 1 Power dissipation

$$P_{\text{tot}} = f(T_C)$$



### 2 Drain current

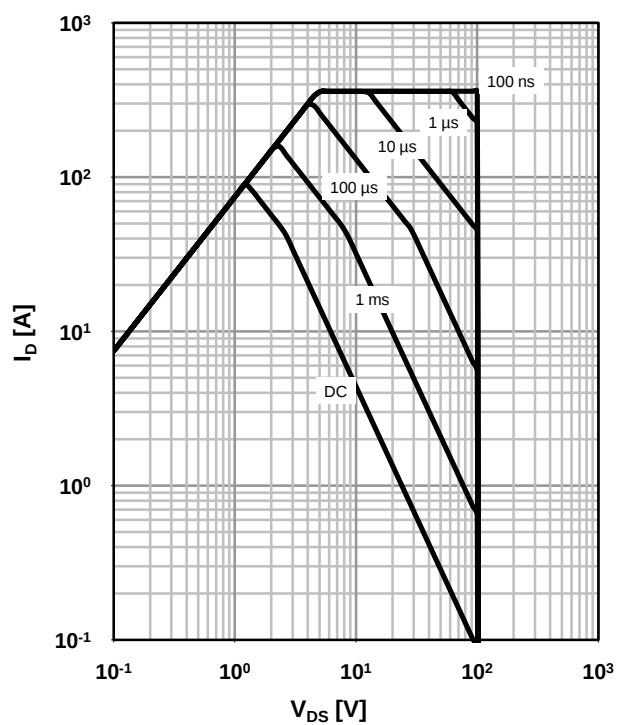
$$I_D = f(T_C); V_{GS} \geq 10 \text{ V}$$



### 3 Safe operating area

$$I_D = f(V_{DS}); T_C = 25^\circ\text{C}; D = 0$$

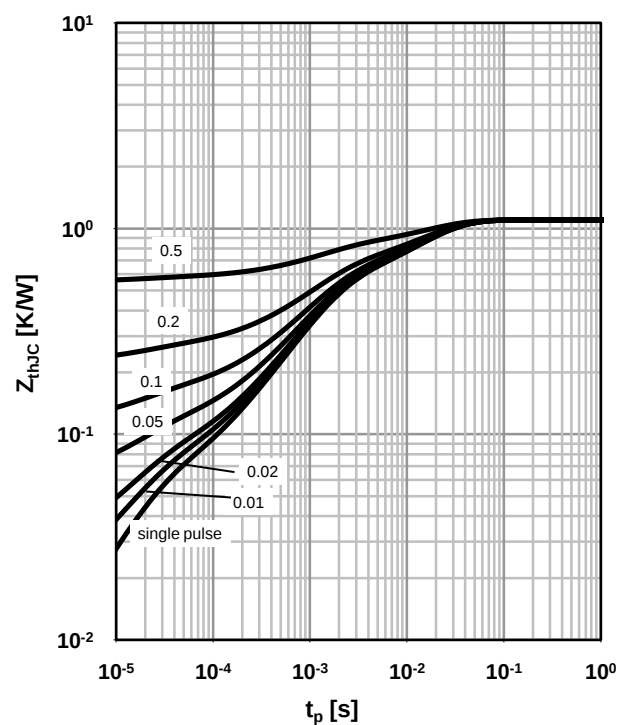
parameter:  $t_p$



### 4 Max. transient thermal impedance

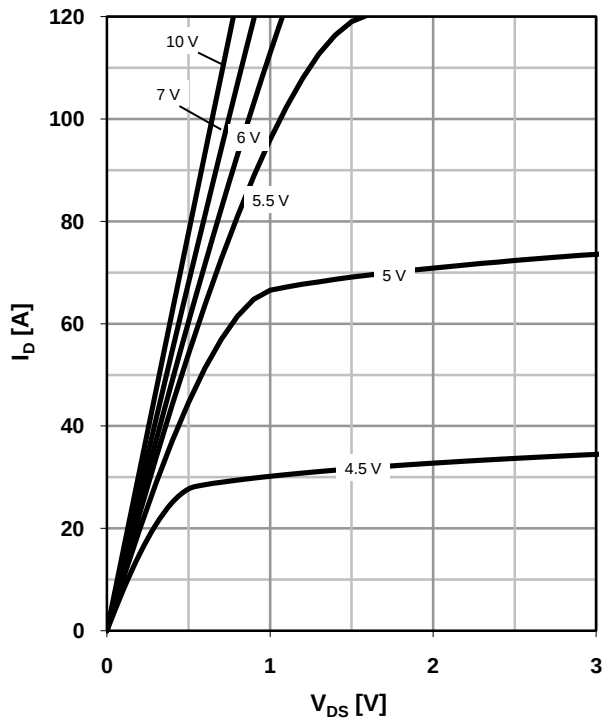
$$Z_{\text{thJC}} = f(t_p)$$

parameter:  $D = t_p/T$



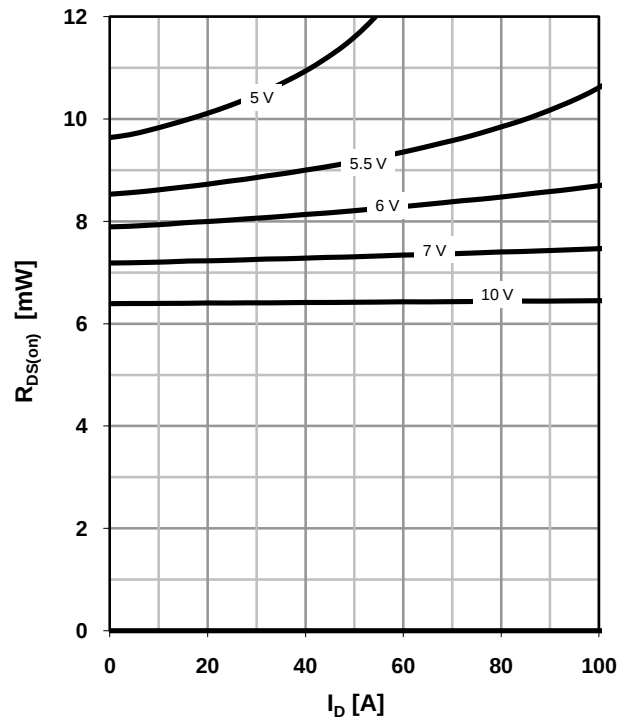
### 5 Typ. output characteristics

 $I_D = f(V_{DS}); T_j = 25^\circ\text{C}$ 

parameter:  $V_{GS}$ 


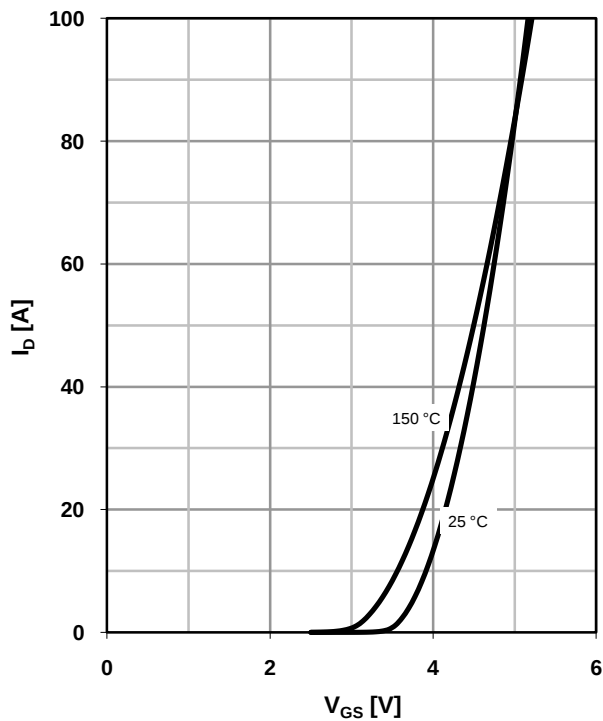
### 6 Typ. drain-source on resistance

 $R_{DS(on)} = f(I_D); T_j = 25^\circ\text{C}$ 

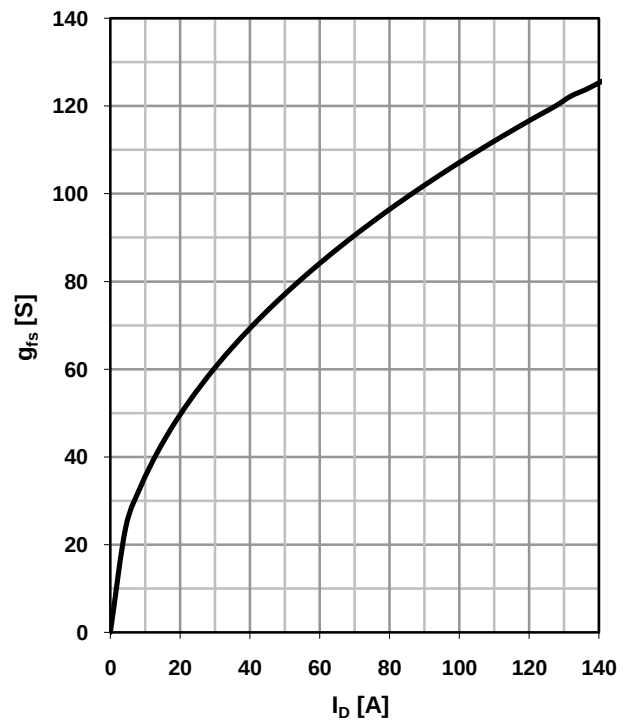
parameter:  $V_{GS}$ 


### 7 Typ. transfer characteristics

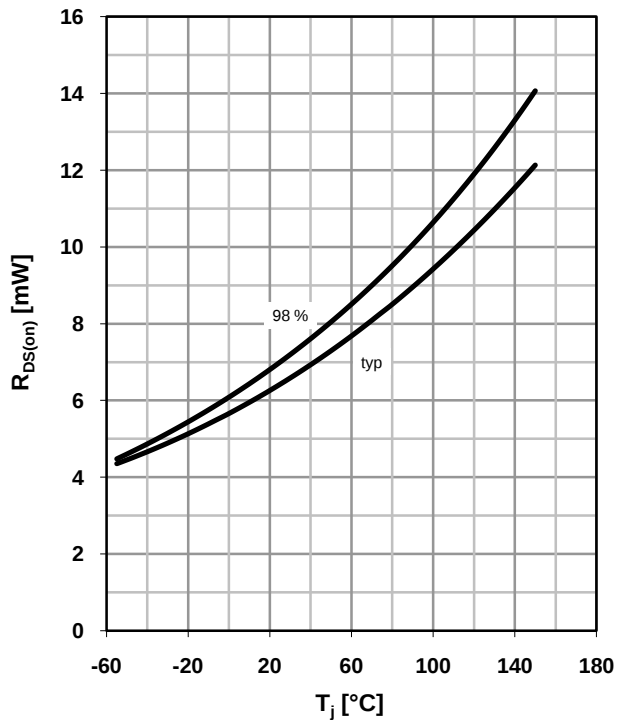
 $I_D = f(V_{GS}); |V_{DS}| > 2|I_D|R_{DS(on)max}$ 

parameter:  $T_j$ 


### 8 Typ. forward transconductance

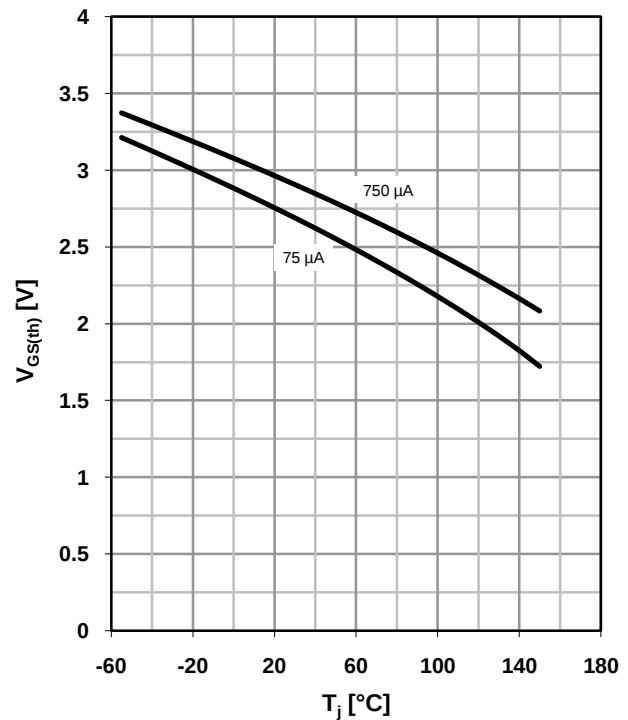
 $g_{fs} = f(I_D); T_j = 25^\circ\text{C}$ 


## 9 Drain-source on-state resistance

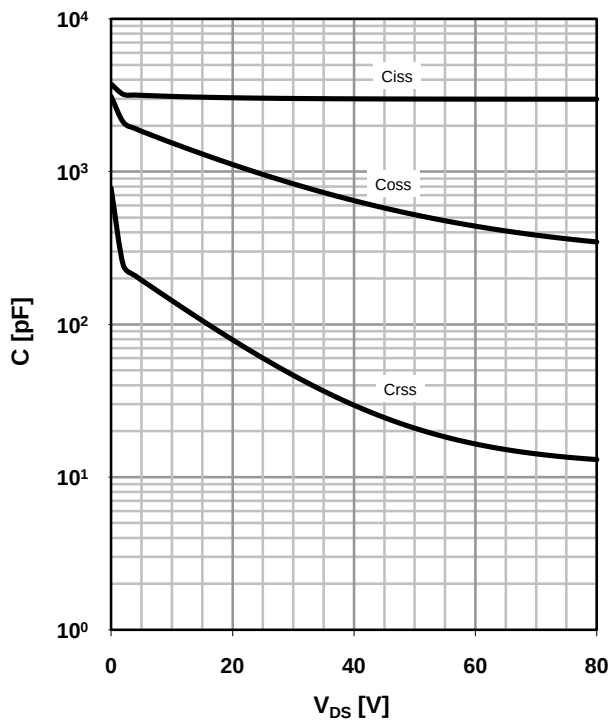
 $R_{DS(on)} = f(T_j); I_D = 50 \text{ A}; V_{GS} = 10 \text{ V}$ 


## 10 Typ. gate threshold voltage

 $V_{GS(th)} = f(T_j); V_{GS} = V_{DS}$ 

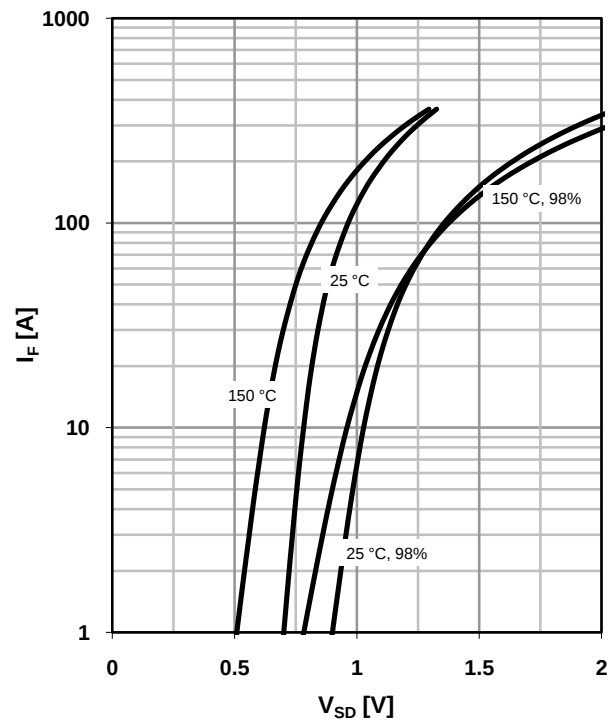
parameter:  $I_D$ 


## 11 Typ. capacitances

 $C = f(V_{DS}); V_{GS} = 0 \text{ V}; f = 1 \text{ MHz}$ 


## 12 Forward characteristics of reverse diode

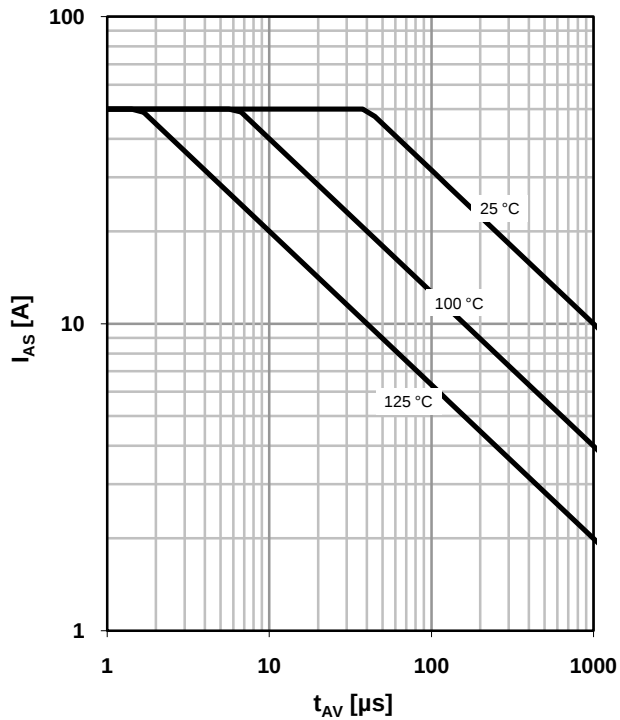
 $I_F = f(V_{SD})$ 

parameter:  $T_j$ 


### 13 Avalanche characteristics

$$I_{AS}=f(t_{AV}); R_{GS}=25\ \Omega$$

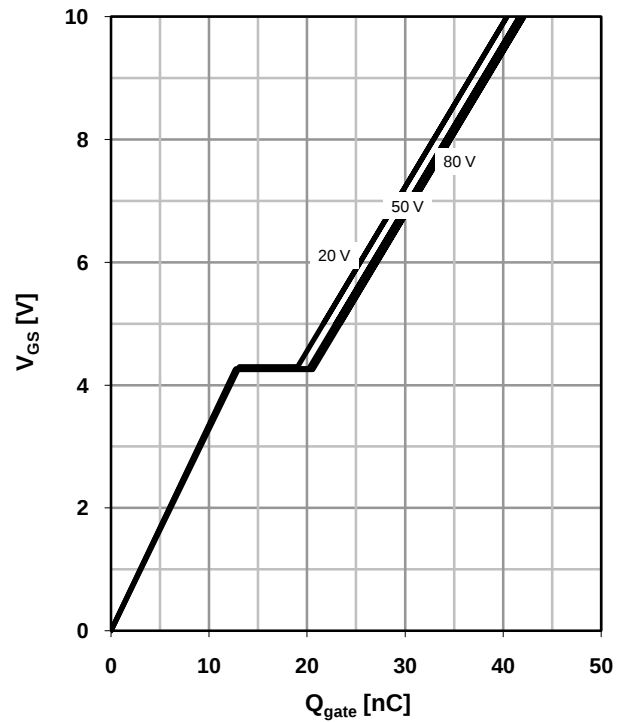
parameter:  $T_{j(\text{start})}$



### 14 Typ. gate charge

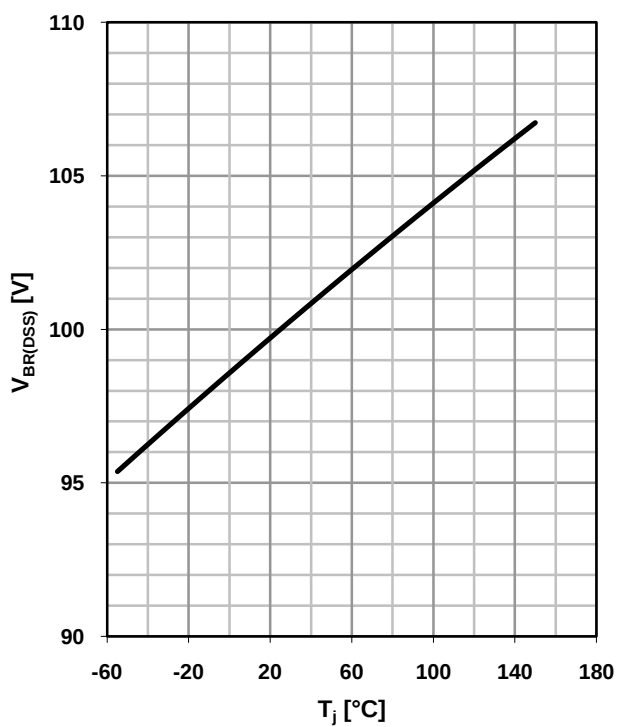
$$V_{GS}=f(Q_{\text{gate}}); I_D=25\ \text{A pulsed}$$

parameter:  $V_{DD}$

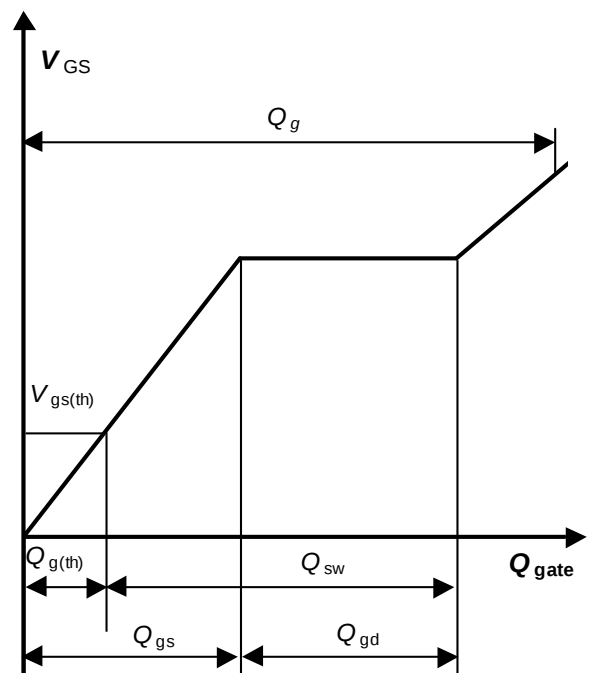


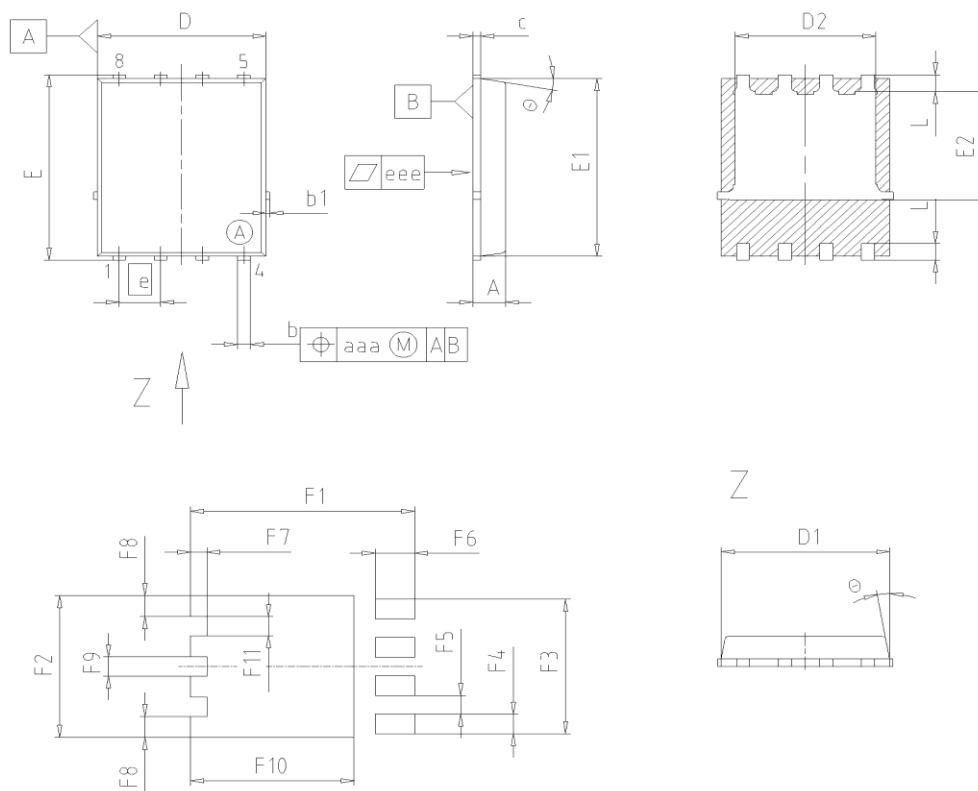
### 15 Drain-source breakdown voltage

$$V_{BR(DSS)}=f(T_j); I_D=1\ \text{mA}$$



### 16 Gate charge waveforms



**Package Outline: PG-TDSON-8**


| DIM  | MILLIMETERS |       | INCHES |       |
|------|-------------|-------|--------|-------|
|      | MIN         | MAX   | MIN    | MAX   |
| A    | 0.90        | 1.10  | 0.035  | 0.043 |
| b    | 0.34        | 0.54  | 0.013  | 0.021 |
| b1   | 0.02        | 0.22  | 0.001  | 0.008 |
| c    | 0.15        | 0.35  | 0.006  | 0.014 |
| D=D1 | 4.95        | 5.35  | 0.195  | 0.211 |
| D2   | 4.20        | 4.40  | 0.165  | 0.173 |
| E    | 5.95        | 6.35  | 0.234  | 0.250 |
| E1   | 5.70        | 6.10  | 0.224  | 0.240 |
| E2   | 3.40        | 3.80  | 0.134  | 0.150 |
| e    | 1.27        |       | 0.050  |       |
| N    | 8           |       | 8      |       |
| L    | 0.45        | 0.65  | 0.018  | 0.026 |
| □    | 8.5°        | 11.5° | 8.5°   | 11.5° |
| aaa  | 0.25        |       | 0.010  |       |
| eee  | 0.05        |       | 0.002  |       |
| F1   | 6.75        | 6.95  | 0.266  | 0.274 |
| F2   | 4.60        | 4.80  | 0.181  | 0.189 |
| F3   | 4.36        | 4.56  | 0.172  | 0.180 |
| F4   | 0.55        | 0.75  | 0.022  | 0.030 |
| F5   | 0.52        | 0.72  | 0.020  | 0.028 |
| F6   | 1.10        | 1.30  | 0.043  | 0.051 |
| F7   | 0.40        | 0.60  | 0.016  | 0.024 |
| F8   | 0.60        | 0.80  | 0.024  | 0.031 |
| F9   | 0.53        | 0.73  | 0.021  | 0.029 |
| F10  | 4.90        | 5.10  | 0.193  | 0.201 |
| F11  | 0.53        | 0.73  | 0.021  | 0.029 |

|                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------|
| <b>DOCUMENT NO.</b><br>Z8B00003332                                                                                  |
| <b>SCALE</b><br>0 2.5 5mm                                                                                           |
| <b>EUROPEAN PROJECTION</b><br> |
| <b>ISSUE DATE</b><br>08-03-2007                                                                                     |
| <b>REVISION</b><br>03                                                                                               |



**Published by**  
**Infineon Technologies AG**  
**81726 Munich, Germany**  
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# OptiMOS™ and StrongIRFET™ MOSFETS

Selection guide 2020

[www.infineon.com/powermosfet-12V-300V](http://www.infineon.com/powermosfet-12V-300V)





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# OptiMOS™ and StrongIRFET™

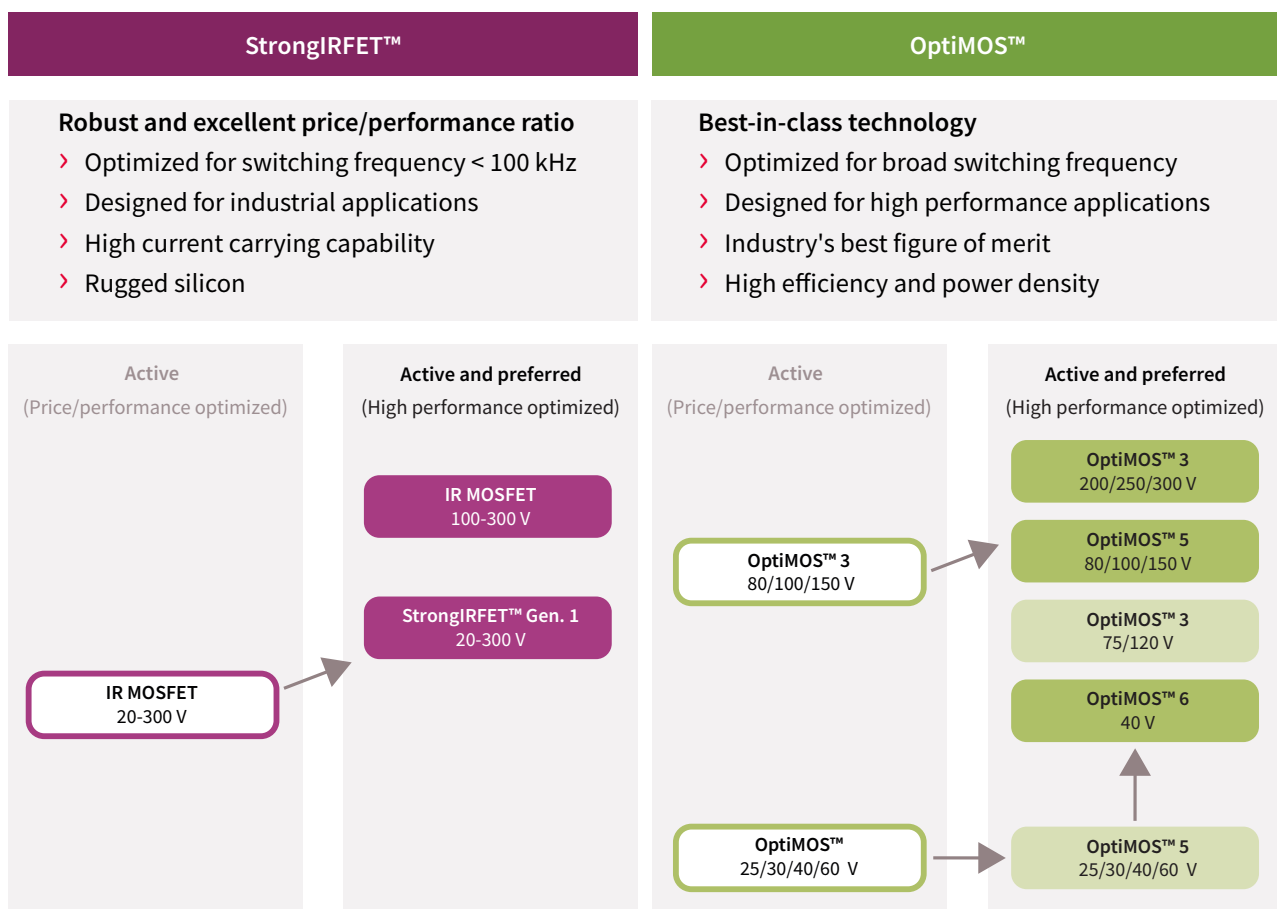
## 20-300 V N-channel power MOSFETs

Infineon's semiconductors are designed to bring greater efficiency, power density and cost-effectiveness. The full range of OptiMOS™ and StrongIRFET™ power MOSFETs enables innovation and performance in applications such as switch mode power supplies (SMPS), battery powered applications, motor control and drives, inverters, and computing.

Infineon's highly innovative OptiMOS™ and StrongIRFET™ families consistently meet the highest quality and performance demands in key specifications for power system designs such as on-state resistance ( $R_{DS(on)}$ ) and figure of merit (FOM).

OptiMOS™ power MOSFETs provide best-in-class performance. Features include ultralow  $R_{DS(on)}$ , as well as low charge for high switching frequency applications. StrongIRFET™ power MOSFETs are designed for drives applications and are ideal for designs with a low switching frequency, as well as those that require a high current carrying capability.

## Technology development and product family positioning





Infineon's power MOSFET 20-300 V product portfolio is divided into „active and preferred“, referring to the latest technology available offering best-in-class performance, and „active“, consisting of well-established technologies which complete this broad portfolio.

OptiMOS™ 6 power MOSFETs 40 V are the newest addition to the OptiMOS™ product family available either in SuperSO8 or PQFN 3.3 x 3.3 packages. This technology is the perfect solution when best-in-class (BiC) products and high efficiency over a wide range of output power are required. For other voltage classes, from 25 V up to 150 V, OptiMOS™ 5 represents the latest generation in the market, offering either best-in-class (BiC) or price/performance solutions. For high frequency applications, the product portfolio is complemented by OptiMOS™ 3 power MOSFETs 40/60 V as standard components. The „active and preferred“ OptiMOS™ 3 power MOSFETs 75/120 V, as well as 200/250/300 V is the best fit portfolio either in low- or high-frequency applications with a range of products covering from BiC to standard parts.

StrongIRFET™ is recommended for 20-300 V applications when the BiC performance is not essential and the cost is a more significant consideration.

## Guidance for applications and voltage classes

OptiMOS™ and StrongIRFET™ portfolio, covering 20 up to 300 V MOSFETs, can address a broad range of needs from low- to high-switching frequencies. The tables below provide a guidance on the recommended OptiMOS™ or StrongIRFET™ products for each major sub-application and voltage class.

| Recommended voltage |                                                                    |                | 20 V to 30 V | 40 V | 60 V | 75 V to 80 V | 100 V | 135 V to 150 V | 200 V | 250 V | 300 V |
|---------------------|--------------------------------------------------------------------|----------------|--------------|------|------|--------------|-------|----------------|-------|-------|-------|
| Battery powered     | Low power<br>Power tools, Multi-copter, Battery, Industrial Drives | OptiMOS™       | ✓            | ✓    | ✓    | ✓            |       |                |       |       |       |
|                     |                                                                    | StrongIRFET™   | ✓            | ✓    | ✓    | ✓            |       |                |       |       |       |
|                     | High power<br>(LEV, LSEV)                                          | OptiMOS™       |              |      | ✓    | ✓            | ✓     | ✓              | ✓     |       |       |
|                     |                                                                    | StrongIRFET™   |              |      | ✓    | ✓            | ✓     | ✓              | ✓     |       |       |
| Inverters           | Solar                                                              | OptiMOS™       |              |      | ✓    | ✓            | ✓     | ✓              |       |       |       |
|                     |                                                                    | StrongIRFET™   |              |      | ✓    | ✓            | ✓     |                |       |       |       |
|                     | Online UPS                                                         | slow switching |              |      |      |              |       |                |       |       |       |
|                     |                                                                    | OptiMOS™       | ✓            | ✓    | ✓    | ✓            | ✓     | ✓              | ✓     | ✓     | ✓     |
|                     |                                                                    | StrongIRFET™   | ✓            | ✓    | ✓    | ✓            | ✓     | ✓              | ✓     | ✓     | ✓     |
|                     |                                                                    | fast switching |              |      |      |              |       |                |       |       |       |
|                     |                                                                    | OptiMOS™       | ✓            | ✓    | ✓    | ✓            | ✓     | ✓              | ✓     | ✓     | ✓     |
|                     |                                                                    | StrongIRFET™   | ✓            | ✓    | ✓    | ✓            | ✓     | ✓              | ✓     | ✓     | ✓     |
|                     | Offline UPS                                                        | OptiMOS™       |              | ✓    | ✓    |              |       |                |       |       |       |
|                     |                                                                    | StrongIRFET™   |              | ✓    | ✓    |              |       |                |       |       |       |
| SMPS                | Adapter / Charger                                                  | OptiMOS™       |              | ✓    | ✓    | ✓            | ✓     |                |       |       |       |
|                     |                                                                    | StrongIRFET™   |              | ✓    | ✓    | ✓            | ✓     |                |       |       |       |
|                     | PC Power                                                           | OptiMOS™       |              | ✓    | ✓    |              |       |                |       |       |       |
|                     |                                                                    | StrongIRFET™   |              | ✓    | ✓    |              |       |                |       |       |       |
|                     | LCD TV                                                             | OptiMOS™       |              |      | ✓    | ✓            | ✓     |                |       |       |       |
|                     |                                                                    | StrongIRFET™   |              |      | ✓    | ✓            | ✓     |                |       |       |       |
|                     | Server                                                             | OptiMOS™       |              | ✓    | ✓    | ✓            |       |                |       |       |       |
|                     |                                                                    | StrongIRFET™   |              | ✓    | ✓    | ✓            |       |                |       |       |       |
|                     | AC-DC                                                              | OptiMOS™       |              |      |      | ✓            | ✓     | ✓              | ✓     |       |       |
|                     |                                                                    | StrongIRFET™   |              |      |      | ✓            | ✓     |                |       |       |       |
|                     | Telecom                                                            | OptiMOS™       | ✓            | ✓    | ✓    | ✓            | ✓     | ✓              |       |       |       |
|                     |                                                                    | StrongIRFET™   | ✓            | ✓    | ✓    | ✓            | ✓     |                |       |       |       |

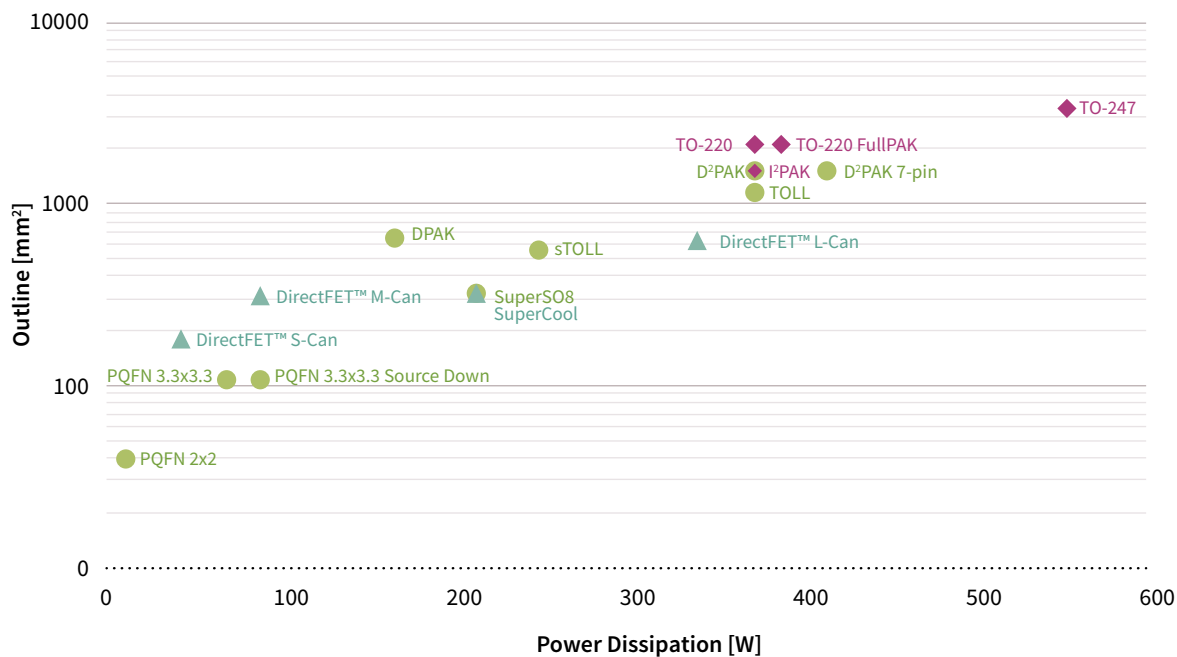
## Space-saving and high performance packages

|                                                                   | TO-247                                                                            | TO-220                                                                            | TO-220 FullPAK                                                                    | D <sup>2</sup> PAK                                                                 | D <sup>2</sup> PAK 7-pin                                                            | TO-Leadless                                                                         |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                                                   |  |  |  |  |  |  |
| Optimized for high power applications and high current capability |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
| Height [mm]                                                       | 5.0                                                                               | 4.4                                                                               | 4.5                                                                               | 4.4                                                                                | 4.4                                                                                 | 2.3                                                                                 |
| Outline [mm]                                                      | 40.15 x 15.9                                                                      | 29.5 x 10.0                                                                       | 29.5 x 10.0                                                                       | 15.0 x 10.0                                                                        | 15.0 x 10.0                                                                         | 11.68 x 9.9                                                                         |
| Thermal resistance $R_{thJC}$ [K/W]                               | 2.0                                                                               | 0.5                                                                               | 2.5                                                                               | 0.5                                                                                | 0.5                                                                                 | 0.4                                                                                 |

|                                     | SuperSO8                                                                           | Power Block                                                                        | PQFN 3.3 x 3.3 Source-Down                                                         | PQFN 3.3 x 3.3                                                                      | PQFN 2 x 2                                                                           | DirectFET™                                                                           |
|-------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                                     |  |  |  |  |  |  |
|                                     | For highest efficiency and power management                                        | Significant design shrink                                                          | High power density and performance                                                 | For highest efficiency and power management                                         | Enables significant space saving                                                     | Best thermal behavior in a tiny footprint                                            |
| Height [mm]                         | 1.0                                                                                | 1.0                                                                                | 1.0                                                                                | 1.0                                                                                 | 0.9                                                                                  | Small: 0.65<br>Medium: 0.65<br>Large: 0.71                                           |
| Outline [mm]                        | 5.15 x 6.15                                                                        | 5.0 x 6.0                                                                          | 3.3 x 3.3                                                                          | 3.3 x 3.3                                                                           | 2.0 x 2.0                                                                            | Small: 4.8 x 3.8<br>Medium: 6.3 x 4.9<br>Large: 9.1 x 6.98                           |
| Thermal resistance $R_{thJC}$ [K/W] | 0.8                                                                                | 1.5                                                                                | 1.4                                                                                | 3.2                                                                                 | 11.1                                                                                 | 0.5                                                                                  |

## Discrete and integrated packages

OptiMOS™ and StrongIRFET™ technologies are available in different packages to address demands for higher current carrying capability and significant space saving. The broad portfolio enables footprint reduction, boosted current rating and optimized thermal performance. While the surface mount leadless devices are enabled for footprint reduction, through-hole packages are characterized by a high power rating. Furthermore, Infineon offers innovative packages such as DirectFET™ and TO-Leadless. DirectFET™ is designed for high frequency applications by offering the lowest parasitic resistance. This package is available in three different sizes: small, medium and large. TO-Leadless is optimized to dissipate power up to 375 W, increasing power density with a substantial reduction in footprint.



# Small signal/small power MOSFETs 250-600 V

Combining latest high-performance silicon technology with small and innovative packaging

Small signal/small power products are ideally suited for space-constrained automotive or non-automotive applications. By combining the latest high-performance silicon technology with small and innovative packaging, Infineon's small signal/small power family offers designers more flexibility when it comes to making their power MOSFET selection. The products can be found in almost all applications e.g. battery protection, battery charging, LED lighting, load switches, DC-DC converters, level shifters, low voltage drives and many more.

## The entire family includes different packages:

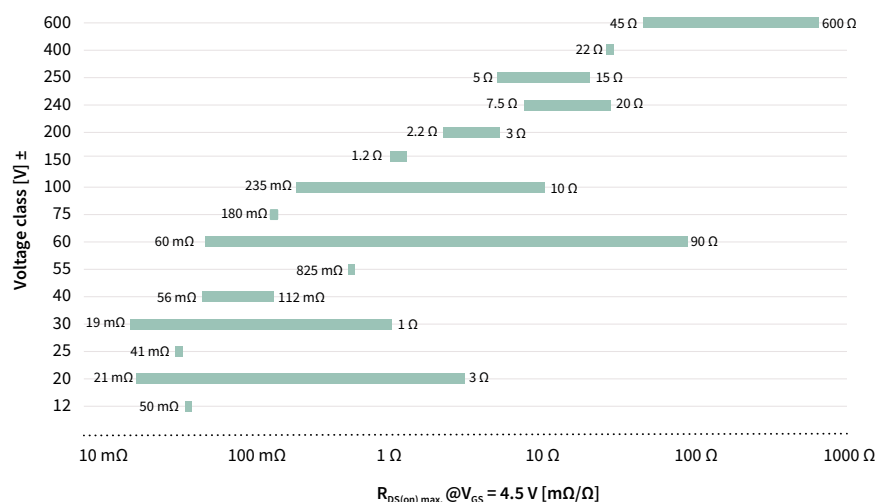
SOT-223, SOT-23, SOT-323, SOT-363, SOT-89, TSOP-6 and SC59

The product portfolio covers N-channel and P-channel enhancement mode MOSFETs as well as N-channel depletion mode products:

- › 20-250 V P-channel enhancement mode (available in single and dual configurations)
- › 20-600 V N-channel enhancement mode (available in single and dual configurations)
- › -20/20 V and -30/30 V complementary (P + N channel) enhancement mode
- › 60-600 V N-channel depletion mode

| Key features                                                                      |
|-----------------------------------------------------------------------------------|
| Most products qualified to AEC Q101                                               |
| Four $V_{GS(th)}$ classes available for 1.8 V, 2.5 V, 4.5 V, and 10 V gate drives |
| ESD protected p-channel parts                                                     |
| $V_{DS}$ range from -250 V to 600 V                                               |
| RoHS compliant and halogen free                                                   |

| Key benefits                                                    |
|-----------------------------------------------------------------|
| Suitable for automotive and high quality demanding applications |
| Easy interface to MCU                                           |
| Reduction of design complexity                                  |
| Wide selection of products available                            |
| Industry standard small outline packages                        |
| Environmentally friendly                                        |



Small signal/small power MOSFETs are available in seven industry-standard package types ranging from the largest SOT-223 to the smallest SOT-363.

Products are offered in single, dual and complementary configurations and are suitable for a wide range of applications, including battery protection, LED lighting, low voltage drives and DC-DC converters.

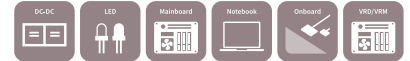
|                                                                                     | SOT-363                                                                             | SOT-323                                                                             | SOT-23                                                                              | TSOP-6                                                                                | SC59                                                                                  | SOT-89                                                                                | SOT-223 |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------|
|  |  |  |  |  |  |  |         |
| Package outline [mm <sup>2</sup> ]                                                  | 4.2                                                                                 | 4.2                                                                                 | 6.96                                                                                | 7.25                                                                                  | 8.4                                                                                   | 18                                                                                    | 45.5    |

[www.infineon.com/smallsignal](http://www.infineon.com/smallsignal)

For more details on the product, click on the part number. 



## OptiMOS™ and StrongIRFET™ 20 V (super) logic level



| $R_{DS(on)}$ max<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                            | DirectFET™                                            | PQFN 2 x 2                                                                                              | PQFN 3.3 x 3.3                                    | SuperSO8                                                                                   | SO-8                                        |
|----------------------------------------------------|---------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------|
| < 1                                                |                                             | IRL6283MTRPBF<br>$R_{DS(on)}=0.65\text{ mΩ}$          |                                                                                                         |                                                   | IRFH6200TRPBF<br>$R_{DS(on)}=0.99\text{ mΩ}$                                               |                                             |
| 2-4                                                | IRLR6225TRPBF<br>$R_{DS(on)}=4.0\text{ mΩ}$ | IRL6297SDTRPBF**<br>$R_{DS(on)}=3.8\text{ mΩ}$ ; dual |                                                                                                         | IRLHM620TRPBF*** 1)<br>$R_{DS(on)}=2.5\text{ mΩ}$ | BSC026N02KS G<br>$R_{DS(on)}=2.6\text{ mΩ}$<br>IRLH6224TRPBF<br>$R_{DS(on)}=3.0\text{ mΩ}$ | IRF6201TRPBF<br>$R_{DS(on)}=2.45\text{ mΩ}$ |
| 4-10                                               |                                             |                                                       |                                                                                                         |                                                   | BSC046N02KS G<br>$R_{DS(on)}=4.6\text{ mΩ}$                                                | IRF3717<br>$R_{DS(on)}=4.4\text{ mΩ}$       |
| > 10                                               |                                             |                                                       | IRLHS6242TRPBF<br>$R_{DS(on)}=11.7\text{ mΩ}$<br>IRLHS6276TRPBF**<br>$R_{DS(on)}=45.0\text{ mΩ}$ ; dual |                                                   |                                                                                            |                                             |

## OptiMOS™ and StrongIRFET™ 25 V logic level



| $R_{DS(on)}$ max<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | DirectFET™                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PQFN 2 x 2                                     | PQFN 3.3 x 3.3                                                                                                                                                                                                                                                                                                                                                                              | SuperSO8                                                                                                                                                                                                                                                                                                                            | SO-8                                  |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| < 1                                                | IRF6718L2TRPBF<br>$R_{DS(on)}=0.7\text{ mΩ}$<br>BSB008NE2LX<br>$R_{DS(on)}=0.8\text{ mΩ}$                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                | IQE006NE2LM5 3)<br>$R_{DS(on)}=0.6\text{ mΩ}$<br>IQE006NE2LM5CG 3)<br>$R_{DS(on)}=0.6\text{ mΩ}$<br>BSZ009NE2LS5<br>$R_{DS(on)}=0.9\text{ mΩ}$                                                                                                                                                                                                                                              | BSC004NE2LS5 2)<br>$R_{DS(on)}=0.9\text{ mΩ}$<br>BSC009NE2LS5<br>$R_{DS(on)}=0.9\text{ mΩ}$<br>BSC009NE2LS51**<br>$R_{DS(on)}=0.95\text{ mΩ}$                                                                                                                                                                                       |                                       |
| 1-2                                                | IRF6898MTRPBF**<br>$R_{DS(on)}=1.1\text{ mΩ}$<br>BSB012NE2LXI**<br>$R_{DS(on)}=1.2\text{ mΩ}$<br>IRF6717MTRPBF<br>$R_{DS(on)}=1.25\text{ mΩ}$<br>IRF6894MTRPBF**<br>$R_{DS(on)}=1.3\text{ mΩ}$<br>BSB013NE2LXI**<br>$R_{DS(on)}=1.3\text{ mΩ}$<br>IRF6797MTRPBF**<br>$R_{DS(on)}=1.4\text{ mΩ}$<br>IRF6716M<br>$R_{DS(on)}=1.6\text{ mΩ}$<br>IRF6715MTRPBF<br>$R_{DS(on)}=1.6\text{ mΩ}$<br>IRF6893MTRPBF**<br>$R_{DS(on)}=1.6\text{ mΩ}$<br>IRF6892STRPBF**<br>$R_{DS(on)}=1.7\text{ mΩ}$<br>IRF6795MTRPBF**<br>$R_{DS(on)}=1.8\text{ mΩ}$ |                                                | BSZ010NE2LS5<br>$R_{DS(on)}=1.0\text{ mΩ}$<br>BSZ011NE2LS5I<br>$R_{DS(on)}=1.1\text{ mΩ}$<br>BSZ011NE2LS5I<br>$R_{DS(on)}=1.1\text{ mΩ}$<br>BSZ013NE2LS51**<br>$R_{DS(on)}=1.3\text{ mΩ}$<br>BSZ014NE2LS51F***<br>$R_{DS(on)}=1.45\text{ mΩ}$<br>BSZ017NE2LS51**<br>$R_{DS(on)}=1.7\text{ mΩ}$<br>BSZ018NE2LS<br>$R_{DS(on)}=1.8\text{ mΩ}$<br>BSZ018NE2LSI**<br>$R_{DS(on)}=1.8\text{ mΩ}$ | BSC010NE2LS<br>$R_{DS(on)}=1.0\text{ mΩ}$<br>BSC010NE2LS1**<br>$R_{DS(on)}=1.05\text{ mΩ}$<br>BSC014NE2LS1**<br>$R_{DS(on)}=1.4\text{ mΩ}$<br>IRFH5250D<br>$R_{DS(on)}=1.4\text{ mΩ}$<br>BSC015NE2LS51**<br>$R_{DS(on)}=1.5\text{ mΩ}$<br>BSC018NE2LS<br>$R_{DS(on)}=1.8\text{ mΩ}$<br>BSC018NE2LS1**<br>$R_{DS(on)}=1.8\text{ mΩ}$ |                                       |
| 2-4                                                | IRF6714MTRPBF<br>$R_{DS(on)}=2.1\text{ mΩ}$<br>BSF030NE2LQ<br>$R_{DS(on)}=3.0\text{ mΩ}$<br>BSF035NE2LQ<br>$R_{DS(on)}=3.5\text{ mΩ}$<br>IRF6811STRPBF**<br>$R_{DS(on)}=3.7\text{ mΩ}$                                                                                                                                                                                                                                                                                                                                                      | ISK024NE2LM5****<br>$R_{DS(on)}=2.4\text{ mΩ}$ | BSZ031NE2LS5<br>$R_{DS(on)}=3.1\text{ mΩ}$<br>BSZ033NE2LS5<br>$R_{DS(on)}=3.3\text{ mΩ}$<br>BSZ036NE2LS<br>$R_{DS(on)}=3.6\text{ mΩ}$<br>BSZ037NE2LS5****<br>$R_{DS(on)}=3.7\text{ mΩ}$<br>BSZ039NE2LS5****<br>$R_{DS(on)}=3.9\text{ mΩ}$                                                                                                                                                   | BSC024NE2LS<br>$R_{DS(on)}=2.4\text{ mΩ}$<br>BSC026NE2LS5<br>$R_{DS(on)}=2.6\text{ mΩ}$<br>BSC032NE2LS<br>$R_{DS(on)}=3.2\text{ mΩ}$                                                                                                                                                                                                | IRF8252<br>$R_{DS(on)}=2.7\text{ mΩ}$ |
| 4-10                                               | IRF6802SD<br>$R_{DS(on)}=4.2\text{ mΩ}$<br>IRF6710S2TRPBF<br>$R_{DS(on)}=4.5\text{ mΩ}$<br>IRF6712STRPBF<br>$R_{DS(on)}=4.9\text{ mΩ}$<br>IRF6810STRPBF**<br>$R_{DS(on)}=5.2\text{ mΩ}$                                                                                                                                                                                                                                                                                                                                                     |                                                | IRFHM8228TRPBF<br>$R_{DS(on)}=5.2\text{ mΩ}$<br>BSZ060NE2LS<br>$R_{DS(on)}=6.0\text{ mΩ}$<br>IRFHM8235TRPBF<br>$R_{DS(on)}=7.7\text{ mΩ}$                                                                                                                                                                                                                                                   | BSC050NE2LS<br>$R_{DS(on)}=5.0\text{ mΩ}$                                                                                                                                                                                                                                                                                           |                                       |
| > 10                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | IRFHS8242<br>$R_{DS(on)}=13\text{ mΩ}$         |                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                     |                                       |

[www.infineon.com/powermosfet-12V-300V](http://www.infineon.com/powermosfet-12V-300V)

\* Optimized for resonant applications (e.g. LLC converter)

\*\* Monolithically integrated Schottky-like diode

\*\*\*  $R_{DS(on)}$  max @  $V_{GS}=4.5\text{ V}$

\*\*\*\* For more information on the product, contact our product support

1) 2.5  $V_{GS}$  capable

2) Coming soon

3) Source-Down

For more details on the product, click on the part number.



## OptiMOS™ and StrongIRFET™ 25/30 V in Power Stage 3x3 and 5x6



| Part number | Package  | Monolithically integrated Schottky like diode | BV <sub>DSS</sub> [V] | R <sub>DS(on)</sub> , max. [ mΩ ] @ V <sub>GS</sub> =4.5 V max. |          | Q <sub>g</sub> [nC] @ V <sub>GS</sub> =4.5 V typ. |          |
|-------------|----------|-----------------------------------------------|-----------------------|-----------------------------------------------------------------|----------|---------------------------------------------------|----------|
|             |          |                                               |                       | High-side                                                       | Low-side | High-side                                         | Low-side |
| BSZ0910ND   | PQFN 3x3 | –                                             | 30                    | 13                                                              | 13       | 4.0                                               | 4.0      |
| BSZ0909ND   | PQFN 3x3 | –                                             | 30                    | 25                                                              | 25       | 1.8                                               | 1.8      |
| BSC0910NDI  | SuperSO8 | ✓                                             | 25                    | 5.9                                                             | 1.6      | 7.7                                               | 25.0     |
| BSC0911ND   | SuperSO8 | –                                             | 25                    | 4.8                                                             | 1.7      | 7.7                                               | 25.0     |
| BSC0921NDI  | SuperSO8 | ✓                                             | 30                    | 7.0                                                             | 2.1      | 5.8                                               | 21.0     |
| BSC0923NDI  | SuperSO8 | ✓                                             | 30                    | 7.0                                                             | 3.7      | 5.2                                               | 12.2     |
| BSC0924NDI  | SuperSO8 | ✓                                             | 30                    | 7.0                                                             | 5.2      | 5.2                                               | 8.6      |
| BSC0925ND   | SuperSO8 | –                                             | 30                    | 6.4                                                             | 6.4      | 5.2                                               | 6.7      |
| BSC0993ND   | SuperSO8 | –                                             | 30                    | 7.0                                                             | 7.0      | 5.4                                               | 6.7      |

## OptiMOS™ and StrongIRFET™ 25/30 V in Power Block 5x6



| Part number | Package  | Monolithically integrated Schottky like diode | BV <sub>DSS</sub> [V] | R <sub>DS(on)</sub> , max. [ mΩ ] @ V <sub>GS</sub> =4.5 V max. |          | Q <sub>g</sub> [nC] @ V <sub>GS</sub> =4.5 V typ. |          |
|-------------|----------|-----------------------------------------------|-----------------------|-----------------------------------------------------------------|----------|---------------------------------------------------|----------|
|             |          |                                               |                       | High-side                                                       | Low-side | High-side                                         | Low-side |
| BSG0810NDI  | SuperSO8 | ✓                                             | 25                    | 4.0                                                             | 1.2      | 5.6                                               | 16.0     |
| BSG0811ND   | SuperSO8 | –                                             | 25                    | 4.0                                                             | 1.1      | 5.6                                               | 20.0     |
| BSG0813NDI  | SuperSO8 | ✓                                             | 25                    | 4.0                                                             | 1.7      | 5.6                                               | 12.0     |

## OptiMOS™ and StrongIRFET™ 30 V logic level



| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                                 | TO-263<br>(D <sup>2</sup> PAK)                     | TO-263<br>(D <sup>2</sup> PAK 7-pin)             | TO-220                                          |
|------------------------------------------------------|--------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-------------------------------------------------|
| <1                                                   |                                                  |                                                    | IPB009N03L G<br>$R_{DS(on)}=0.95\text{ m}\Omega$ |                                                 |
| 1-2                                                  |                                                  | IRLS3813TRLPBF<br>$R_{DS(on)}=1.95\text{ m}\Omega$ |                                                  | IRLB3813PBF<br>$R_{DS(on)}=1.95\text{ m}\Omega$ |
| 2-4                                                  | IRLR8743TRPBF<br>$R_{DS(on)}=3.1\text{ m}\Omega$ | IRFR8314TRPBF<br>$R_{DS(on)}=2.2\text{ m}\Omega$   |                                                  | IRLB8314PBF<br>$R_{DS(on)}=2.4\text{ m}\Omega$  |
|                                                      | IPD031N03L G<br>$R_{DS(on)}=3.1\text{ m}\Omega$  |                                                    |                                                  | IRL3713PBF<br>$R_{DS(on)}=3.0\text{ m}\Omega$   |
|                                                      |                                                  | IPB034N03L G<br>$R_{DS(on)}=3.4\text{ m}\Omega$    |                                                  | IRLB8743PBF<br>$R_{DS(on)}=3.2\text{ m}\Omega$  |
|                                                      | IPD040N03L G<br>$R_{DS(on)}=4.0\text{ m}\Omega$  |                                                    |                                                  | IPP034N03L G<br>$R_{DS(on)}=3.4\text{ m}\Omega$ |
| 4-10                                                 | IPD050N03L G<br>$R_{DS(on)}=5.0\text{ m}\Omega$  | IPB042N03L G<br>$R_{DS(on)}=4.2\text{ m}\Omega$    |                                                  | IPP042N03L G<br>$R_{DS(on)}=4.2\text{ m}\Omega$ |
|                                                      | IRLR8726TRPBF<br>$R_{DS(on)}=5.8\text{ m}\Omega$ | IPB055N03L G<br>$R_{DS(on)}=5.5\text{ m}\Omega$    |                                                  | IRLB8748PBF<br>$R_{DS(on)}=4.8\text{ m}\Omega$  |
|                                                      | IPD060N03L G<br>$R_{DS(on)}=6.0\text{ m}\Omega$  | IPB065N03L G<br>$R_{DS(on)}=6.5\text{ m}\Omega$    |                                                  | IPP055N03L G<br>$R_{DS(on)}=5.5\text{ m}\Omega$ |
|                                                      | IPD075N03L G<br>$R_{DS(on)}=7.5\text{ m}\Omega$  | IPB080N03L G<br>$R_{DS(on)}=8.0\text{ m}\Omega$    |                                                  | IRL8113PBF<br>$R_{DS(on)}=6.0\text{ m}\Omega$   |
|                                                      | IRLR8729TRPBF<br>$R_{DS(on)}=8.9\text{ m}\Omega$ |                                                    |                                                  | IRLB8721PBF<br>$R_{DS(on)}=8.7\text{ m}\Omega$  |
|                                                      | IPD090N03L G<br>$R_{DS(on)}=9.0\text{ m}\Omega$  |                                                    |                                                  |                                                 |
|                                                      | IPD135N03L G<br>$R_{DS(on)}=13.5\text{ m}\Omega$ |                                                    |                                                  |                                                 |
|                                                      | IRLR3103<br>$R_{DS(on)}=19.0\text{ m}\Omega$     |                                                    |                                                  |                                                 |

## OptiMOS™ and StrongIRFET™ 30 V logic level



| $R_{DS(on)}$ , max.<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | DirectFET™                                         | PQFN 3.3 x 3.3                                   | SuperSO8                                           | TO-Leadless                                      |  |
|-------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|----------------------------------------------------|--------------------------------------------------|--|
| <1                                                    |                                                    |                                                  | BSC005N03LS5*<br>$R_{DS(on)}=0.5\text{ m}\Omega$   | IPT004N03L<br>$R_{DS(on)}=0.4\text{ m}\Omega$    |  |
|                                                       |                                                    |                                                  | BSC005N03LS5I*<br>$R_{DS(on)}=0.5\text{ m}\Omega$  |                                                  |  |
| 1-2                                                   |                                                    |                                                  | ISC011N03LS5<br>$R_{DS(on)}=1.1\text{ m}\Omega$    |                                                  |  |
|                                                       |                                                    |                                                  | IRFH8303TRPBF<br>$R_{DS(on)}=1.1\text{ m}\Omega$   |                                                  |  |
|                                                       |                                                    |                                                  | BSC011N03LS<br>$R_{DS(on)}=1.1\text{ m}\Omega$     |                                                  |  |
|                                                       |                                                    |                                                  | BSC011N03LSI**<br>$R_{DS(on)}=1.1\text{ m}\Omega$  |                                                  |  |
|                                                       |                                                    |                                                  | BSC011N03LST***<br>$R_{DS(on)}=1.1\text{ m}\Omega$ |                                                  |  |
|                                                       | IRF8301MTRPBF<br>$R_{DS(on)}=1.5\text{ m}\Omega$   |                                                  | IRFH8307TRPBF<br>$R_{DS(on)}=1.3\text{ m}\Omega$   |                                                  |  |
|                                                       | IRF6726MTRPBF<br>$R_{DS(on)}=1.7\text{ m}\Omega$   | BSZ0500NSI**<br>$R_{DS(on)}=1.5\text{ m}\Omega$  | BSC0500NSI**<br>$R_{DS(on)}=1.3\text{ m}\Omega$    |                                                  |  |
|                                                       | IRF6727MTRPBF<br>$R_{DS(on)}=1.7\text{ m}\Omega$   | BSZ019N03LS<br>$R_{DS(on)}=1.9\text{ m}\Omega$   | BSC014N03LS G<br>$R_{DS(on)}=1.4\text{ m}\Omega$   |                                                  |  |
|                                                       | IRF8302MTRPBF**<br>$R_{DS(on)}=1.8\text{ m}\Omega$ | ISZ019N03L5S<br>$R_{DS(on)}=1.9\text{ m}\Omega$  | IRFH5301TRPBF<br>$R_{DS(on)}=1.85\text{ m}\Omega$  |                                                  |  |
|                                                       |                                                    | BSZ0901NS<br>$R_{DS(on)}=2.0\text{ m}\Omega$     | ISC019N03L5S<br>$R_{DS(on)}=1.9\text{ m}\Omega$    |                                                  |  |
|                                                       |                                                    | BSZ0501NSI**<br>$R_{DS(on)}=2.0\text{ m}\Omega$  | BSC0901NS<br>$R_{DS(on)}=1.9\text{ m}\Omega$       |                                                  |  |
|                                                       |                                                    |                                                  | BSC0501NSI**<br>$R_{DS(on)}=1.9\text{ m}\Omega$    |                                                  |  |
|                                                       |                                                    |                                                  | BSC0901NSI**<br>$R_{DS(on)}=2.0\text{ m}\Omega$    |                                                  |  |
|                                                       | 2-4                                                |                                                  |                                                    | ISC026N03L5S<br>$R_{DS(on)}=2.6\text{ m}\Omega$  |  |
|                                                       |                                                    |                                                  |                                                    | ISC037N03L5IS<br>$R_{DS(on)}=3.7\text{ m}\Omega$ |  |
|                                                       |                                                    | ISZ040N03L5IS<br>$R_{DS(on)}=4.0\text{ m}\Omega$ | ISC045N03L5S<br>$R_{DS(on)}=4.5\text{ m}\Omega$    |                                                  |  |
| 4-10                                                  |                                                    | ISZ065N03L5S<br>$R_{DS(on)}=6.5\text{ m}\Omega$  |                                                    |                                                  |  |

[www.infineon.com/powermosfet-12V-300V](http://www.infineon.com/powermosfet-12V-300V)

\* Coming soon

\*\* Monolithically integrated Schottky-like diode

\*\*\*For more information on the product, contact our product support

For more details on the product, click on the part number.

## OptiMOS™ and StrongIRFET™ 30 V logic level



| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | DirectFET™                                    | PQFN 3.3 x 3.3                                | SuperSO8                                       | SO-8                                                        | SO-8<br>Dual                                                 | PQFN 2 x 2                                               |
|------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------|
| 2-4                                                  | IRF8304MTRPBF<br>$R_{DS(on)}=2.2\text{ mΩ}$   | BSZ0901NSI**<br>$R_{DS(on)}=2.1\text{ mΩ}$    | BSC020N03LS G<br>$R_{DS(on)}=2.0\text{ mΩ}$    |                                                             |                                                              | ISK036N03LM5 <sup>2)</sup><br>$R_{DS(on)}=3.6\text{ mΩ}$ |
|                                                      |                                               |                                               | IRFH5302TRPBF<br>$R_{DS(on)}=2.1\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      | IRF6724MTRPBF<br>$R_{DS(on)}=2.5\text{ mΩ}$   | IRLHM620TRPBF<br>$R_{DS(on)}=2.5\text{ mΩ}$   | BSC0502NSI**<br>$R_{DS(on)}=2.4\text{ mΩ}$     |                                                             |                                                              |                                                          |
|                                                      | IRF8306MTRPBF**<br>$R_{DS(on)}=2.5\text{ mΩ}$ | BSZ0902NS<br>$R_{DS(on)}=2.6\text{ mΩ}$       | BSC025N03LS G<br>$R_{DS(on)}=2.5\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               |                                               | IRFH5302DTRPBF**<br>$R_{DS(on)}=2.5\text{ mΩ}$ |                                                             |                                                              |                                                          |
|                                                      |                                               |                                               | BSC0902NS<br>$R_{DS(on)}=2.6\text{ mΩ}$        |                                                             |                                                              |                                                          |
|                                                      |                                               |                                               | IRF8252TRPBF<br>$R_{DS(on)}=2.7\text{ mΩ}$     |                                                             |                                                              |                                                          |
|                                                      |                                               | BSZ0902NSI**<br>$R_{DS(on)}=2.8\text{ mΩ}$    | BSC0902NSI**<br>$R_{DS(on)}=2.8\text{ mΩ}$     | IRF8788TRPBF<br>$R_{DS(on)}=2.8\text{ mΩ}$                  |                                                              |                                                          |
|                                                      |                                               | BSZ0502NSI**<br>$R_{DS(on)}=2.8\text{ mΩ}$    | IRFH8316TRPBF<br>$R_{DS(on)}=2.95\text{ mΩ}$   |                                                             |                                                              |                                                          |
|                                                      |                                               |                                               | BSC030N03LS G<br>$R_{DS(on)}=3.0\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               | BSZ0503NSI**<br>$R_{DS(on)}=3.4\text{ mΩ}$    | IRFH8318TRPBF<br>$R_{DS(on)}=3.1\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               | IRLHM630***<br>$R_{DS(on)}=3.5\text{ mΩ}$     | BSC0503NSI**<br>$R_{DS(on)}=3.2\text{ mΩ}$     | IRF7862TRPBF<br>$R_{DS(on)}=3.3\text{ mΩ}$                  |                                                              |                                                          |
|                                                      |                                               | BSZ035N03LS G<br>$R_{DS(on)}=3.5\text{ mΩ}$   | BSC034N03LS G<br>$R_{DS(on)}=3.4\text{ mΩ}$    | IRF8734TRPBF<br>$R_{DS(on)}=3.5\text{ mΩ}$                  |                                                              |                                                          |
|                                                      |                                               | IRFHM830<br>$R_{DS(on)}=3.8\text{ mΩ}$        | BSC0504NSI**<br>$R_{DS(on)}=3.7\text{ mΩ}$     |                                                             |                                                              |                                                          |
| 4-10                                                 | IRF6722MTRPBF<br>$R_{DS(on)}=7.7\text{ mΩ}$   | IRFHM830D<br>$R_{DS(on)}=4.3\text{ mΩ}$       | IRFH8324TRPBF<br>$R_{DS(on)}=4.1\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               | BSZ0506NS<br>$R_{DS(on)}=4.4\text{ mΩ}$       | BSC042N03LS G<br>$R_{DS(on)}=4.2\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               | IRFHM8326TRPBF<br>$R_{DS(on)}=4.7\text{ mΩ}$  | BSC0906NS<br>$R_{DS(on)}=4.5\text{ mΩ}$        |                                                             |                                                              |                                                          |
|                                                      |                                               |                                               | IRFH5304TRPBF<br>$R_{DS(on)}=4.5\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               |                                               | IRFH8321TRPBF<br>$R_{DS(on)}=4.9\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               | BSZ050N03LS G<br>$R_{DS(on)}=5.0\text{ mΩ}$   | IRFH8325TRPBF<br>$R_{DS(on)}=5.0\text{ mΩ}$    | IRF8736TRPBF<br>$R_{DS(on)}=4.8\text{ mΩ}$                  |                                                              |                                                          |
|                                                      |                                               | BSZ058N03LS G<br>$R_{DS(on)}=5.8\text{ mΩ}$   | BSC050N03LS G<br>$R_{DS(on)}=5.0\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               | IRFHM8329TRPBF<br>$R_{DS(on)}=6.1\text{ mΩ}$  | BSC052N03LS<br>$R_{DS(on)}=5.2\text{ mΩ}$      |                                                             |                                                              |                                                          |
|                                                      |                                               | BSZ065N03LS<br>$R_{DS(on)}=6.5\text{ mΩ}$     | BSC057N03LS G<br>$R_{DS(on)}=5.7\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      | IRF8327S<br>$R_{DS(on)}=7.3\text{ mΩ}$        | IRFHM8330TRPBF<br>$R_{DS(on)}=6.6\text{ mΩ}$  | IRFH8330TRPBF<br>$R_{DS(on)}=6.6\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               | BSZ0994NS<br>$R_{DS(on)}=7.0\text{ mΩ}$       | BSC080N03LS G<br>$R_{DS(on)}=8.0\text{ mΩ}$    |                                                             |                                                              |                                                          |
|                                                      |                                               | IRFHM831<br>$R_{DS(on)}=7.8\text{ mΩ}$        | IRFH8334TRPBF<br>$R_{DS(on)}=9.0\text{ mΩ}$    | IRF8721TRPBF<br>$R_{DS(on)}=8.5\text{ mΩ}$                  |                                                              |                                                          |
|                                                      |                                               | BSZ088N03LS G<br>$R_{DS(on)}=8.8\text{ mΩ}$   | BSC090N03LS G<br>$R_{DS(on)}=9.0\text{ mΩ}$    | IRF8714TRPBF<br>$R_{DS(on)}=8.7\text{ mΩ}$                  |                                                              |                                                          |
|                                                      |                                               | IRFHM8334TRPBF<br>$R_{DS(on)}=9.0\text{ mΩ}$  | BSC0909NS<br>$R_{DS(on)}=9.2\text{ mΩ}$        |                                                             |                                                              |                                                          |
| 10-63                                                |                                               | BSZ100N03LS G<br>$R_{DS(on)}=10.0\text{ mΩ}$  |                                                |                                                             |                                                              |                                                          |
|                                                      |                                               | BSZ0909NS<br>$R_{DS(on)}=12.0\text{ mΩ}$      | BSC120N03LS G<br>$R_{DS(on)}=12.0\text{ mΩ}$   | IRF8707TRPBF<br>$R_{DS(on)}=11.9\text{ mΩ}$                 | IRF7907TRPBF<br>$R_{DS(on)}=11.8\text{ mΩ}+16.4\text{ mΩ}$   | IRLHS6342***<br>$R_{DS(on)}=16\text{ mΩ}$                |
|                                                      |                                               | IRFHM8337TRPBF<br>$R_{DS(on)}=12.4\text{ mΩ}$ | IRFH8337TRPBF<br>$R_{DS(on)}=12.8\text{ mΩ}$   | IRL6342 <sup>1)***</sup><br>$R_{DS(on)}=14.6\text{ mΩ}$     | IRF8513TRPBF***<br>$R_{DS(on)}=2.7\text{ mΩ}+15.5\text{ mΩ}$ | IRFHS8342<br>$R_{DS(on)}=16\text{ mΩ}$                   |
|                                                      |                                               | BSZ130N03LS G<br>$R_{DS(on)}=13.0\text{ mΩ}$  |                                                | IRL6372 <sup>2)***</sup><br>$R_{DS(on)}=18\text{ mΩ; dual}$ | IRF8313TRPBF<br>$R_{DS(on)}=15.5\text{ mΩ}+15.5\text{ mΩ}$   | IRLHS6376***<br>$R_{DS(on)}=63\text{ mΩ; dual}$          |
| 2 x 7.2                                              |                                               |                                               | BSC072N03LD G<br>$R_{DS(on)}=7.2\text{ mΩ}$    |                                                             |                                                              |                                                          |
| 2 x 15                                               |                                               |                                               | BSC150N03LD G<br>$R_{DS(on)}=15.0\text{ mΩ}$   |                                                             |                                                              |                                                          |

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\*\* Monolithically integrated Schottky-like diode

\*\*\*  $R_{DS(on)}$  max @  $V_{GS}=4.5\text{ V}$

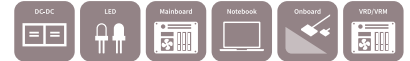
\*\*\*\* For more information on the product, contact our product support

1) 2.5  $V_{GS}$  capable

2) Coming soon

For more details on the product,  
click on the part number. 

## OptiMOST™ and StrongIRFET™ 30 V logic level 5 V optimized

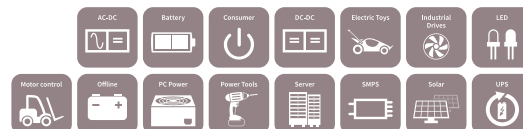


| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | PQFN 3.3 x 3.3                                            | SuperSO8                                                  | SO-8                                                      | SO-8<br>Dual                                              |
|------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| 1-2                                                  |                                                           | BSC016N03MS G<br>$R_{DS(on)} \approx 1.6\text{ m}\Omega$  |                                                           |                                                           |
|                                                      |                                                           | BSC020N03MS G<br>$R_{DS(on)} \approx 2.0\text{ m}\Omega$  |                                                           |                                                           |
| 2-4                                                  |                                                           | BSC025N03MS G<br>$R_{DS(on)} \approx 2.5\text{ m}\Omega$  | BSO033N03MS G<br>$R_{DS(on)} \approx 3.3\text{ m}\Omega$  |                                                           |
|                                                      | BSZ035N03MS G<br>$R_{DS(on)} \approx 3.5\text{ m}\Omega$  | BSC030N03MS G<br>$R_{DS(on)} \approx 3.0\text{ m}\Omega$  | BSO040N03MS G<br>$R_{DS(on)} \approx 4.0\text{ m}\Omega$  |                                                           |
| 4-10                                                 |                                                           | BSC042N03MS G<br>$R_{DS(on)} \approx 4.2\text{ m}\Omega$  |                                                           |                                                           |
|                                                      | BSZ050N03MS G<br>$R_{DS(on)} \approx 5.0\text{ m}\Omega$  | BSC057N03MS G<br>$R_{DS(on)} \approx 5.7\text{ m}\Omega$  |                                                           |                                                           |
|                                                      |                                                           | BSC080N03MS G<br>$R_{DS(on)} \approx 8.0\text{ m}\Omega$  |                                                           |                                                           |
|                                                      | BSZ058N03MS G<br>$R_{DS(on)} \approx 5.8\text{ m}\Omega$  | BSC090N03MS G<br>$R_{DS(on)} \approx 9.0\text{ m}\Omega$  |                                                           |                                                           |
|                                                      | BSZ088N03MS G<br>$R_{DS(on)} \approx 8.8\text{ m}\Omega$  | BSC100N03MS G<br>$R_{DS(on)} \approx 10.0\text{ m}\Omega$ |                                                           |                                                           |
|                                                      | BSZ100N03MS G<br>$R_{DS(on)} \approx 10.0\text{ m}\Omega$ |                                                           |                                                           |                                                           |
| >10                                                  | BSZ130N03MS G<br>$R_{DS(on)} \approx 13.0\text{ m}\Omega$ | BSC120N03MS G<br>$R_{DS(on)} \approx 12.0\text{ m}\Omega$ | BSO110N03MS G<br>$R_{DS(on)} \approx 11.0\text{ m}\Omega$ | BSO150N03MD G<br>$R_{DS(on)} \approx 15.0\text{ m}\Omega$ |
|                                                      |                                                           |                                                           |                                                           | BSO220N03MD G<br>$R_{DS(on)} \approx 22.0\text{ m}\Omega$ |

## OptiMOST™ and StrongIRFET™ 40 V normal level



| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                                         | TO-263<br>(D <sup>2</sup> PAK)                            | TO-263<br>(D <sup>2</sup> PAK 7-pin)                       | TO-220                                                  | TO-247                                                 | DirectFET™                                                | PQFN 3.3 x 3.3                                            | SuperSO8                                                      | TO-220 FullPAK                                           |
|------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------|
| <1                                                   |                                                          |                                                           | IRF40SC240<br>$R_{DS(on)} \approx 0.65\text{ m}\Omega$     |                                                         |                                                        |                                                           |                                                           |                                                               |                                                          |
|                                                      |                                                          |                                                           | IRFS7430TRL7PP<br>$R_{DS(on)} \approx 0.75\text{ m}\Omega$ |                                                         |                                                        |                                                           |                                                           |                                                               |                                                          |
| 1-2                                                  |                                                          | IRFS7430TRLPBF<br>$R_{DS(on)} \approx 1.3\text{ m}\Omega$ | IRFS7434TRL7PP<br>$R_{DS(on)} \approx 1.0\text{ m}\Omega$  | IRFB7430PBF<br>$R_{DS(on)} \approx 1.3\text{ m}\Omega$  | IRFP7430PBF<br>$R_{DS(on)} \approx 1.3\text{ m}\Omega$ | IRL40DM247<br>$R_{DS(on)} \approx 1.0\text{ m}\Omega$     |                                                           | IRFH7084TRPBF<br>$R_{DS(on)} \approx 1.25\text{ m}\Omega$     |                                                          |
|                                                      |                                                          | IPB015N04N G<br>$R_{DS(on)} \approx 1.5\text{ m}\Omega$   | IPB011N04N G<br>$R_{DS(on)} \approx 1.1\text{ m}\Omega$    | IPP015N04N G<br>$R_{DS(on)} \approx 1.5\text{ m}\Omega$ |                                                        | IRF7739L1TRPBF<br>$R_{DS(on)} \approx 1.0\text{ m}\Omega$ |                                                           | IRFH7004TRPBF<br>$R_{DS(on)} \approx 1.4\text{ m}\Omega$      |                                                          |
|                                                      |                                                          | IRFS3004<br>$R_{DS(on)} \approx 1.75\text{ m}\Omega$      | IRFS3004-7P<br>$R_{DS(on)} \approx 1.25\text{ m}\Omega$    | IRFB7434PBF<br>$R_{DS(on)} \approx 1.6\text{ m}\Omega$  |                                                        | IRF7480MTRPBF<br>$R_{DS(on)} \approx 1.2\text{ m}\Omega$  |                                                           | BSC017N04NS G<br>$R_{DS(on)} \approx 1.7\text{ m}\Omega$      |                                                          |
|                                                      |                                                          | IRFS7434TRLPBF<br>$R_{DS(on)} \approx 1.6\text{ m}\Omega$ | IRFS7437TRL7PP<br>$R_{DS(on)} \approx 1.4\text{ m}\Omega$  | IRFB3004PBF<br>$R_{DS(on)} \approx 1.75\text{ m}\Omega$ |                                                        | IRF7946TRPBF<br>$R_{DS(on)} \approx 1.4\text{ m}\Omega$   |                                                           | IRF40H210<br>$R_{DS(on)} \approx 1.7\text{ m}\Omega$          |                                                          |
|                                                      |                                                          | IRFS7437TRLPBF<br>$R_{DS(on)} \approx 1.8\text{ m}\Omega$ | IPB020N04N G<br>$R_{DS(on)} \approx 2.0\text{ m}\Omega$    | IRFB7437PBF<br>$R_{DS(on)} \approx 2.0\text{ m}\Omega$  |                                                        | BSB015N04NX3 G<br>$R_{DS(on)} \approx 1.5\text{ m}\Omega$ |                                                           | BSC019N04NS G<br>$R_{DS(on)} \approx 1.9\text{ m}\Omega$      |                                                          |
|                                                      |                                                          |                                                           |                                                            |                                                         |                                                        | IRF40DM229<br>$R_{DS(on)} \approx 1.85\text{ m}\Omega$    |                                                           |                                                               |                                                          |
| 2-4                                                  | IRFR7440TRPBF<br>$R_{DS(on)} \approx 2.4\text{ m}\Omega$ | IRFS7440TRLPBF<br>$R_{DS(on)} \approx 2.5\text{ m}\Omega$ |                                                            | IPP023N04N G<br>$R_{DS(on)} \approx 2.3\text{ m}\Omega$ |                                                        | IRF7483MTRPBF<br>$R_{DS(on)} \approx 2.3\text{ m}\Omega$  |                                                           | IRFH7440TRPBF<br>$R_{DS(on)} \approx 2.4\text{ m}\Omega$      | IPA028N04NM3S<br>$R_{DS(on)} \approx 2.8\text{ m}\Omega$ |
|                                                      | IRFR7446TRPBF<br>$R_{DS(on)} \approx 3.9\text{ m}\Omega$ | IRF1404S<br>$R_{DS(on)} \approx 4.0\text{ m}\Omega$       |                                                            | IRFB7440PBF<br>$R_{DS(on)} \approx 2.5\text{ m}\Omega$  |                                                        |                                                           |                                                           | IRFH5004TRPBF<br>$R_{DS(on)} \approx 2.6\text{ m}\Omega$      |                                                          |
|                                                      |                                                          |                                                           |                                                            | IRFB7446PBF<br>$R_{DS(on)} \approx 3.3\text{ m}\Omega$  |                                                        |                                                           |                                                           | BSC030N04NS G<br>$R_{DS(on)} \approx 3.0\text{ m}\Omega$      |                                                          |
|                                                      |                                                          |                                                           |                                                            |                                                         |                                                        |                                                           |                                                           | IRFH7446TRPBF<br>$R_{DS(on)} \approx 3.3\text{ m}\Omega$      |                                                          |
| 4-10                                                 |                                                          |                                                           |                                                            | IPP041N04N G<br>$R_{DS(on)} \approx 4.1\text{ m}\Omega$ |                                                        |                                                           |                                                           | BSC054N04NS G<br>$R_{DS(on)} \approx 5.4\text{ m}\Omega$      | IPA041N04N G<br>$R_{DS(on)} \approx 4.1\text{ m}\Omega$  |
|                                                      | IRF40R207<br>$R_{DS(on)} \approx 5.1\text{ m}\Omega$     |                                                           |                                                            | IRF40B207<br>$R_{DS(on)} \approx 4.5\text{ m}\Omega$    |                                                        |                                                           |                                                           | IRF40H233<br>$R_{DS(on)} \approx 5.9\text{ m}\Omega$ , dual   |                                                          |
|                                                      |                                                          |                                                           |                                                            | IPP048N04N G<br>$R_{DS(on)} \approx 4.8\text{ m}\Omega$ |                                                        |                                                           |                                                           | BSC076N04ND<br>$R_{DS(on)} \approx 7.6\text{ m}\Omega$ , dual |                                                          |
| >10                                                  |                                                          |                                                           |                                                            |                                                         |                                                        |                                                           | BSZ105N04NS G<br>$R_{DS(on)} \approx 10.5\text{ m}\Omega$ |                                                               |                                                          |
|                                                      |                                                          |                                                           |                                                            |                                                         |                                                        |                                                           | BSZ165N04NS G<br>$R_{DS(on)} \approx 16.5\text{ m}\Omega$ |                                                               |                                                          |



## OptiMOS™ and StrongIRFET™ 40 V logic level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                             | TO-263<br>(D <sup>2</sup> PAK)                | TO-263<br>(D <sup>2</sup> PAK 7-pin)        | TO-220                                     | TO-247                                    | DirectFET™                                    | PQFN 3.3 x 3.3                              | SuperSO8                                            | TO-Leadless                             |
|------------------------------------------------------|----------------------------------------------|-----------------------------------------------|---------------------------------------------|--------------------------------------------|-------------------------------------------|-----------------------------------------------|---------------------------------------------|-----------------------------------------------------|-----------------------------------------|
| <1                                                   |                                              |                                               | IRL40SC228<br>$R_{DS(on)}=0.65\text{ mΩ}$   |                                            |                                           | IRL7472L1TRPBF<br>$R_{DS(on)}=0.45\text{ mΩ}$ |                                             | BSC007N04LS6<br>$R_{DS(on)}=0.7\text{ mΩ}$          | IRL40T209<br>$R_{DS(on)}=0.8\text{ mΩ}$ |
|                                                      |                                              |                                               | IRL40SC209<br>$R_{DS(on)}=0.8\text{ mΩ}$    |                                            |                                           |                                               |                                             |                                                     |                                         |
| 1-2                                                  |                                              | IPB015N04L G<br>$R_{DS(on)}=1.5\text{ mΩ}$    | IPB011N04L G<br>$R_{DS(on)}=1.1\text{ mΩ}$  | IRL40B209<br>$R_{DS(on)}=1.25\text{ mΩ}$   | IRLP3034PBF<br>$R_{DS(on)}=1.7\text{ mΩ}$ | BSB014N04LX3 G<br>$R_{DS(on)}=1.4\text{ mΩ}$  |                                             | BSC010N04LS<br>$R_{DS(on)}=1.0\text{ mΩ}$           |                                         |
|                                                      |                                              | IRLS3034TRL PBF<br>$R_{DS(on)}=1.7\text{ mΩ}$ | IRLS3034TRL7P<br>$R_{DS(on)}=1.4\text{ mΩ}$ | IRLB3034PBF<br>$R_{DS(on)}=1.7\text{ mΩ}$  |                                           | IRL7486MTRPBF<br>$R_{DS(on)}=1.4\text{ mΩ}$   |                                             | BSC010N04LS6<br>$R_{DS(on)}=1.0\text{ mΩ}$          |                                         |
|                                                      |                                              | IRL40S212<br>$R_{DS(on)}=1.9\text{ mΩ}$       |                                             | IRL40B212<br>$R_{DS(on)}=1.9\text{ mΩ}$    |                                           |                                               |                                             | BSC010N04LST<br>$R_{DS(on)}=1.0\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC010N04LSI<br>$R_{DS(on)}=1.05\text{ mΩ}$         |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC010N04LSC*<br>$R_{DS(on)}=1.05\text{ mΩ}$        |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC014N04LST<br>$R_{DS(on)}=1.4\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC014N04LS<br>$R_{DS(on)}=1.4\text{ mΩ}$           |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC014N04LSI<br>$R_{DS(on)}=1.45\text{ mΩ}$         |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | ISC015N04NM5<br>$R_{DS(on)}=1.5\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC016N04LS G<br>$R_{DS(on)}=1.6\text{ mΩ}$         |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | ISC017N04NM5<br>$R_{DS(on)}=1.7\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC018N04LS G<br>$R_{DS(on)}=1.8\text{ mΩ}$         |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               | BSZ018N04LS6<br>$R_{DS(on)}=1.8\text{ mΩ}$  | ISC019N04NM5<br>$R_{DS(on)}=1.9\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC019N04LS<br>$R_{DS(on)}=1.9\text{ mΩ}$           |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC019N04LST<br>$R_{DS(on)}=1.9\text{ mΩ}$          |                                         |
| 2-4                                                  |                                              |                                               |                                             | IRL40B215<br>$R_{DS(on)}=2.7\text{ mΩ}$    |                                           | IRF6613TRPBF<br>$R_{DS(on)}=3.4\text{ mΩ}$    | BSZ021N04LS6<br>$R_{DS(on)}=2.1\text{ mΩ}$  | BSC022N04LS<br>$R_{DS(on)}=2.2\text{ mΩ}$           |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               | BSZ024N04LS6<br>$R_{DS(on)}=2.4\text{ mΩ}$  | BSC022N04LS6<br>$R_{DS(on)}=2.2\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | IRLH5034TRPBF<br>$R_{DS(on)}=2.4\text{ mΩ}$         |                                         |
|                                                      |                                              |                                               |                                             | IPP039N04L G<br>$R_{DS(on)}=3.9\text{ mΩ}$ |                                           |                                               | BSZ025N04LS<br>$R_{DS(on)}=2.5\text{ mΩ}$   | BSC026N04LS<br>$R_{DS(on)}=2.6\text{ mΩ}$           |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               | BSZ028N04LS<br>$R_{DS(on)}=2.8\text{ mΩ}$   | BSC027N04LS G<br>$R_{DS(on)}=2.7\text{ mΩ}$         |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | ISC028N04NM5<br>$R_{DS(on)}=2.8\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC032N04LS<br>$R_{DS(on)}=3.2\text{ mΩ}$           |                                         |
|                                                      | IPD036N04L G<br>$R_{DS(on)}=3.6\text{ mΩ}$   | IRL1404S<br>$R_{DS(on)}=4.0\text{ mΩ}$        |                                             |                                            |                                           |                                               | BSZ034N04LS<br>$R_{DS(on)}=3.4\text{ mΩ}$   | BSC035N04LS G<br>$R_{DS(on)}=3.5\text{ mΩ}$         |                                         |
| 4-10                                                 |                                              |                                               |                                             |                                            |                                           |                                               |                                             | ISC036N04NM5<br>$R_{DS(on)}=3.6\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | ISC046N04NM5<br>$R_{DS(on)}=4.6\text{ mΩ}$          |                                         |
|                                                      | IRLR3114ZTRPBF<br>$R_{DS(on)}=4.5\text{ mΩ}$ |                                               |                                             |                                            |                                           | IRF6616TRPBF<br>$R_{DS(on)}=5.0\text{ mΩ}$    | BSZ040N04LS G<br>$R_{DS(on)}=4.0\text{ mΩ}$ | BSC050N04LS G<br>$R_{DS(on)}=5.0\text{ mΩ}$         |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | ISC058N04NM5<br>$R_{DS(on)}=5.8\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           | IRF6614TRPBF<br>$R_{DS(on)}=8.3\text{ mΩ}$    | BSZ063N04LS6<br>$R_{DS(on)}=6.3\text{ mΩ}$  | BSC059N04LS G<br>$R_{DS(on)}=5.9\text{ mΩ}$         |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC059N04LS6<br>$R_{DS(on)}=5.9\text{ mΩ}$          |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               |                                             | BSC072N04LD<br>$R_{DS(on)}=7.2\text{ mΩ}$ ,<br>dual |                                         |
|                                                      |                                              |                                               |                                             |                                            |                                           |                                               | BSZ097N04LS G<br>$R_{DS(on)}=9.7\text{ mΩ}$ | BSC093N04LS G<br>$R_{DS(on)}=9.3\text{ mΩ}$         |                                         |



## OptiMOS™ and StrongIRFET™ 60 V normal level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                                       | TO-263<br>(D <sup>+</sup> PAK)                         | TO-263<br>(D <sup>+</sup> PAK 7-pin)                        | TO-262<br>(I <sup>+</sup> PAK)                         | TO-220                                                    | TO-220<br>FullPAK                                      | TO-247                                    |
|------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|-------------------------------------------|
| 1-2                                                  |                                                        |                                                        | IPB010N06N <sup>2)</sup><br>$R_{DS(on)}=1.0\text{ mΩ}$      |                                                        |                                                           |                                                        |                                           |
|                                                      |                                                        |                                                        | IRF60C241<br>$R_{DS(on)}=1.3\text{ mΩ}$                     |                                                        |                                                           |                                                        |                                           |
|                                                      |                                                        |                                                        | IRFS7530TRL7PP<br>$R_{DS(on)}=1.4\text{ mΩ}$                |                                                        |                                                           |                                                        |                                           |
|                                                      |                                                        |                                                        | IPB014N06N <sup>2)</sup><br>$R_{DS(on)}=1.4\text{ mΩ}$      |                                                        |                                                           |                                                        |                                           |
|                                                      |                                                        |                                                        | IPB017N06N3 G<br>$R_{DS(on)}=1.7\text{ mΩ}$                 |                                                        |                                                           |                                                        |                                           |
|                                                      |                                                        | IRFS7530TRLPBF<br>$R_{DS(on)}=2.0\text{ mΩ}$           | IRFS7534TRL7PP <sup>2)</sup><br>$R_{DS(on)}=1.95\text{ mΩ}$ | IPI020N06N <sup>2)</sup><br>$R_{DS(on)}=2.0\text{ mΩ}$ | IRFB7530PBF<br>$R_{DS(on)}=2.0\text{ mΩ}$                 |                                                        | IRFP7530PBF<br>$R_{DS(on)}=2.0\text{ mΩ}$ |
| 2-4                                                  | IPD025N06N <sup>2)</sup><br>$R_{DS(on)}=2.5\text{ mΩ}$ | IRFS7534TRLPBF<br>$R_{DS(on)}=2.4\text{ mΩ}$           | IRFS3006TRL7PP<br>$R_{DS(on)}=2.1\text{ mΩ}$                |                                                        | IPP020N06N <sup>2)</sup><br>$R_{DS(on)}=2.0\text{ mΩ}$    |                                                        |                                           |
|                                                      |                                                        | IRFS3006<br>$R_{DS(on)}=2.5\text{ mΩ}$                 |                                                             | IPI024N06N3 G<br>$R_{DS(on)}=2.4\text{ mΩ}$            | IRFB7534PBF<br>$R_{DS(on)}=2.4\text{ mΩ}$                 |                                                        |                                           |
|                                                      |                                                        |                                                        |                                                             |                                                        | IPP024N06N3 G <sup>2)</sup><br>$R_{DS(on)}=2.4\text{ mΩ}$ |                                                        |                                           |
|                                                      |                                                        | IPB026N06N <sup>2)</sup><br>$R_{DS(on)}=2.6\text{ mΩ}$ |                                                             |                                                        | IRFB3006PBF<br>$R_{DS(on)}=2.5\text{ mΩ}$                 |                                                        | IRFP3006PBF<br>$R_{DS(on)}=2.5\text{ mΩ}$ |
|                                                      |                                                        | IPB029N06N3 G<br>$R_{DS(on)}=2.9\text{ mΩ}$            |                                                             | IPI029N06N <sup>2)</sup><br>$R_{DS(on)}=2.9\text{ mΩ}$ | IPP029N06N <sup>2)</sup><br>$R_{DS(on)}=2.9\text{ mΩ}$    | IPA029N06N <sup>2)</sup><br>$R_{DS(on)}=2.9\text{ mΩ}$ | IRFP3206PBF<br>$R_{DS(on)}=3.0\text{ mΩ}$ |
|                                                      |                                                        |                                                        |                                                             |                                                        | IRFB3206BF<br>$R_{DS(on)}=3.0\text{ mΩ}$                  | IPA029N06NM5S<br>$R_{DS(on)}=2.9\text{ mΩ}$            |                                           |
|                                                      | IPD033N06N <sup>2)</sup><br>$R_{DS(on)}=3.3\text{ mΩ}$ | IRFS3206<br>$R_{DS(on)}=3.0\text{ mΩ}$                 |                                                             | IPI032N06N3 G<br>$R_{DS(on)}=3.2\text{ mΩ}$            | IPP032N06N3 G<br>$R_{DS(on)}=3.2\text{ mΩ}$               | IPA032N06N3 G<br>$R_{DS(on)}=3.2\text{ mΩ}$            |                                           |
|                                                      | IPD034N06N3 G<br>$R_{DS(on)}=3.4\text{ mΩ}$            | IRFS7537TRLPBF<br>$R_{DS(on)}=3.3\text{ mΩ}$           |                                                             |                                                        | IRFB7537PBF<br>$R_{DS(on)}=3.3\text{ mΩ}$                 |                                                        | IRFP7537PBF<br>$R_{DS(on)}=3.3\text{ mΩ}$ |
|                                                      |                                                        |                                                        |                                                             |                                                        | IRFB3256PBF<br>$R_{DS(on)}=3.4\text{ mΩ}$                 |                                                        |                                           |
|                                                      | IPD038N06N3 G<br>$R_{DS(on)}=3.8\text{ mΩ}$            | IPB037N06N3 G<br>$R_{DS(on)}=3.7\text{ mΩ}$            |                                                             |                                                        | IPP040N06N3 G<br>$R_{DS(on)}=4.0\text{ mΩ}$               | IPA040N06N <sup>2)</sup><br>$R_{DS(on)}=4.0\text{ mΩ}$ |                                           |
|                                                      |                                                        | IRFS3306<br>$R_{DS(on)}=4.2\text{ mΩ}$                 |                                                             | IPI040N06N3 G<br>$R_{DS(on)}=4.0\text{ mΩ}$            | IPP040N06N <sup>2)</sup><br>$R_{DS(on)}=4.0\text{ mΩ}$    | IPA040N06N M5S<br>$R_{DS(on)}=4.0\text{ mΩ}$           |                                           |
|                                                      |                                                        |                                                        |                                                             |                                                        | IRFB3306PBF<br>$R_{DS(on)}=4.2\text{ mΩ}$                 |                                                        | IRFP3306PBF<br>$R_{DS(on)}=4.2\text{ mΩ}$ |
| 4-10                                                 | IRFR7540TRPBF<br>$R_{DS(on)}=4.8\text{ mΩ}$            | IRFS7540TRLPBF<br>$R_{DS(on)}=5.1\text{ mΩ}$           |                                                             |                                                        | IRFB7540PBF<br>$R_{DS(on)}=5.1\text{ mΩ}$                 | IPA057N06N3 G<br>$R_{DS(on)}=5.7\text{ mΩ}$            |                                           |
|                                                      | IPD053N06N <sup>2)</sup><br>$R_{DS(on)}=5.3\text{ mΩ}$ | IPB054N06N3 G<br>$R_{DS(on)}=5.4\text{ mΩ}$            |                                                             |                                                        | IPP057N06N3 G <sup>2)</sup><br>$R_{DS(on)}=5.7\text{ mΩ}$ |                                                        |                                           |
|                                                      |                                                        | IPB057N06N <sup>2)</sup><br>$R_{DS(on)}=5.7\text{ mΩ}$ |                                                             |                                                        | IRFB7545PBF<br>$R_{DS(on)}=5.9\text{ mΩ}$                 |                                                        |                                           |
|                                                      | IRFR7546TRPBF<br>$R_{DS(on)}=7.9\text{ mΩ}$            | IRF1018ES<br>$R_{DS(on)}=8.4\text{ mΩ}$                |                                                             |                                                        | IPP060N06N <sup>2)</sup><br>$R_{DS(on)}=6.0\text{ mΩ}$    | IPA060N06N <sup>2)</sup><br>$R_{DS(on)}=6.0\text{ mΩ}$ |                                           |
|                                                      | IRFR1018E<br>$R_{DS(on)}=8.4\text{ mΩ}$                |                                                        |                                                             |                                                        | IRFB7546PBF<br>$R_{DS(on)}=7.3\text{ mΩ}$                 |                                                        |                                           |
|                                                      |                                                        |                                                        |                                                             |                                                        | IRF1018EPBF<br>$R_{DS(on)}=8.4\text{ mΩ}$                 | IPA060N06NM5S<br>$R_{DS(on)}=6.0\text{ mΩ}$            |                                           |
|                                                      | IPD088N06N3 G<br>$R_{DS(on)}=8.8\text{ mΩ}$            |                                                        |                                                             |                                                        | IRF60B217<br>$R_{DS(on)}=9.0\text{ mΩ}$                   | IPA093N06N3 G<br>$R_{DS(on)}=9.3\text{ mΩ}$            |                                           |
|                                                      | IRF60R217<br>$R_{DS(on)}=9.9\text{ mΩ}$                | IPB090N06N3 G<br>$R_{DS(on)}=9.0\text{ mΩ}$            |                                                             |                                                        | IPP093N06N3 G<br>$R_{DS(on)}=9.3\text{ mΩ}$               |                                                        |                                           |
| >10                                                  | IRFR3806<br>$R_{DS(on)}=15.8\text{ mΩ}$                | IRFS3806<br>$R_{DS(on)}=15.8\text{ mΩ}$                |                                                             |                                                        | IRFB3806PBF<br>$R_{DS(on)}=15.8\text{ mΩ}$                |                                                        |                                           |



## OptiMOS™ and StrongIRFET™ 60 V normal level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | DirectFET™                                                                                                                                                                              | PQFN 3.3 x 3.3                                                                                                                                                                 | SO-8                                                                                            | SuperSO8                                                                                                                                                                                                                                                                                                                                                                                | TO-Leadless                                            |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <1                                                   |                                                                                                                                                                                         |                                                                                                                                                                                |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                         | IPT007N06N <sup>2)</sup><br>$R_{DS(on)}=0.7\text{ mΩ}$ |
| 1-2                                                  | IRF7749L1TRPBF<br>$R_{DS(on)}=1.5\text{ mΩ}$                                                                                                                                            |                                                                                                                                                                                |                                                                                                 | BSC012N06NS<br>$R_{DS(on)}=1.2\text{ mΩ}$<br>BSC014N06NS <sup>2)</sup><br>$R_{DS(on)}=1.4\text{ mΩ}$<br>BSC014N06NST <sup>2)</sup><br>$R_{DS(on)}=1.45\text{ mΩ}$<br>BSC016N06NST <sup>2)</sup><br>$R_{DS(on)}=1.6\text{ mΩ}$<br>BSC016N06NS <sup>2)</sup><br>$R_{DS(on)}=1.6\text{ mΩ}$<br>BSC019N06NS <sup>2)</sup><br>$R_{DS(on)}=1.9\text{ mΩ}$                                     | IPT012N06N <sup>2)</sup><br>$R_{DS(on)}=1.2\text{ mΩ}$ |
| 2-4                                                  | IRF7748L1TRPBF<br>$R_{DS(on)}=2.2\text{ mΩ}$<br>BSB028N06NN3 G<br>$R_{DS(on)}=2.8\text{ mΩ}$<br>IRF60DM206<br>$R_{DS(on)}=2.9\text{ mΩ}$<br>IRF7580MTRPBF<br>$R_{DS(on)}=3.6\text{ mΩ}$ | BSZ039N06NS<br>$R_{DS(on)}=3.9\text{ mΩ}$                                                                                                                                      |                                                                                                 | BSC028N06NS <sup>2)</sup><br>$R_{DS(on)}=2.8\text{ mΩ}$<br>BSC028N06NST <sup>2)</sup><br>$R_{DS(on)}=2.8\text{ mΩ}$<br>BSC031N06NS3 G<br>$R_{DS(on)}=3.1\text{ mΩ}$<br>IRFH7085TRPBF<br>$R_{DS(on)}=3.2\text{ mΩ}$<br>BSC034N06NS <sup>2)</sup><br>$R_{DS(on)}=3.4\text{ mΩ}$<br>BSC039N06NS <sup>2)</sup><br>$R_{DS(on)}=3.9\text{ mΩ}$<br>IRFH5006TRPBF<br>$R_{DS(on)}=4.1\text{ mΩ}$ |                                                        |
| 4-10                                                 | IRF6648<br>$R_{DS(on)}=7.0\text{ mΩ}$<br>IRF6674<br>$R_{DS(on)}=11.0\text{ mΩ}$                                                                                                         | BSZ042N06NS <sup>2)</sup><br>$R_{DS(on)}=4.2\text{ mΩ}$<br>BSZ068N06NS <sup>2)</sup><br>$R_{DS(on)}=6.8\text{ mΩ}$<br>BSZ100N06NS <sup>2)</sup><br>$R_{DS(on)}=10.0\text{ mΩ}$ | IRF7855TRPBF<br>$R_{DS(on)}=9.4\text{ mΩ}$<br>IRF7351TRPBF<br>$R_{DS(on)}=17.8\text{ mΩ, dual}$ | IRLH5036TRPBF<br>$R_{DS(on)}=4.4\text{ mΩ}$<br>IRFH7545TRPBF<br>$R_{DS(on)}=5.2\text{ mΩ}$<br>BSC066N06NS <sup>2)</sup><br>$R_{DS(on)}=6.6\text{ mΩ}$<br>BSC076N06NS3 G<br>$R_{DS(on)}=7.6\text{ mΩ}$<br>BSC097N06NS <sup>2)</sup><br>$R_{DS(on)}=9.7\text{ mΩ}$<br>BSC097N06NST <sup>2)</sup><br>$R_{DS(on)}=9.7\text{ mΩ}$                                                            |                                                        |
| >10                                                  |                                                                                                                                                                                         | BSZ110N06NS3 G<br>$R_{DS(on)}=11.0\text{ mΩ}$                                                                                                                                  |                                                                                                 | BSC110N06NS3 G<br>$R_{DS(on)}=11.0\text{ mΩ}$<br>IRFH5406TRPBF<br>$R_{DS(on)}=14.4\text{ mΩ}$<br>BSC155N06ND<br>$R_{DS(on)}=15.5\text{ mΩ, dual}$                                                                                                                                                                                                                                       |                                                        |



## OptiMOS™ and StrongIRFET™ 60 V logic level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                                                                                                                                                                         | TO-263<br>(DPAK)                                                                           | TO-263<br>(DPAK 7-pin)                                                                                                                                                              | TO-262<br>(IPAK)                            | TO-220                                                                                                                                  | PQFN 2 x 2                                                                                                                                                                                                                              | PQFN 3.3 x 3.3                                                                                                                                                                                                                                                                               | SuperSO8 |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1-2                                                  |                                                                                                                                                                                          |                                                                                            | IRL60SC216<br>$R_{DS(on)}=1.5\text{ mΩ}$<br>IPB019N06L3 G<br>$R_{DS(on)}=1.9\text{ mΩ}$<br>IRL60S216<br>$R_{DS(on)}=1.95\text{ mΩ}$<br>IRLS3036TRL7PP<br>$R_{DS(on)}=1.9\text{ mΩ}$ | IRL60SL216<br>$R_{DS(on)}=1.95\text{ mΩ}$   | IRL60B216<br>$R_{DS(on)}=1.9\text{ mΩ}$                                                                                                 |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                              |          |
| 2-4                                                  |                                                                                                                                                                                          | IPB019N06L3 G<br>$R_{DS(on)}=1.9\text{ mΩ}$<br>IPB034N06L3 G<br>$R_{DS(on)}=3.4\text{ mΩ}$ |                                                                                                                                                                                     |                                             | IRLB3036PBF<br>$R_{DS(on)}=2.4\text{ mΩ}$<br>IPP037N06L3 G<br>$R_{DS(on)}=3.7\text{ mΩ}$<br>IPP052N06L3 G<br>$R_{DS(on)}=5.2\text{ mΩ}$ | BSZ037N06LS5<br>$R_{DS(on)}=3.7\text{ mΩ}$                                                                                                                                                                                              | BSC027N06LS5<br>$R_{DS(on)}=2.7\text{ mΩ}$<br>BSC028N06LS3 G<br>$R_{DS(on)}=2.8\text{ mΩ}$                                                                                                                                                                                                   |          |
| 4-10                                                 | IPD031N06L3 G<br>$R_{DS(on)}=3.1\text{ mΩ}$<br>IPD048N06L3 G<br>$R_{DS(on)}=4.8\text{ mΩ}$<br>IRLR3636TRPBF<br>$R_{DS(on)}=6.8\text{ mΩ}$<br>IPD079N06L3 G<br>$R_{DS(on)}=7.9\text{ mΩ}$ | IPB034N06L3 G<br>$R_{DS(on)}=3.4\text{ mΩ}$<br>IPB081N06L3 G<br>$R_{DS(on)}=8.1\text{ mΩ}$ |                                                                                                                                                                                     | IPI084N06L3 G<br>$R_{DS(on)}=8.4\text{ mΩ}$ | IPP084N06L3 G<br>$R_{DS(on)}=8.4\text{ mΩ}$                                                                                             | BSZ040N06LS5<br>$R_{DS(on)}=4.0\text{ mΩ}$<br>BSZ065N06LS5<br>$R_{DS(on)}=6.5\text{ mΩ}$<br>BSZ067N06LS3 G<br>$R_{DS(on)}=6.7\text{ mΩ}$<br>BSZ099N06LS5<br>$R_{DS(on)}=9.9\text{ mΩ}$<br>BSZ100N06LS3 G<br>$R_{DS(on)}=10.0\text{ mΩ}$ | IRLH5036TRPBF<br>$R_{DS(on)}=4.4\text{ mΩ}$<br>BSC065N06LS5<br>$R_{DS(on)}=6.5\text{ mΩ}$<br>BSC067N06LS3 G<br>$R_{DS(on)}=6.7\text{ mΩ}$<br>BSC094N06LS5<br>$R_{DS(on)}=9.4\text{ mΩ}$<br>BSC100N06LS3 G<br>$R_{DS(on)}=10.0\text{ mΩ}$<br>BSC112N06LD<br>$R_{DS(on)}=11.2\text{ mΩ, dual}$ |          |
| >10                                                  | IPD220N06L3 G<br>$R_{DS(on)}=22.0\text{ mΩ}$<br>IPD350N06L G<br>$R_{DS(on)}=35.0\text{ mΩ}$                                                                                              |                                                                                            |                                                                                                                                                                                     |                                             |                                                                                                                                         | IRL60HS118<br>$R_{DS(on)}=17.0\text{ mΩ}$                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                              |          |

[www.infineon.com/powermosfet-12V-300V](http://www.infineon.com/powermosfet-12V-300V)
2) 6 V rated ( $R_{DS(on)}$  also specified @  $V_{GS} = 6\text{ V}$ )

For more details on the product, click on the part number.



## OptiMOS™ and StrongIRFET™ 75 V normal level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                             | TO-263<br>(D <sup>2</sup> PAK)                | TO-263<br>(D <sup>2</sup> PAK 7-pin)          | TO-220                                      | TO-247                                     | DirectFET™                                                 | SuperSO8                                     |
|------------------------------------------------------|----------------------------------------------|-----------------------------------------------|-----------------------------------------------|---------------------------------------------|--------------------------------------------|------------------------------------------------------------|----------------------------------------------|
| 1-2                                                  |                                              | IPB020NE7N3 G<br>$R_{DS(on)}=2.0\text{ mΩ}$   | IRFS7730TRL7PP<br>$R_{DS(on)}=2.0\text{ mΩ}$  |                                             | IRFP7718PBF<br>$R_{DS(on)}=1.8\text{ mΩ}$  |                                                            |                                              |
|                                                      |                                              |                                               |                                               |                                             | IRFP4368PBF<br>$R_{DS(on)}=1.85\text{ mΩ}$ |                                                            |                                              |
| 2-4                                                  |                                              | IRFS7730TRL7PP<br>$R_{DS(on)}=2.6\text{ mΩ}$  | IRFS3107TRL7PP<br>$R_{DS(on)}=2.6\text{ mΩ}$  | IPP023NE7N3 G<br>$R_{DS(on)}=2.3\text{ mΩ}$ | IRFP3077PBF<br>$R_{DS(on)}=3.3\text{ mΩ}$  | IRF7759L2TRPBF<br>$R_{DS(on)}=2.3\text{ mΩ}$               |                                              |
|                                                      |                                              | IRFS3107TRL7PP<br>$R_{DS(on)}=3.0\text{ mΩ}$  |                                               | IRFB7730PBF<br>$R_{DS(on)}=2.6\text{ mΩ}$   |                                            |                                                            |                                              |
|                                                      |                                              | IPB031NE7N3 G<br>$R_{DS(on)}=3.1\text{ mΩ}$   | IRFS7734TRL7PP<br>$R_{DS(on)}=3.05\text{ mΩ}$ | IRFB3077PBF<br>$R_{DS(on)}=3.3\text{ mΩ}$   |                                            |                                                            | BSC036NE7NS3 G<br>$R_{DS(on)}=3.6\text{ mΩ}$ |
|                                                      |                                              | IRFS7734TRL7PP<br>$R_{DS(on)}=3.5\text{ mΩ}$  |                                               | IPP034NE7N3 G<br>$R_{DS(on)}=3.4\text{ mΩ}$ |                                            |                                                            |                                              |
|                                                      |                                              |                                               |                                               | IRFB7734PBF<br>$R_{DS(on)}=3.5\text{ mΩ}$   |                                            |                                                            |                                              |
| 4-10                                                 |                                              | IRFS3207ZTRL7PP<br>$R_{DS(on)}=4.1\text{ mΩ}$ |                                               | IRFB3207ZPBF<br>$R_{DS(on)}=4.5\text{ mΩ}$  |                                            |                                                            |                                              |
|                                                      |                                              | IPB049NE7N3 G<br>$R_{DS(on)}=4.9\text{ mΩ}$   |                                               | IPP052NE7N3 G<br>$R_{DS(on)}=5.2\text{ mΩ}$ |                                            |                                                            | BSC042NE7NS3 G<br>$R_{DS(on)}=4.2\text{ mΩ}$ |
|                                                      |                                              | IRFS3307ZTRL7PP<br>$R_{DS(on)}=5.8\text{ mΩ}$ |                                               | IRFB3307ZPBF<br>$R_{DS(on)}=5.8\text{ mΩ}$  |                                            |                                                            |                                              |
|                                                      |                                              | IRFS7762TRL7PP<br>$R_{DS(on)}=6.7\text{ mΩ}$  |                                               | IPP062NE7N3 G<br>$R_{DS(on)}=6.2\text{ mΩ}$ |                                            | IRF7780MTRPBF<br>$R_{DS(on)}=5.7\text{ mΩ}$                | IRFH5007TRPBF<br>$R_{DS(on)}=5.9\text{ mΩ}$  |
|                                                      | IRFR7740TRPBF<br>$R_{DS(on)}=7.2\text{ mΩ}$  |                                               |                                               | IRFB7740PBF<br>$R_{DS(on)}=7.3\text{ mΩ}$   |                                            |                                                            |                                              |
|                                                      |                                              | IRFS7787TRL7PP<br>$R_{DS(on)}=8.4\text{ mΩ}$  |                                               | IRFB7787PBF<br>$R_{DS(on)}=8.4\text{ mΩ}$   |                                            |                                                            | IRFH7787TRPBF<br>$R_{DS(on)}=8.0\text{ mΩ}$  |
|                                                      | IRFR3607PBF<br>$R_{DS(on)}=9.0\text{ mΩ}$    | IRFS3607TRL7PP<br>$R_{DS(on)}=9.0\text{ mΩ}$  |                                               | IRFB3607PBF<br>$R_{DS(on)}=9.0\text{ mΩ}$   |                                            |                                                            |                                              |
| >10                                                  | IRFR7746TRPBF<br>$R_{DS(on)}=11.2\text{ mΩ}$ |                                               |                                               | IRFB7746PBF<br>$R_{DS(on)}=10.6\text{ mΩ}$  |                                            | BSF450NE7NH3 <sup>(1)</sup><br>$R_{DS(on)}=45.0\text{ mΩ}$ |                                              |



## OptiMOS™ and StrongIRFET™ 80 V normal level – logic level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                             | TO-263<br>(D <sup>2</sup> PAK)              | TO-263<br>(D <sup>2</sup> PAK 7-pin)        | TO-262<br>(I <sup>2</sup> PAK)              | TO-220                                      | TO-220<br>FullPAK                           | DirectFET™                                    | PQFN 2 x 2                                | PQFN 3.3 x 3.3                                | SuperSO8                                      | TO-Leadless                               |
|------------------------------------------------------|----------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|-----------------------------------------------|-------------------------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------------------------|
| 1-2                                                  |                                              | IPB017N08N5<br>$R_{DS(on)}=1.7\text{ mΩ}$   | IPB015N08N5<br>$R_{DS(on)}=1.5\text{ mΩ}$   |                                             |                                             |                                             |                                               |                                           |                                               |                                               | IPT012N08N5<br>$R_{DS(on)}=1.2\text{ mΩ}$ |
|                                                      |                                              | IPB020N08N5<br>$R_{DS(on)}=2.0\text{ mΩ}$   | IPB019N08N3 G<br>$R_{DS(on)}=1.9\text{ mΩ}$ |                                             | IPP020N08N5<br>$R_{DS(on)}=2.0\text{ mΩ}$   |                                             |                                               |                                           |                                               | BSC021N08NS5<br>$R_{DS(on)}=2.1\text{ mΩ}$    | IPT019N08N5<br>$R_{DS(on)}=1.9\text{ mΩ}$ |
|                                                      |                                              |                                             | IPB019N08N5<br>$R_{DS(on)}=1.95\text{ mΩ}$  |                                             |                                             |                                             |                                               |                                           |                                               |                                               |                                           |
| 2-4                                                  |                                              | IPB024N08N5<br>$R_{DS(on)}=2.4\text{ mΩ}$   |                                             |                                             | IPP023N08N5<br>$R_{DS(on)}=2.3\text{ mΩ}$   |                                             |                                               |                                           |                                               | BSC025N08LS5<br>$R_{DS(on)}=2.5\text{ mΩ}$    |                                           |
|                                                      |                                              | IPB025N08N3 G<br>$R_{DS(on)}=2.5\text{ mΩ}$ | IPB030N08N3 G<br>$R_{DS(on)}=3.0\text{ mΩ}$ |                                             | IPP027N08N5<br>$R_{DS(on)}=2.7\text{ mΩ}$   |                                             |                                               |                                           |                                               | BSC026N08NS5<br>$R_{DS(on)}=2.6\text{ mΩ}$    |                                           |
|                                                      |                                              |                                             |                                             |                                             | IPP028N08N3 G<br>$R_{DS(on)}=2.8\text{ mΩ}$ | IPA028N08N3 G<br>$R_{DS(on)}=2.8\text{ mΩ}$ |                                               |                                           |                                               | BSC030N08NS5<br>$R_{DS(on)}=3.0\text{ mΩ}$    | IPT029N08N5<br>$R_{DS(on)}=2.9\text{ mΩ}$ |
|                                                      |                                              | IPB031N08N5<br>$R_{DS(on)}=3.1\text{ mΩ}$   |                                             |                                             | IPP034N08N5<br>$R_{DS(on)}=3.4\text{ mΩ}$   |                                             |                                               |                                           |                                               | BSC037N08NS5<br>$R_{DS(on)}=3.7\text{ mΩ}$    |                                           |
|                                                      |                                              |                                             |                                             |                                             |                                             |                                             |                                               |                                           |                                               | BSC037N08NS5T<br>$R_{DS(on)}=3.7\text{ mΩ}$   |                                           |
|                                                      |                                              | IPB035N08N3 G<br>$R_{DS(on)}=3.5\text{ mΩ}$ |                                             | IPI037N08N3 G<br>$R_{DS(on)}=3.7\text{ mΩ}$ | IPP037N08N3 G<br>$R_{DS(on)}=3.7\text{ mΩ}$ | IPA037N08N3 G<br>$R_{DS(on)}=3.7\text{ mΩ}$ |                                               |                                           |                                               | BSC040N08NS5<br>$R_{DS(on)}=4.0\text{ mΩ}$    |                                           |
| 4-10                                                 | IPD046N08N5<br>$R_{DS(on)}=4.6\text{ mΩ}$    | IPB049N08N5<br>$R_{DS(on)}=4.9\text{ mΩ}$   |                                             |                                             | IPP052N08N5<br>$R_{DS(on)}=5.2\text{ mΩ}$   | IPA040N08NM5S<br>$R_{DS(on)}=4.0\text{ mΩ}$ | BSB044N08NN3 G<br>$R_{DS(on)}=4.4\text{ mΩ}$  |                                           |                                               | BSC047N08NS3 G<br>$R_{DS(on)}=4.7\text{ mΩ}$  |                                           |
|                                                      | IPD053N08N3 G<br>$R_{DS(on)}=5.3\text{ mΩ}$  | IPB054N08N3 G<br>$R_{DS(on)}=5.4\text{ mΩ}$ |                                             |                                             | IPP057N08N3 G<br>$R_{DS(on)}=5.7\text{ mΩ}$ | IPA052N08NM5S<br>$R_{DS(on)}=5.2\text{ mΩ}$ |                                               |                                           |                                               | BSC052N08NS5<br>$R_{DS(on)}=5.2\text{ mΩ}$    |                                           |
|                                                      |                                              | IPB067N08N3 G<br>$R_{DS(on)}=6.7\text{ mΩ}$ |                                             |                                             |                                             | IPA057N08N3 G<br>$R_{DS(on)}=5.7\text{ mΩ}$ |                                               |                                           |                                               | BSC057N08NS3 G<br>$R_{DS(on)}=5.7\text{ mΩ}$  |                                           |
|                                                      |                                              |                                             |                                             |                                             |                                             |                                             | IRF6646TRPBF<br>$R_{DS(on)}=9.5\text{ mΩ}$    |                                           |                                               | BSC061N08NS5<br>$R_{DS(on)}=6.1\text{ mΩ}$    |                                           |
|                                                      | IPD096N08N3 G<br>$R_{DS(on)}=9.6\text{ mΩ}$  |                                             |                                             |                                             | IPP100N08N3 G<br>$R_{DS(on)}=9.7\text{ mΩ}$ |                                             | IRF7854TRPBF<br>$R_{DS(on)}=9.5\text{ mΩ}$    |                                           |                                               | BSC072N08NS5<br>$R_{DS(on)}=7.2\text{ mΩ}$    |                                           |
| >10                                                  |                                              |                                             |                                             |                                             |                                             |                                             | BSB104N08NP3 G<br>$R_{DS(on)}=10.4\text{ mΩ}$ | IRL80HS120<br>$R_{DS(on)}=32.0\text{ mΩ}$ | BSZ110N08NS5<br>$R_{DS(on)}=11.0\text{ mΩ}$   | BSC117N08NS5<br>$R_{DS(on)}=11.7\text{ mΩ}$   |                                           |
|                                                      | IPD135N08N3 G<br>$R_{DS(on)}=13.5\text{ mΩ}$ |                                             |                                             |                                             |                                             |                                             |                                               |                                           | BSZ123N08NS3 G<br>$R_{DS(on)}=12.3\text{ mΩ}$ | BSC123N08NS3 G<br>$R_{DS(on)}=12.3\text{ mΩ}$ |                                           |
|                                                      |                                              |                                             |                                             |                                             |                                             |                                             |                                               |                                           | BSZ340N08NS3 G<br>$R_{DS(on)}=34.0\text{ mΩ}$ | BSC340N08NS3 G<br>$R_{DS(on)}=34.0\text{ mΩ}$ |                                           |
|                                                      |                                              |                                             |                                             |                                             |                                             |                                             |                                               |                                           |                                               |                                               |                                           |

[www.infineon.com/powermosfet-12V-300V](http://www.infineon.com/powermosfet-12V-300V)

1) DirectFET™ S

For more details on the product, click on the part number.

## OptiMOS™ and StrongIRFET™ 100 V normal level



| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                             | TO-263<br>(D <sup>2</sup> PAK)                 | TO-263<br>(D <sup>2</sup> PAK 7-pin)         | TO-262<br>(I <sup>2</sup> PAK)               | TO-220                                         | TO-220<br>FullPAK                                      | TO-247                                     |
|------------------------------------------------------|----------------------------------------------|------------------------------------------------|----------------------------------------------|----------------------------------------------|------------------------------------------------|--------------------------------------------------------|--------------------------------------------|
| 1-2                                                  |                                              | IPB020N10N5<br>$R_{DS(on)}=2.0\text{ mΩ}$      | IPB017N10N5<br>$R_{DS(on)}=1.7\text{ mΩ}$    |                                              |                                                |                                                        | IRF100P218<br>$R_{DS(on)}=1.1\text{ mΩ}$   |
|                                                      |                                              | IPB020N10N5LF<br>$R_{DS(on)}=2.0\text{ mΩ}$    | IPB017N10N5LF<br>$R_{DS(on)}=1.7\text{ mΩ}$  |                                              |                                                |                                                        | IRF100P219<br>$R_{DS(on)}=2.1\text{ mΩ}$   |
| 2-4                                                  |                                              | IPB027N10N3 G<br>$R_{DS(on)}=2.7\text{ mΩ}$    | IPB024N10N5<br>$R_{DS(on)}=2.4\text{ mΩ}$    |                                              | IPP023N10N5<br>$R_{DS(on)}=2.3\text{ mΩ}$      |                                                        | IRFP4468PBF<br>$R_{DS(on)}=2.6\text{ mΩ}$  |
|                                                      |                                              | IPB027N10N5<br>$R_{DS(on)}=2.7\text{ mΩ}$      | IPB025N10N3 G<br>$R_{DS(on)}=2.5\text{ mΩ}$  | IPI030N10N3 G<br>$R_{DS(on)}=3.0\text{ mΩ}$  | IPP030N10N3 G<br>$R_{DS(on)}=3.0\text{ mΩ}$    | IPA030N10N3 G<br>$R_{DS(on)}=3.0\text{ mΩ}$            |                                            |
|                                                      |                                              | IPB033N10N5LF<br>$R_{DS(on)}=3.3\text{ mΩ}$    | IPB032N10N5<br>$R_{DS(on)}=3.2\text{ mΩ}$    |                                              | IPP030N10N5<br>$R_{DS(on)}=3.0\text{ mΩ}$      |                                                        |                                            |
|                                                      |                                              |                                                | IPB039N10N3 G<br>$R_{DS(on)}=3.9\text{ mΩ}$  |                                              | IPP039N10N5<br>$R_{DS(on)}=3.9\text{ mΩ}$      |                                                        |                                            |
| 4-10                                                 | IPD050N10N5<br>$R_{DS(on)}=5.0\text{ mΩ}$    | IPB042N10N3 G<br>$R_{DS(on)}=4.2\text{ mΩ}$    | IRFS4010TRL7PP<br>$R_{DS(on)}=4.0\text{ mΩ}$ | IPI045N10N3 G<br>$R_{DS(on)}=4.5\text{ mΩ}$  | IRF100B201<br>$R_{DS(on)}=4.2\text{ mΩ}$       | IPA045N10N3 G<br>$R_{DS(on)}=4.5\text{ mΩ}$            | IRFP4110PBF<br>$R_{DS(on)}=4.5\text{ mΩ}$  |
|                                                      | IPD068N10N3 G<br>$R_{DS(on)}=6.8\text{ mΩ}$  | IRF100S201<br>$R_{DS(on)}=4.2\text{ mΩ}$       |                                              |                                              | IRFB4110PBF<br>$R_{DS(on)}=4.5\text{ mΩ}$      | IPA050N10NM5S<br>$R_{DS(on)}=5.0\text{ mΩ}$            | IRFP4310ZPBF<br>$R_{DS(on)}=6.0\text{ mΩ}$ |
|                                                      |                                              | IRFS4010TRL7PBF<br>$R_{DS(on)}=4.7\text{ mΩ}$  |                                              |                                              | IPP045N10N3 G<br>$R_{DS(on)}=4.5\text{ mΩ}$    |                                                        |                                            |
|                                                      |                                              | IPB065N10N3 G<br>$R_{DS(on)}=6.5\text{ mΩ}$    |                                              |                                              | IRFB4310ZPBF<br>$R_{DS(on)}=6.0\text{ mΩ}$     |                                                        |                                            |
|                                                      |                                              | IRFS4310ZTRL7PBF<br>$R_{DS(on)}=7.0\text{ mΩ}$ |                                              | IPI072N10N3 G<br>$R_{DS(on)}=7.2\text{ mΩ}$  | IPP072N10N3 G<br>$R_{DS(on)}=7.2\text{ mΩ}$    | IPA083N10N5<br>$R_{DS(on)}=8.3\text{ mΩ}$              |                                            |
|                                                      | IPD082N10N3 G<br>$R_{DS(on)}=8.2\text{ mΩ}$  |                                                |                                              |                                              | IPP083N10N5<br>$R_{DS(on)}=8.3\text{ mΩ}$      | IPA083N10NM5S<br>$R_{DS(on)}=8.3\text{ mΩ}$            |                                            |
|                                                      |                                              | IPB083N10N3 G<br>$R_{DS(on)}=8.3\text{ mΩ}$    |                                              | IPI086N10N3 G<br>$R_{DS(on)}=8.6\text{ mΩ}$  | IPP086N10N3 G<br>$R_{DS(on)}=8.6\text{ mΩ}$    | IPA086N10N3 G<br>$R_{DS(on)}=8.6\text{ mΩ}$            |                                            |
|                                                      |                                              |                                                |                                              |                                              | IRF100B202<br>$R_{DS(on)}=8.6\text{ mΩ}$       |                                                        |                                            |
|                                                      |                                              | IRFS4410ZTRL7PBF<br>$R_{DS(on)}=9.0\text{ mΩ}$ |                                              |                                              | IRFS4410ZTRL7PBF<br>$R_{DS(on)}=9.0\text{ mΩ}$ |                                                        |                                            |
|                                                      |                                              |                                                |                                              |                                              | IRFB4410ZPBF<br>$R_{DS(on)}=9.0\text{ mΩ}$     |                                                        |                                            |
| 10-25                                                | IPD122N10N3 G<br>$R_{DS(on)}=12.2\text{ mΩ}$ |                                                |                                              |                                              |                                                |                                                        |                                            |
|                                                      | IPD12CN10N G<br>$R_{DS(on)}=12.4\text{ mΩ}$  | IPB123N10N3 G<br>$R_{DS(on)}=12.3\text{ mΩ}$   |                                              |                                              |                                                |                                                        |                                            |
|                                                      | IRFR4510TRPBF<br>$R_{DS(on)}=13.9\text{ mΩ}$ | IRFS4510TRL7PBF<br>$R_{DS(on)}=13.9\text{ mΩ}$ |                                              |                                              | IRFB4510PBF<br>$R_{DS(on)}=13.5\text{ mΩ}$     | IPA126N10NM3S<br>$R_{DS(on)}=12.6\text{ mΩ}$           |                                            |
|                                                      |                                              |                                                |                                              | IPI180N10N3 G<br>$R_{DS(on)}=18.0\text{ mΩ}$ |                                                |                                                        |                                            |
| >25                                                  | IPD25CN10N G<br>$R_{DS(on)}=25.0\text{ mΩ}$  |                                                |                                              |                                              |                                                |                                                        |                                            |
|                                                      | IPD33CN10N G<br>$R_{DS(on)}=33.0\text{ mΩ}$  |                                                |                                              |                                              |                                                | IRFI4212H-117P<br>$R_{DS(on)}=72.5\text{ mΩ, HB}^{1)}$ |                                            |
|                                                      | IPD78CN10N G<br>$R_{DS(on)}=78.0\text{ mΩ}$  |                                                |                                              |                                              |                                                |                                                        |                                            |



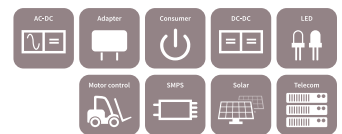
## OptiMOS™ and StrongIRFET™ 100 V normal level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | DirectFET™                                                    | PQFN 3.3 x 3.3                                               | SuperSO8                                                    | SuperSO8 dual cool                             | SO-8                                          | TO-Leadless                                 |
|------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------|-----------------------------------------------|---------------------------------------------|
| 1-2                                                  |                                                               |                                                              |                                                             |                                                |                                               | IPT015N10N5<br>$R_{DS(on)} = 1.5\text{ mΩ}$ |
|                                                      |                                                               |                                                              | BSC027N10NS5<br>$R_{DS(on)} = 2.7\text{ mΩ}$                |                                                |                                               | IPT020N10N3<br>$R_{DS(on)} = 2.0\text{ mΩ}$ |
|                                                      |                                                               |                                                              |                                                             |                                                |                                               | IPT020N10N5<br>$R_{DS(on)} = 2.0\text{ mΩ}$ |
| 2-4                                                  | IRF7769L1TRPBF<br>$R_{DS(on)} = 3.5\text{ mΩ}$                |                                                              | BSC035N10NS5<br>$R_{DS(on)} = 3.5\text{ mΩ}$                | BSC040N10NS5SC<br>$R_{DS(on)} = 4.0\text{ mΩ}$ |                                               | IPT026N10N5<br>$R_{DS(on)} = 2.6\text{ mΩ}$ |
|                                                      |                                                               |                                                              | BSC040N10NS5<br>$R_{DS(on)} = 4.0\text{ mΩ}$                |                                                |                                               |                                             |
| 4-10                                                 |                                                               |                                                              | BSC050N10N5*<br>$R_{DS(on)} = 5.0\text{ mΩ}$                |                                                |                                               |                                             |
|                                                      | BSB056N10NN3 G<br>$R_{DS(on)} = 5.6\text{ mΩ}$                |                                                              | BSC060N10NS3 G<br>$R_{DS(on)} = 6.0\text{ mΩ}$              |                                                |                                               |                                             |
|                                                      |                                                               |                                                              | BSC070N10NS3 G<br>$R_{DS(on)} = 7.0\text{ mΩ}$              | BSC070N10NS5SC<br>$R_{DS(on)} = 7.0\text{ mΩ}$ |                                               |                                             |
|                                                      |                                                               |                                                              | BSC070N10NS5<br>$R_{DS(on)} = 7.0\text{ mΩ}$                |                                                |                                               |                                             |
|                                                      |                                                               |                                                              | IRFH5010TRPBF<br>$R_{DS(on)} = 9.0\text{ mΩ}$               |                                                |                                               |                                             |
|                                                      |                                                               | BSZ097N10NS5<br>$R_{DS(on)} = 9.7\text{ mΩ}$                 | BSC098N10NS5<br>$R_{DS(on)} = 9.8\text{ mΩ}$                |                                                |                                               |                                             |
| 10-25                                                |                                                               |                                                              | BSC100N10NSF G<br>$R_{DS(on)} = 10.0\text{ mΩ}$             |                                                |                                               |                                             |
|                                                      | IRF6644TRPBF<br>$R_{DS(on)} = 13.0\text{ mΩ}$                 |                                                              | BSC109N10NS3 G<br>$R_{DS(on)} = 10.9\text{ mΩ}$             |                                                |                                               |                                             |
|                                                      |                                                               |                                                              | BSC118N10NS G<br>$R_{DS(on)} = 11.8\text{ mΩ}$              |                                                |                                               |                                             |
|                                                      |                                                               |                                                              | IRFH5110TRPBF<br>$R_{DS(on)} = 12.4\text{ mΩ}$              |                                                |                                               |                                             |
|                                                      | BSF134N10NJ3 G <sup>1)</sup><br>$R_{DS(on)} = 13.4\text{ mΩ}$ |                                                              | IRFH7110TRPBF<br>$R_{DS(on)} = 13.5\text{ mΩ}$              |                                                |                                               |                                             |
|                                                      |                                                               |                                                              | IRFH5210TRPBF<br>$R_{DS(on)} = 14.9\text{ mΩ}$              |                                                |                                               |                                             |
|                                                      |                                                               | BSZ160N10NS3 G<br>$R_{DS(on)} = 16.0\text{ mΩ}$              | BSC160N10NS3 G<br>$R_{DS(on)} = 16.0\text{ mΩ}$             |                                                |                                               |                                             |
|                                                      | IRF6662TRPBF<br>$R_{DS(on)} = 22.0\text{ mΩ}$                 |                                                              | BSC196N10NS G<br>$R_{DS(on)} = 19.6\text{ mΩ}$              |                                                | IRF7853TRPBF<br>$R_{DS(on)} = 18.0\text{ mΩ}$ |                                             |
| >25                                                  | IRF6645TRPBF<br>$R_{DS(on)} = 35.0\text{ mΩ}$                 | BSZ440N10NS3 G<br>$R_{DS(on)} = 44.0\text{ mΩ}$              | BSC252N10NSF G<br>$R_{DS(on)} = 25.2\text{ mΩ}$             |                                                |                                               |                                             |
|                                                      | IRF7665S2TRPBF<br>$R_{DS(on)} = 62.0\text{ mΩ}$               |                                                              | BSC440N10NS3 G<br>$R_{DS(on)} = 44.0\text{ mΩ}$             |                                                |                                               |                                             |
| 2 x 75                                               | IRF6665TRPBF<br>$R_{DS(on)} = 63.0\text{ mΩ}$                 |                                                              | BSC750N10ND G<br>$R_{DS(on)} = 75.0\text{ mΩ}; \text{dual}$ |                                                |                                               |                                             |
| 2 x 195                                              |                                                               | IRFHM792TRPBF<br>$R_{DS(on)} = 195.0\text{ mΩ}, \text{dual}$ |                                                             |                                                |                                               |                                             |

## OptiMOS™ and StrongIRFET™ 100 V logic level



| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                                | TO-263<br>(DPAK)                               | TO-263<br>(DPAK 7-pin)                         | TO-220                                        | PQFN 2 x 2                                   | PQFN 3.3 x 3.3                                  | SuperSO8                                        |
|------------------------------------------------------|-------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------|----------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| 2-4                                                  |                                                 |                                                | IRLS4030TRL7PP<br>$R_{DS(on)} = 3.9\text{ mΩ}$ |                                               |                                              |                                                 | BSC034N10LS5<br>$R_{DS(on)} = 3.4\text{ mΩ}$    |
| 4-10                                                 |                                                 | IRLS4030TRL7PP<br>$R_{DS(on)} = 4.3\text{ mΩ}$ |                                                | IRLB4030PBF<br>$R_{DS(on)} = 4.3\text{ mΩ}$   |                                              | BSZ096N10LS5<br>$R_{DS(on)} = 9.6\text{ mΩ}$    | BSC070N10LS5<br>$R_{DS(on)} = 7.0\text{ mΩ}$    |
|                                                      |                                                 |                                                |                                                |                                               |                                              |                                                 | IRLH5030TRPBF<br>$R_{DS(on)} = 9.0\text{ mΩ}$   |
|                                                      |                                                 |                                                |                                                |                                               |                                              |                                                 | BSC096N10LS5<br>$R_{DS(on)} = 9.6\text{ mΩ}$    |
| 10-25                                                |                                                 |                                                |                                                | IPP12CN10L G<br>$R_{DS(on)} = 12.0\text{ mΩ}$ |                                              | BSZ146N10LS5<br>$R_{DS(on)} = 14.6\text{ mΩ}$   | BSC123N10LS G<br>$R_{DS(on)} = 12.3\text{ mΩ}$  |
|                                                      | IRLR3110ZTRPBF<br>$R_{DS(on)} = 14.0\text{ mΩ}$ |                                                |                                                |                                               |                                              | BSZ150N10LS3 G<br>$R_{DS(on)} = 15.0\text{ mΩ}$ | BSC146N10LS5<br>$R_{DS(on)} = 14.6\text{ mΩ}$   |
| >25                                                  |                                                 |                                                |                                                |                                               | IRL100HS121<br>$R_{DS(on)} = 42.0\text{ mΩ}$ |                                                 | BSC265N10LSF G<br>$R_{DS(on)} = 26.5\text{ mΩ}$ |



## OptiMOS™ and StrongIRFET™ 120 V normal level / logic level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                             | TO-263<br>(D <sup>2</sup> PAK)               | TO-263<br>(D <sup>2</sup> PAK 7-pin)        | TO-262<br>(IPAK)                             | TO-220                                       | PQFN 3.3 x 3.3                                | SuperSO8                                      |
|------------------------------------------------------|----------------------------------------------|----------------------------------------------|---------------------------------------------|----------------------------------------------|----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| 2-4                                                  |                                              | IPB038N12N3 G<br>$R_{DS(on)}=3.8\text{ mΩ}$  | IPB036N12N3 G<br>$R_{DS(on)}=3.6\text{ mΩ}$ |                                              |                                              |                                               |                                               |
| 4-10                                                 |                                              |                                              |                                             | IPI041N12N3 G<br>$R_{DS(on)}=4.1\text{ mΩ}$  | IPP041N12N3 G<br>$R_{DS(on)}=4.1\text{ mΩ}$  |                                               | BSC077N12NS3 G<br>$R_{DS(on)}=7.7\text{ mΩ}$  |
|                                                      |                                              |                                              |                                             |                                              | IPP048N12N3 G<br>$R_{DS(on)}=4.8\text{ mΩ}$  |                                               | BSC080N12LS*<br>$R_{DS(on)}=8.0\text{ mΩ}$    |
|                                                      |                                              |                                              |                                             | IPI076N12N3 G<br>$R_{DS(on)}=7.6\text{ mΩ}$  | IPP076N12N3 G<br>$R_{DS(on)}=7.6\text{ mΩ}$  |                                               |                                               |
| 10-25                                                | IPD110N12N3 G<br>$R_{DS(on)}=11.0\text{ mΩ}$ |                                              |                                             |                                              | IPP114N12N3 G<br>$R_{DS(on)}=11.4\text{ mΩ}$ |                                               | BSC120N12LS*<br>$R_{DS(on)}=12.0\text{ mΩ}$   |
|                                                      |                                              | IPB144N12N3 G<br>$R_{DS(on)}=14.4\text{ mΩ}$ |                                             | IPI147N12N3 G<br>$R_{DS(on)}=14.7\text{ mΩ}$ | IPP147N12N3 G<br>$R_{DS(on)}=14.7\text{ mΩ}$ | BSZ240N12NS3 G<br>$R_{DS(on)}=24.0\text{ mΩ}$ | BSC190N12NS3 G<br>$R_{DS(on)}=19.0\text{ mΩ}$ |

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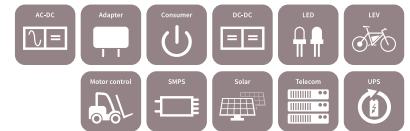
\* logic level devices

For more details on the product,  
click on the part number. 



## OptiMOST™ and StrongIRFET™ 135-150 V normal level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | DirectFET™                                                  | PQFN 3.3 x 3.3                                | SuperSO8                                                 | TO-Leadless                               |
|------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------|-------------------------------------------|
| 4-10                                                 |                                                             |                                               | BSC074N15NS5 <sup>3)</sup><br>$R_{DS(on)}=7.4\text{ mΩ}$ | IPT059N15N3<br>$R_{DS(on)}=5.9\text{ mΩ}$ |
|                                                      |                                                             |                                               | BSC093N15NS5<br>$R_{DS(on)}=9.3\text{ mΩ}$               |                                           |
| 10-25                                                | IRF7779L2TRPBF <sup>5)</sup><br>$R_{DS(on)}=11.0\text{ mΩ}$ |                                               | BSC110N15NS5<br>$R_{DS(on)}=11.0\text{ mΩ}$              |                                           |
|                                                      |                                                             |                                               | BSC160N15NS5<br>$R_{DS(on)}=16.0\text{ mΩ}$              |                                           |
|                                                      | BSB165N15NZ3 G<br>$R_{DS(on)}=16.5\text{ mΩ}$               |                                               | BSC190N15NS3 G<br>$R_{DS(on)}=19.0\text{ mΩ}$            |                                           |
| >25                                                  | BSB280N15NZ3 G<br>$R_{DS(on)}=28.0\text{ mΩ}$               | BSZ300N15NS5<br>$R_{DS(on)}=30.0\text{ mΩ}$   | BSC360N15NS3 G<br>$R_{DS(on)}=36.0\text{ mΩ}$            |                                           |
|                                                      | IRF6643TRPBF<br>$R_{DS(on)}=34.5\text{ mΩ}$                 | BSZ520N15NS3 G<br>$R_{DS(on)}=52.0\text{ mΩ}$ | BSC520N15NS3 G<br>$R_{DS(on)}=52.0\text{ mΩ}$            |                                           |
|                                                      | IRF6775MTRPBF<br>$R_{DS(on)}=56.0\text{ mΩ}$                | BSZ900N15NS3 G<br>$R_{DS(on)}=90.0\text{ mΩ}$ |                                                          |                                           |



## OptiMOST™ and StrongIRFET™ 135-150 V normal level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                             | TO-263<br>(D <sup>2</sup> PAK)                         | TO-263<br>(D <sup>2</sup> PAK 7-pin)                    | SuperSO8                                     | TO-251<br>(IPAK)                           | TO-262<br>(I <sup>2</sup> PAK)                             | TO-220                                                     | TO-220<br>FullIPAK                           | TO-247                                     |
|------------------------------------------------------|----------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|----------------------------------------------|--------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------|--------------------------------------------|
| 4-10                                                 |                                              | IPB048N15N5<br>$R_{DS(on)}=4.8\text{ mΩ}$              | IPB044N15N5<br>$R_{DS(on)}=4.4\text{ mΩ}$               |                                              |                                            | IPI051N15N5<br>$R_{DS(on)}=5.1\text{ mΩ}$                  | IPP051N15N5 <sup>2)</sup><br>$R_{DS(on)}=5.1\text{ mΩ}$    |                                              | IRF150P220<br>$R_{DS(on)}=2.5\text{ mΩ}$   |
|                                                      |                                              | IPB048N15N5LF<br>$R_{DS(on)}=4.8\text{ mΩ}$            | IRF135SA204 <sup>5)</sup><br>$R_{DS(on)}=5.9\text{ mΩ}$ |                                              |                                            |                                                            |                                                            |                                              | IRF150P221<br>$R_{DS(on)}=4.8\text{ mΩ}$   |
|                                                      |                                              | IPB072N15N3 G<br>$R_{DS(on)}=7.2\text{ mΩ}$            | IPB060N15N5<br>$R_{DS(on)}=6.0\text{ mΩ}$               | BSC074N15NS5<br>$R_{DS(on)}=7.4\text{ mΩ}$   |                                            | IPI075N15N3 G<br>$R_{DS(on)}=7.5\text{ mΩ}$                | IPP075N15N3 G<br>$R_{DS(on)}=7.5\text{ mΩ}$                |                                              | IRFP4568PBF<br>$R_{DS(on)}=5.9\text{ mΩ}$  |
|                                                      |                                              | IPB073N15N5<br>$R_{DS(on)}=7.3\text{ mΩ}$              | IPB065N15N3 G<br>$R_{DS(on)}=6.5\text{ mΩ}$             |                                              |                                            | IPI076N15N5<br>$R_{DS(on)}=7.6\text{ mΩ}$                  | IPP076N15N5<br>$R_{DS(on)}=7.6\text{ mΩ}$                  | IPA075N15N3 G<br>$R_{DS(on)}=7.5\text{ mΩ}$  |                                            |
|                                                      |                                              | IPB083N15N5LF<br>$R_{DS(on)}=8.3\text{ mΩ}$            |                                                         |                                              |                                            |                                                            |                                                            |                                              |                                            |
|                                                      |                                              | IRF135S203 <sup>5)</sup><br>$R_{DS(on)}=8.4\text{ mΩ}$ |                                                         |                                              |                                            |                                                            | IRF135B203 <sup>5)</sup><br>$R_{DS(on)}=8.4\text{ mΩ}$     |                                              |                                            |
|                                                      |                                              |                                                        |                                                         |                                              |                                            |                                                            | IRFB4115PBF<br>$R_{DS(on)}=11.0\text{ mΩ}$                 |                                              |                                            |
| 10-25                                                |                                              | IPB108N15N3 G<br>$R_{DS(on)}=10.8\text{ mΩ}$           | IRFS4115TRL7PP<br>$R_{DS(on)}=11.8\text{ mΩ}$           |                                              |                                            | IPI111N15N3 G<br>$R_{DS(on)}=11.1\text{ mΩ}$               | IPP111N15N3 G<br>$R_{DS(on)}=11.1\text{ mΩ}$               | IPA105N15N3 G<br>$R_{DS(on)}=10.5\text{ mΩ}$ |                                            |
|                                                      |                                              | IRFS4321<br>$R_{DS(on)}=15.0\text{ mΩ}$                | IRFS4321TRL7PP<br>$R_{DS(on)}=14.7\text{ mΩ}$           |                                              |                                            |                                                            | IRFB4321PBF<br>$R_{DS(on)}=15.0\text{ mΩ}$                 |                                              | IRFP4321PBF<br>$R_{DS(on)}=15.5\text{ mΩ}$ |
|                                                      |                                              | IRFS4115TRL7PBF<br>$R_{DS(on)}=12.1\text{ mΩ}$         |                                                         |                                              |                                            |                                                            | IRFB4228PBF<br>$R_{DS(on)}=15.0\text{ mΩ}$                 |                                              |                                            |
|                                                      | IPD200N15N3 G<br>$R_{DS(on)}=20.0\text{ mΩ}$ | IPB200N15N3 G<br>$R_{DS(on)}=20.0\text{ mΩ}$           |                                                         |                                              |                                            |                                                            | IPP200N15N3 G <sup>2)</sup><br>$R_{DS(on)}=20.0\text{ mΩ}$ |                                              |                                            |
| >25                                                  |                                              | IRFS4615PBF<br>$R_{DS(on)}=42.0\text{ mΩ}$             |                                                         | IRFH5015TRPBF<br>$R_{DS(on)}=31.0\text{ mΩ}$ |                                            |                                                            | IRFB4615PBF<br>$R_{DS(on)}=39.0\text{ mΩ}$                 |                                              |                                            |
|                                                      | IRFR4615<br>$R_{DS(on)}=42.0\text{ mΩ}$      | IRFS5615PBF<br>$R_{DS(on)}=42.0\text{ mΩ}$             |                                                         |                                              | IRFU4615PBF<br>$R_{DS(on)}=42.0\text{ mΩ}$ |                                                            | IRFB5615PBF<br>$R_{DS(on)}=39.0\text{ mΩ}$                 |                                              |                                            |
|                                                      | IPD530N15N3 G<br>$R_{DS(on)}=53.0\text{ mΩ}$ | IPB530N15N3 G<br>$R_{DS(on)}=53.0\text{ mΩ}$           |                                                         | IRFH5215TRPBF<br>$R_{DS(on)}=58.0\text{ mΩ}$ |                                            | IPI530N15N3 G <sup>2)</sup><br>$R_{DS(on)}=53.0\text{ mΩ}$ | IPP530N15N3 G <sup>2)</sup><br>$R_{DS(on)}=53.0\text{ mΩ}$ |                                              |                                            |
|                                                      |                                              |                                                        |                                                         |                                              |                                            |                                                            | IRFB4019PBF<br>$R_{DS(on)}=95.0\text{ mΩ}$                 |                                              |                                            |

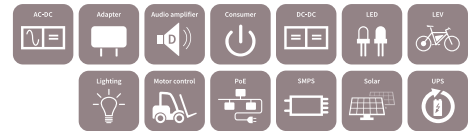
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2) 8 V rated ( $R_{DS(on)}$  also specified @  $V_{GS} = 8\text{ V}$ )

3) Coming soon

5) 135 V

For more details on the product, click on the part number.



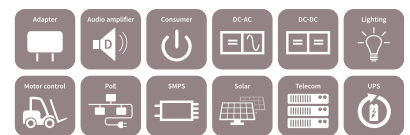
## OptiMOS™ and StrongIRFET™ 200 V normal level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK) | TO-263<br>(D <sup>2</sup> PAK)                                                                                                                                                                                                                                                                                         | TO-262<br>(I <sup>2</sup> PAK)                                                                                                                        | TO-220                                                                                                                                                                                                                                    | TO-220<br>FullPAK                                                                                | TO-247                                                                                                                                    |
|------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 4-10                                                 |                  |                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                       |                                                                                                                                                                                                                                           |                                                                                                  | IRF200P222<br>$R_{DS(on)}=6.6\text{ mΩ}$<br>IRFP4668PBF<br>$R_{DS(on)}=9.7\text{ mΩ}$                                                     |
| 10-25                                                |                  | IPB107N20N3 G<br>$R_{DS(on)}=10.7\text{ mΩ}$<br>IPB107N20NA <sup>4)</sup><br>$R_{DS(on)}=10.7\text{ mΩ}$<br>IPB110N20N3LF<br>$R_{DS(on)}=11.0\text{ mΩ}$<br>IPB117N20NFD<br>$R_{DS(on)}=11.7\text{ mΩ}$<br>IPB156N22NFD <sup>2)</sup><br>$R_{DS(on)}=15.6\text{ mΩ}$<br>IRFS4127TRL PBF<br>$R_{DS(on)}=22.0\text{ mΩ}$ | IPI110N20N3 G<br>$R_{DS(on)}=11.0\text{ mΩ}$                                                                                                          | IPP110N20N3 G<br>$R_{DS(on)}=11.0\text{ mΩ}$<br>IPP110N20NA<br>$R_{DS(on)}=11.0\text{ mΩ}$<br>IPP120N20NFD<br>$R_{DS(on)}=12.0\text{ mΩ}$<br>IRFB4127PBF<br>$R_{DS(on)}=20.0\text{ mΩ}$                                                   |                                                                                                  | IRF200P223<br>$R_{DS(on)}=11.5\text{ mΩ}$<br><br>IRFP4127PBF<br>$R_{DS(on)}=21.0\text{ mΩ}$<br>IRFP4227PBF<br>$R_{DS(on)}=25.0\text{ mΩ}$ |
| >25                                                  |                  | IRFS4227TRL PBF<br>$R_{DS(on)}=26.0\text{ mΩ}$<br>IPD320N20N3 G<br>$R_{DS(on)}=32.0\text{ mΩ}$<br><br>IRFR4620TRL PBF<br>$R_{DS(on)}=78.0\text{ mΩ}$                                                                                                                                                                   | IPB320N20N3 G<br>$R_{DS(on)}=32.0\text{ mΩ}$<br><br>IRFS4620TRL PBF<br>$R_{DS(on)}=78.0\text{ mΩ}$<br>IRFS4020TRL PBF<br>$R_{DS(on)}=105.0\text{ mΩ}$ | IPI320N20N3 G<br>$R_{DS(on)}=32.0\text{ mΩ}$<br><br>IRFB4620PBF<br>$R_{DS(on)}=72.5\text{ mΩ}$<br>IRFB5620PBF<br>$R_{DS(on)}=72.5\text{ mΩ}$<br>IRFB4020PBF<br>$R_{DS(on)}=100.0\text{ mΩ}$<br>IRF200B211<br>$R_{DS(on)}=170.0\text{ mΩ}$ | IPA320N20NM3S<br>$R_{DS(on)}=32.0\text{ mΩ}$<br>IRFI4020H-117P<br>$R_{DS(on)}=100\text{ mΩ, HB}$ |                                                                                                                                           |



## OptiMOS™ and StrongIRFET™ 200 V normal level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | DirectFET™ | PQFN 3.3 x 3.3 | SuperSO8                                                                                                                                                                                                                                                                                                                                      | SO-8                                        | TO-Leadless                                 |
|------------------------------------------------------|------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------|
| 10-25                                                |            |                | BSC220N20NSFD<br>$R_{DS(on)}=22.0\text{ mΩ}$                                                                                                                                                                                                                                                                                                  |                                             | IPT111N20NFD<br>$R_{DS(on)}=11.1\text{ mΩ}$ |
| >25                                                  |            |                | BSC320N20NS3 G<br>$R_{DS(on)}=32.0\text{ mΩ}$<br>BSC350N20NSFD<br>$R_{DS(on)}=35.0\text{ mΩ}$<br>BSC500N20NS3G<br>$R_{DS(on)}=50.0\text{ mΩ}$<br>IRFH5020<br>$R_{DS(on)}=55.0\text{ mΩ}$<br>BSZ900N20NS3 G<br>$R_{DS(on)}=90.0\text{ mΩ}$<br>BSZ12DN20NS3 G<br>$R_{DS(on)}=125.0\text{ mΩ}$<br>BSZ22DN20NS3 G<br>$R_{DS(on)}=225.0\text{ mΩ}$ | IRF7820TRPBF<br>$R_{DS(on)}=78.0\text{ mΩ}$ |                                             |



## OptiMOS™ and StrongIRFET™ 250 V normal level

| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-252<br>(DPAK)                             | TO-263<br>(D <sup>2</sup> PAK)                 | TO-262<br>(I <sup>2</sup> PAK)               | TO-220                                       | TO-220<br>FullPAK                            | TO-247                                     | PQFN 3.3 x 3.3                                 | SuperSO8                                       | TO-Leadless                                 |
|------------------------------------------------------|----------------------------------------------|------------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|--------------------------------------------|------------------------------------------------|------------------------------------------------|---------------------------------------------|
| 10-25                                                |                                              | IPB200N25N3 G<br>$R_{DS(on)}=20.0\text{ mΩ}$   | IPI200N25N3 G<br>$R_{DS(on)}=20.0\text{ mΩ}$ | IPP200N25N3 G<br>$R_{DS(on)}=20.0\text{ mΩ}$ |                                              | IRF250P224<br>$R_{DS(on)}=12.0\text{ mΩ}$  |                                                |                                                |                                             |
|                                                      |                                              |                                                |                                              | IPP220N25NFD<br>$R_{DS(on)}=22.0\text{ mΩ}$  |                                              | IRFP4768PBF<br>$R_{DS(on)}=17.5\text{ mΩ}$ |                                                |                                                | IPT210N25NFD<br>$R_{DS(on)}=21.0\text{ mΩ}$ |
|                                                      |                                              |                                                |                                              |                                              |                                              | IRF250P225<br>$R_{DS(on)}=22.0\text{ mΩ}$  |                                                |                                                |                                             |
| >25                                                  |                                              |                                                |                                              |                                              |                                              |                                            |                                                | BSC430N25NSFD<br>$R_{DS(on)}=43.0\text{ mΩ}$   |                                             |
|                                                      |                                              | IRFS4229TRL PBF<br>$R_{DS(on)}=48.0\text{ mΩ}$ |                                              | IRFB4332PBF<br>$R_{DS(on)}=33.0\text{ mΩ}$   |                                              | IRFP4332PBF<br>$R_{DS(on)}=33.0\text{ mΩ}$ |                                                | BSC600N25NS3 G<br>$R_{DS(on)}=60.0\text{ mΩ}$  |                                             |
|                                                      | IPD600N25N3 G<br>$R_{DS(on)}=60.0\text{ mΩ}$ | IPB600N25N3 G<br>$R_{DS(on)}=60.0\text{ mΩ}$   | IPI600N25N3 G<br>$R_{DS(on)}=60.0\text{ mΩ}$ | IRFB4229PBF<br>$R_{DS(on)}=46.0\text{ mΩ}$   |                                              |                                            |                                                | BSC670N25NSFD<br>$R_{DS(on)}=67.0\text{ mΩ}$   |                                             |
|                                                      |                                              |                                                |                                              | IPP600N25N3 G<br>$R_{DS(on)}=60.0\text{ mΩ}$ | IPA600N25NM3S<br>$R_{DS(on)}=60.0\text{ mΩ}$ | IRFP4229PBF<br>$R_{DS(on)}=46.0\text{ mΩ}$ | BSZ16DN25NS3 G<br>$R_{DS(on)}=165.0\text{ mΩ}$ | IRFH5025<br>$R_{DS(on)}=100.0\text{ mΩ}$       |                                             |
|                                                      |                                              |                                                |                                              |                                              |                                              |                                            | BSZ42DN25NS3 G<br>$R_{DS(on)}=425.0\text{ mΩ}$ | BSC16DN25NS3 G<br>$R_{DS(on)}=165.0\text{ mΩ}$ |                                             |

## OptiMOS™ and StrongIRFET™ 300 V normal level



| $R_{DS(on), max.}$<br>@ $V_{GS}=10\text{ V}$<br>[mΩ] | TO-263<br>(D <sup>2</sup> PAK)            | TO-220                                     | TO-247                                     | SuperSO8                                      |
|------------------------------------------------------|-------------------------------------------|--------------------------------------------|--------------------------------------------|-----------------------------------------------|
| 0-25                                                 |                                           |                                            | IRF300P226<br>$R_{DS(on)}=19.0\text{ mΩ}$  |                                               |
| >25                                                  | IPB407N30N<br>$R_{DS(on)}=40.7\text{ mΩ}$ | IPP410N30N<br>$R_{DS(on)}=41.0\text{ mΩ}$  | IRFP4868PBF<br>$R_{DS(on)}=32.0\text{ mΩ}$ |                                               |
|                                                      |                                           |                                            | IRF300P227<br>$R_{DS(on)}=40.0\text{ mΩ}$  |                                               |
|                                                      |                                           | IRFB4137PBF<br>$R_{DS(on)}=69.0\text{ mΩ}$ | IRFP4137PBF<br>$R_{DS(on)}=69.0\text{ mΩ}$ | BSC13DN30NSFD<br>$R_{DS(on)}=130.0\text{ mΩ}$ |

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For more details on the product, click on the part number.



## Power MOSFETs complementary



| Voltage [V]   |        |         | PQFN 3.3 x 3.3                                            | SO-8                                                 |
|---------------|--------|---------|-----------------------------------------------------------|------------------------------------------------------|
| Complementary | -20/20 | >50 mΩ  | BSZ15DC02KD H*/**<br>N: 55 mΩ, 5.1 A<br>P: 150 mΩ, -3.2 A |                                                      |
|               |        |         | BSZ215C H*/**<br>N: 55 mΩ, 5.1 A<br>P: 150 mΩ, -3.2 A     |                                                      |
|               | -60/60 | 11-30 Ω |                                                           | BSO612CV G*<br>N: 0.12 Ω, 3.0 A<br>P: 0.30 Ω, -2.0 A |
|               |        |         |                                                           | BSO615C G*<br>N: 0.11 Ω, 3.1 A<br>P: 0.30 Ω, -2.0 A  |

[www.infineon.com/complementary](http://www.infineon.com/complementary)

\*Products are qualified to Automotive AEC Q101

\*\*R<sub>DS(on)</sub> specified at 4.5 V

For more details on the product, click on the part number. 

## Power P-channel MOSFETs



| Voltage [V] | TO-252 (DPAK)                                         | TO-263 (D <sup>+</sup> PAK)                          | TO-220                                                | DirectFET™                                            | PQFN 3.3 x 3.3                                               | SuperSO8                                                    | SO-8                                                        | PQFN 2 x 2                                                    |
|-------------|-------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------|
| -20         |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | BSO201SP H<br>$R_{DS(on)} = 7.0 \text{ m}\Omega$            |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | BSO203SP H<br>$R_{DS(on)} = 21.0 \text{ m}\Omega$           |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | BSO203P H<br>$R_{DS(on)} = 21.0 \text{ m}\Omega$            |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             | IRLHS2242TRPBF**<br>$R_{DS(on)} = 31.0 \text{ m}\Omega$       |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | BSO207P H<br>$R_{DS(on)} = 45.0 \text{ m}\Omega$            |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | BSO211P H<br>$R_{DS(on)} = 67.0 \text{ m}\Omega$            |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              | BSC030P03NS3 G<br>$R_{DS(on)} = 3.0 \text{ m}\Omega$        | IRF9310<br>$R_{DS(on)} = 4.6 \text{ m}\Omega$               |                                                               |
|             | IPD042P03L3 G<br>$R_{DS(on)} = 4.2 \text{ m}\Omega$   |                                                      |                                                       |                                                       |                                                              | BSC060P03NS3E G<br>$R_{DS(on)} = 6.0 \text{ m}\Omega$ ; ESD | IRF9317<br>$R_{DS(on)} = 6.6 \text{ m}\Omega$               |                                                               |
|             |                                                       |                                                      |                                                       |                                                       | BSZ086P03NS3 G<br>$R_{DS(on)} = 8.6 \text{ m}\Omega$         |                                                             | IRF9321<br>$R_{DS(on)} = 7.2 \text{ m}\Omega$               |                                                               |
|             | SPD50P03L G**<br>$R_{DS(on)} = 7.0 \text{ m}\Omega$   |                                                      |                                                       | IRF9395M<br>$R_{DS(on)} = 7.0 \text{ m}\Omega$ ; dual | BSZ086P03NS3E G<br>$R_{DS(on)} = 8.6 \text{ m}\Omega$        |                                                             | BSO080P03NS 3 G<br>$R_{DS(on)} = 8.0 \text{ m}\Omega$       |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              | BSC084P03NS3 G<br>$R_{DS(on)} = 8.4 \text{ m}\Omega$        | BSO080P03NS3E G<br>$R_{DS(on)} = 8.0 \text{ m}\Omega$ ; ESD |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              | BSC084P03NS3E G<br>$R_{DS(on)} = 8.4 \text{ m}\Omega$ ; ESD | BSO080P03S H<br>$R_{DS(on)} = 8.0 \text{ m}\Omega$          |                                                               |
|             |                                                       |                                                      |                                                       |                                                       | BSZ120P03NS3 G<br>$R_{DS(on)} = 12.0 \text{ m}\Omega$        |                                                             | BSO301SP H<br>$R_{DS(on)} = 8.0 \text{ m}\Omega$            |                                                               |
|             |                                                       |                                                      |                                                       |                                                       | BSZ120P03NS3E G<br>$R_{DS(on)} = 12.0 \text{ m}\Omega$ ; ESD |                                                             | IRF9328<br>$R_{DS(on)} = 11.9 \text{ m}\Omega$              |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | IRF9388TRPBF<br>$R_{DS(on)} = 11.9 \text{ m}\Omega$         |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | BSO130P03S H<br>$R_{DS(on)} = 13.0 \text{ m}\Omega$         |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | IRF9358<br>$R_{DS(on)} = 16 \text{ m}\Omega$ ; dual         |                                                               |
|             |                                                       |                                                      |                                                       |                                                       | IRFHM9331 <sup>1)</sup><br>$R_{DS(on)} = 15 \text{ m}\Omega$ |                                                             | IRF9332<br>$R_{DS(on)} = 17.5 \text{ m}\Omega$              |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       | BSZ180P03NS3 G<br>$R_{DS(on)} = 18.0 \text{ m}\Omega$        |                                                             | IRF9333<br>$R_{DS(on)} = 19.4 \text{ m}\Omega$              |                                                               |
| -30         |                                                       |                                                      |                                                       |                                                       | BSZ180P03NS3E G<br>$R_{DS(on)} = 18.0 \text{ m}\Omega$ ; ESD |                                                             | BSO200P03S H<br>$R_{DS(on)} = 20.0 \text{ m}\Omega$         |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | BSO303SP H<br>$R_{DS(on)} = 21.0 \text{ m}\Omega$           | IRFHS9301TRPBF<br>$R_{DS(on)} = 37.0 \text{ m}\Omega$         |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | BSO303P H<br>$R_{DS(on)} = 21.0 \text{ m}\Omega$ ; dual     |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | IRF9362<br>$R_{DS(on)} = 21 \text{ m}\Omega$ ; dual         | IRFHS9351TRPBF<br>$R_{DS(on)} = 170.0 \text{ m}\Omega$ ; dual |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             | IRF9335<br>$R_{DS(on)} = 59 \text{ m}\Omega$                |                                                               |
|             | IPD380P06NM<br>$R_{DS(on)} = 38 \text{ m}\Omega$      | IPB110P06LM<br>$R_{DS(on)} = 11 \text{ m}\Omega$     | SPP80P06P H*<br>$R_{DS(on)} = 23.0 \text{ m}\Omega$   |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | IPD650P06NM<br>$R_{DS(on)} = 65 \text{ m}\Omega$      | SPB80P06P G*<br>$R_{DS(on)} = 23.0 \text{ m}\Omega$  |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | SPD30P06P G*<br>$R_{DS(on)} = 75.0 \text{ m}\Omega$   |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | IPD900P06NM<br>$R_{DS(on)} = 90 \text{ m}\Omega$      |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | SPD18P06P G*<br>$R_{DS(on)} = 130.0 \text{ m}\Omega$  | SPB18P06P G*<br>$R_{DS(on)} = 130.0 \text{ m}\Omega$ | SPP18P06P H*<br>$R_{DS(on)} = 130.0 \text{ m}\Omega$  |                                                       |                                                              |                                                             | BSO613SPV G*<br>$R_{DS(on)} = 130.0 \text{ m}\Omega$        |                                                               |
|             | SPD09P06PL G*<br>$R_{DS(on)} = 250.0 \text{ m}\Omega$ |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | IPD25DP06LM<br>$R_{DS(on)} = 250 \text{ m}\Omega$     |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | IPD25DP06NM<br>$R_{DS(on)} = 250 \text{ m}\Omega$     |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | SPD08P06P G*<br>$R_{DS(on)} = 300.0 \text{ m}\Omega$  |                                                      | SPP08P06P H*<br>$R_{DS(on)} = 300.0 \text{ m}\Omega$  |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | IPD40DP06NM<br>$R_{DS(on)} = 400 \text{ m}\Omega$     |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | SPD15P10PL G*<br>$R_{DS(on)} = 200.0 \text{ m}\Omega$ |                                                      | SPP15P10PL H*<br>$R_{DS(on)} = 200.0 \text{ m}\Omega$ |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | SPD15P10P G*<br>$R_{DS(on)} = 240.0 \text{ m}\Omega$  |                                                      | SPP15P10P H*<br>$R_{DS(on)} = 240.0 \text{ m}\Omega$  |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | SPD04P10PL G*<br>$R_{DS(on)} = 850.0 \text{ m}\Omega$ |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             | SPD04P10P G*<br>$R_{DS(on)} = 1000.0 \text{ m}\Omega$ |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
| -60         |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
| -100        |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |
|             |                                                       |                                                      |                                                       |                                                       |                                                              |                                                             |                                                             |                                                               |

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\* Products are qualified to Automotive AEC Q101

\*\* $R_{DS(on)}$  specified at 4.5 V

1) 5-leg

2) 2.5  $V_{GS}$  capableFor more details on the product, click on the part number. 

## Small signal/small power N-channel



| Voltage [V] |     | SOT-223                           | TSOP-6                                         | SOT-89                      | SC59                         | SOT-23                                                              | SOT-323                        | SOT-363                              |
|-------------|-----|-----------------------------------|------------------------------------------------|-----------------------------|------------------------------|---------------------------------------------------------------------|--------------------------------|--------------------------------------|
| N-channel   | 20  |                                   |                                                |                             | BSR802N<br>23 mΩ, 3.7 A, ULL | IRLML6244* <sup>1)</sup><br>21 mΩ, 6.3 A, LL                        |                                |                                      |
|             |     |                                   | BSL202SN<br>22 mΩ, 7.5 A, SLL                  |                             | BSR202N<br>21 mΩ, 3.8 A, SLL | IRLML2502* <sup>1)</sup><br>45 mΩ, 4.2 A, SLL                       |                                |                                      |
|             |     |                                   | IRLMS2002* <sup>1)</sup><br>30 mΩ, 6.5 A, SLL  |                             |                              | IRLML6246* <sup>1)</sup><br>46 mΩ, 4.1 A, LL                        |                                |                                      |
|             |     |                                   |                                                |                             |                              | BSS205N<br>50 mΩ, 2.5 A, SLL                                        |                                | BSD214SN<br>140 mΩ, 1.5 A, SLL       |
|             |     |                                   |                                                |                             |                              | BSS806NE<br>57 mΩ, 2.3 A, ULL, ESD                                  |                                |                                      |
|             |     |                                   | BSL806N**<br>82 mΩ, 2.3 A, ULL                 |                             |                              | BSS806N<br>57 mΩ, 2.3 A, ULL                                        | BSS214NW<br>140 mΩ, 1.5 A, SLL | BSD235N<br>350 mΩ, 0.95 A, SLL, dual |
|             |     |                                   | IRLMS1902* <sup>1)</sup><br>100 mΩ, 3.2 A, SLL |                             |                              | BSS214N<br>140 mΩ, 1.5 A, SLL                                       | BSS816NW<br>160 mΩ, 1.4 A, ULL | BSD840N<br>400 mΩ, 0.88 A, ULL, dual |
|             |     |                                   |                                                |                             |                              | IRLML2402* <sup>1)</sup><br>250 mΩ, 1.2 A, SLL                      |                                |                                      |
|             | 25  |                                   |                                                |                             |                              | IRFML8244*<br>24 mΩ, 5.8 A, NL                                      |                                |                                      |
|             |     |                                   |                                                |                             |                              | IRLML0030*<br>27 mΩ, 5.3 A, LL                                      |                                | BSD316SN<br>160 mΩ, 1.4A, LL         |
|             | 30  |                                   | IRLTS6342* <sup>1)</sup><br>17.5 mΩ, 8.3 A, LL |                             |                              | IRLML6344* <sup>1)</sup><br>29 mΩ, 5.0 A, LL                        |                                |                                      |
|             |     |                                   | IRFTS8342*<br>19 mΩ, 8.2 A, NL                 |                             |                              | BSS306N<br>57 mΩ, 2.3 A, LL                                         |                                |                                      |
|             |     |                                   |                                                |                             |                              | IRLML6346* <sup>1)</sup><br>63 mΩ, 3.4 A, LL                        |                                |                                      |
|             |     |                                   | IRLMS1503*<br>100 mΩ, 3.2 A, LL                |                             |                              | IRLML2030*<br>100 mΩ, 1.4 A, LL                                     |                                |                                      |
|             |     |                                   |                                                |                             |                              | BSS316N<br>160 mΩ, 1.4 A, LL                                        |                                |                                      |
|             |     |                                   |                                                |                             |                              | IRLML2803*<br>250 mΩ, 1.2 A, LL                                     |                                |                                      |
|             |     |                                   |                                                |                             |                              | IRLML0040TRPBF*<br>56 mΩ, 3.6 A, LL                                 |                                |                                      |
|             |     |                                   |                                                |                             |                              | BSS670S2L<br>650 mΩ, 0.54 A, LL                                     | BSS340NW<br>400 mΩ, 0.88 A, LL |                                      |
|             | 60  | BSP318S<br>90 mΩ, 2.6 A, LL       | BSL606SN<br>60 mΩ, 4.5 A, LL                   | BSS606N<br>60 mΩ, 3.2 A, LL |                              | IRLML0060*<br>92 mΩ, 2.7 A, LL                                      | BSS138W<br>3.5 Ω, 0.28 A, LL   | 2N7002DW<br>3 Ω, 0.3 A, LL, dual     |
|             |     | BSP320S<br>120 mΩ, 2.9 A, NL      |                                                |                             |                              | IRLML2060*<br>480 mΩ, 1.2 A, LL                                     | SN7002W<br>5 Ω, 0.23 A, LL     |                                      |
|             |     | BSP295<br>300 mΩ, 1.8 A, LL       |                                                |                             |                              | BSS138N<br>3.5 Ω, 0.23 A, LL                                        |                                |                                      |
|             |     |                                   |                                                |                             |                              | BSS7728N<br>5 Ω, 0.2 A, LL                                          |                                |                                      |
|             |     |                                   |                                                |                             |                              | SN7002N<br>5 Ω, 0.2 A, LL                                           |                                |                                      |
|             |     |                                   |                                                |                             |                              | 2N7002*<br>3 Ω, 0.3 A, LL                                           |                                |                                      |
|             |     |                                   |                                                |                             |                              | BSS159N<br>8 Ω, 0.13 A, depl.                                       |                                |                                      |
|             |     |                                   |                                                |                             |                              |                                                                     |                                |                                      |
|             | 75  | BSP716N<br>160 mΩ, 2.3 A, LL      |                                                |                             |                              |                                                                     |                                |                                      |
|             |     | BSP372N<br>230 mΩ, 1.8 A, LL      |                                                |                             |                              | IRLML0100*<br>220 mΩ, 1.6 A, LL                                     |                                |                                      |
|             |     | BSP373N<br>240 mΩ, 1.8 A, NL      |                                                |                             |                              | BSS119N<br>6 Ω, 0.19 A, LL                                          |                                |                                      |
|             |     | BSP296N<br>600 mΩ, 1.2 A, LL      |                                                |                             |                              | V <sub>GS(th)</sub> 1.8 V to 2.3 V<br>BSS123N<br>6 Ω, 0.19 A, LL    |                                |                                      |
|             | 100 |                                   |                                                |                             |                              | V <sub>GS(th)</sub> 0.8 V to 1.8 V<br>BSS169<br>12 Ω, 0.09 A, depl. |                                |                                      |
|             |     |                                   |                                                |                             |                              |                                                                     |                                |                                      |
|             |     |                                   |                                                |                             |                              |                                                                     |                                |                                      |
|             |     |                                   |                                                |                             |                              |                                                                     |                                |                                      |
|             | 150 |                                   | IRF5802*<br>1.2 mΩ, 0.9 A, NL                  |                             |                              |                                                                     |                                |                                      |
|             |     |                                   | IRF5801*<br>2.2 mΩ, 0.6 A, NL                  |                             |                              |                                                                     |                                |                                      |
|             | 200 | BSP297<br>1.8 Ω, 0.66 A, LL       |                                                |                             |                              |                                                                     |                                |                                      |
|             |     | BSP149<br>3.5 Ω, 0.14 A, depl.    |                                                |                             |                              |                                                                     |                                |                                      |
|             | 240 | BSP88<br>6 Ω, 0.35 A, 2.8 V rated |                                                | BSS87<br>6 Ω, 0.26 A, LL    |                              | BSS131<br>14 Ω, 0.1 A, LL                                           |                                |                                      |
|             |     | BSP89<br>6 Ω, 0.35 A, LL          |                                                |                             |                              |                                                                     |                                |                                      |
|             |     | BSP129<br>6 Ω, 0.05 A, depl.      |                                                |                             |                              |                                                                     |                                |                                      |
|             | 250 |                                   |                                                |                             |                              | BSS139<br>30 Ω, 0.03 A, depl.                                       |                                |                                      |
|             | 400 | BSP324<br>25 Ω, 0.17 A, LL        |                                                |                             |                              |                                                                     |                                |                                      |
|             | 500 |                                   |                                                |                             |                              |                                                                     |                                |                                      |
|             | 600 | BSP125<br>45 Ω, 0.12 A, LL        |                                                | BSS225<br>45 Ω, 0.09 A, LL  |                              | BSS127<br>500 Ω, 0.023 A, LL                                        |                                |                                      |
|             |     | BSP135<br>60 Ω, 0.02 A, depl.     |                                                |                             |                              | BSS126<br>700 Ω, 0.007 A, depl.                                     |                                |                                      |
|             | 800 |                                   |                                                |                             |                              |                                                                     |                                |                                      |

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All products are qualified to Automotive AEC Q101 (except the parts marked with\*)

1) R<sub>DS(on)</sub> specified at 4.5 V

\*\* For more information on the product, contact our product support

For more details on the product, click on the part number.





## Small signal/small power P-channel

| Voltage [V]       |      | SOT-223                            | TSOP-6                                          | SOT-89                       | SC59                           | SOT-23                                           | SOT-323                                        | SOT-363                                            |
|-------------------|------|------------------------------------|-------------------------------------------------|------------------------------|--------------------------------|--------------------------------------------------|------------------------------------------------|----------------------------------------------------|
| P-channel MOSFETs | -250 | BSP317P<br>4 Ω, -0.43 A, LL        |                                                 | BSS192P<br>12 Ω, -0.19 A, LL | BSR92P<br>11 Ω, -0.14 A, LL    |                                                  |                                                |                                                    |
|                   |      | BSP92P<br>12 Ω, -0.26 A, LL        |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   |      | BSP321P<br>900 mΩ, -0.98 A, NL     |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   | -100 | BSP322P<br>800 mΩ, -1.0 A, LL      |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   |      | BSP316P<br>1.8 Ω, -0.68 A, LL      |                                                 |                              | BSR316P<br>1.8 Ω, -0.36 A, LL  |                                                  |                                                |                                                    |
|                   |      | ISP650P06NM<br>65 mΩ, -3.7 A, NL   |                                                 |                              |                                | ISS17EP06LM<br>1.7 Ω, -0.3 A, LL                 |                                                |                                                    |
|                   |      | ISP12DP06NM<br>125 mΩ, -2.8 A, NL  |                                                 |                              |                                | BSS83P<br>2 Ω, -0.33 A, LL                       | BSS84PW<br>8 Ω, -0.15 A, LL                    |                                                    |
|                   |      | ISP13DP06NMS<br>125 mΩ, -2.8 A, NL |                                                 |                              |                                | ISS55EP06LM<br>5.5 Ω, -0.18 A, NL                |                                                |                                                    |
|                   |      | BSP613P<br>130 mΩ, 2.9 A, NL       |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   |      | ISP25DP06LM<br>250 mΩ, -1.9 A, LL  |                                                 |                              |                                | BSS84P<br>8 Ω, -0.17 A, LL                       |                                                |                                                    |
|                   |      | ISP25DP06NM<br>250 mΩ, -1.9 A, NL  |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   | -60  | ISP25DP06LMS<br>250 mΩ, -1.9 A, LL |                                                 |                              | BSR315P<br>800 mΩ, -0.62 A, LL |                                                  |                                                |                                                    |
|                   |      | ISP26DP06NMS<br>260 mΩ, -1.9 A, NL |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   |      | BSP171P<br>300 mΩ, -1.9 A, LL      |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   |      | BSP170P<br>300 mΩ, -1.9 A, NL      |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   |      | ISP75DP06LM<br>750 mΩ, -1.1 A, LL  |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   |      | BSP315P<br>800 mΩ, -1.17 A, LL     |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   | -40  |                                    | IRF5803TRPBF*<br>112 mΩ, -3.4 A, LL             |                              |                                |                                                  |                                                |                                                    |
|                   |      |                                    | IRF59342TRPBF*<br>40 mΩ, -5.8 A, LL             |                              |                                | IRLML9301TRPBF*<br>64 mΩ, -3.6 A, LL             |                                                | BSD314SPE<br>140 mΩ, -1.5 A, LL, ESD               |
|                   |      |                                    | BSL307SP<br>43 mΩ, -5.5 A, LL                   |                              |                                | BSS308PE<br>80 mΩ, -2.1 A, LL, ESD               |                                                |                                                    |
|                   |      |                                    | BSL308PE<br>80 mΩ, -2.1 A, LL, dual, ESD        |                              |                                | IRLML5203TRPBF*<br>98 mΩ, -3.0 A, LL             |                                                |                                                    |
|                   | -30  |                                    |                                                 |                              |                                | BSS314PE<br>140 mΩ, -1.5 A, LL, ESD              |                                                |                                                    |
|                   |      |                                    |                                                 |                              |                                | BSS315P<br>150 mΩ, -1.5 A, LL                    |                                                |                                                    |
|                   |      |                                    |                                                 |                              |                                | IRLML9303TRPBF*<br>165 mΩ, -2.3 A, LL            |                                                |                                                    |
|                   |      |                                    |                                                 |                              |                                | IRLML5103TRPBF*<br>600 mΩ, -0.76 A, LL           |                                                |                                                    |
|                   |      |                                    |                                                 |                              |                                |                                                  |                                                |                                                    |
|                   | -20  |                                    | IRLTS2242* <sup>1)</sup><br>32 mΩ, -6.9 A, SLL  |                              |                                |                                                  |                                                |                                                    |
|                   |      |                                    | BSL207SP <sup>1)</sup><br>41 mΩ, -6 A, SLL      |                              |                                | IRLML2244* <sup>1)</sup><br>54 mΩ, 4.3 A, LL     |                                                |                                                    |
|                   |      |                                    | IRLMS6802* <sup>1)</sup><br>50 mΩ, -5.6 A, SLL  |                              |                                | IRLML6402* <sup>1)</sup><br>65 mΩ, -3.7 A, SLL   | BSS209PW <sup>1)</sup><br>550 mΩ, -0.58 A, SLL | BSV236SP <sup>1)</sup><br>175 mΩ, -1.5 A, SLL      |
|                   |      |                                    | BSL211SP <sup>1)</sup><br>67 mΩ, -4.7 A, SLL    |                              |                                | IRLML2246* <sup>1)</sup><br>135 mΩ, 2.6 A, LL    | BSS223PW <sup>1)</sup><br>1.2 Ω, -0.39 A, SLL  | BSD223P <sup>1)</sup><br>1.2 Ω, -0.39 A, SLL, dual |
|                   |      |                                    | IRLMS6702* <sup>1)</sup><br>200 mΩ, -2.4 A, SLL |                              |                                | BSS215P <sup>1)</sup><br>150 mΩ, -1.5 A, SLL     |                                                |                                                    |
|                   |      |                                    |                                                 |                              |                                | IRLML6302* <sup>1)</sup><br>600 mΩ, -0.78 A, SLL |                                                |                                                    |
|                   | -12  |                                    |                                                 |                              |                                | IRLML6401* <sup>1)</sup><br>50 mΩ, -4.3 A, SLL   |                                                |                                                    |

## Small signal/small power complementary



| Voltage [V]   |        | TSOP-6                                                    | SOT-363                                                    |
|---------------|--------|-----------------------------------------------------------|------------------------------------------------------------|
| Complementary | -20/20 | BSL215C<br>N: 140 mΩ, 1.5 A, SLL<br>P: 150 mΩ, 1.5 A, SLL | BSD235C<br>N: 350 mΩ, 0.95 A, SLL<br>P: 1.2 Ω, 0.53 A, SLL |
|               | -30/30 | BSL308C<br>N: 57 mΩ, 2.3 A, LL<br>P: 80 mΩ, -2.0 A, LL    |                                                            |
|               |        | BSL316C<br>N: 160 mΩ, 1.4 A, LL<br>P: 150 mΩ, -1.5 A, LL  |                                                            |

[www.infineon.com/smallsignal](http://www.infineon.com/smallsignal)

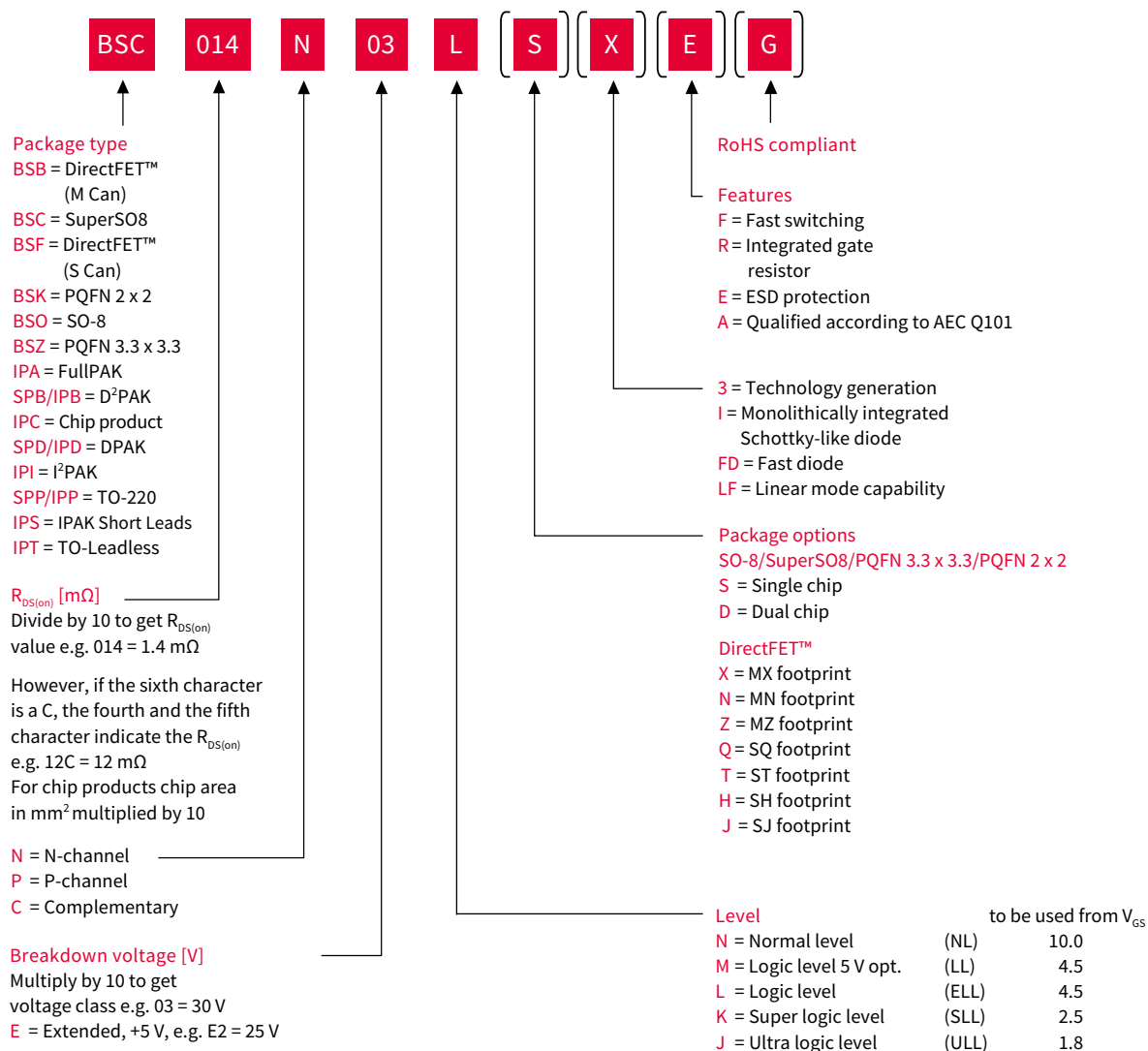
All products are qualified to Automotive AEC Q101 (except the parts marked with\*)

1) R<sub>DS(on)</sub> 4.5 V rated

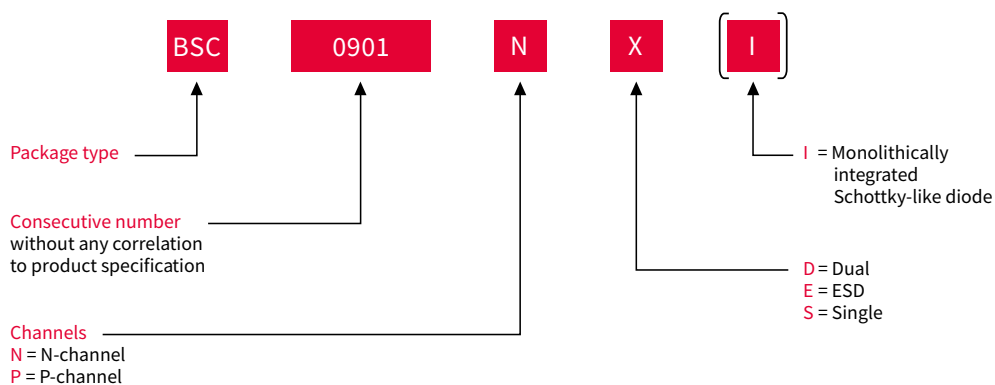
For more details on the product, click on the part number.

# Nomenclature

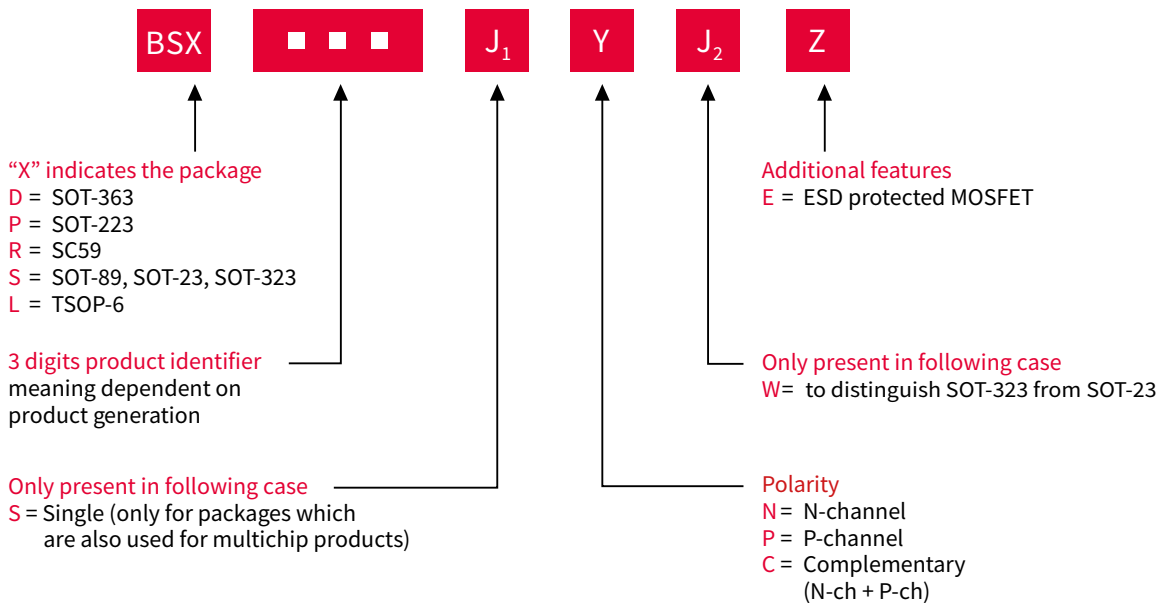
## OptiMOS™



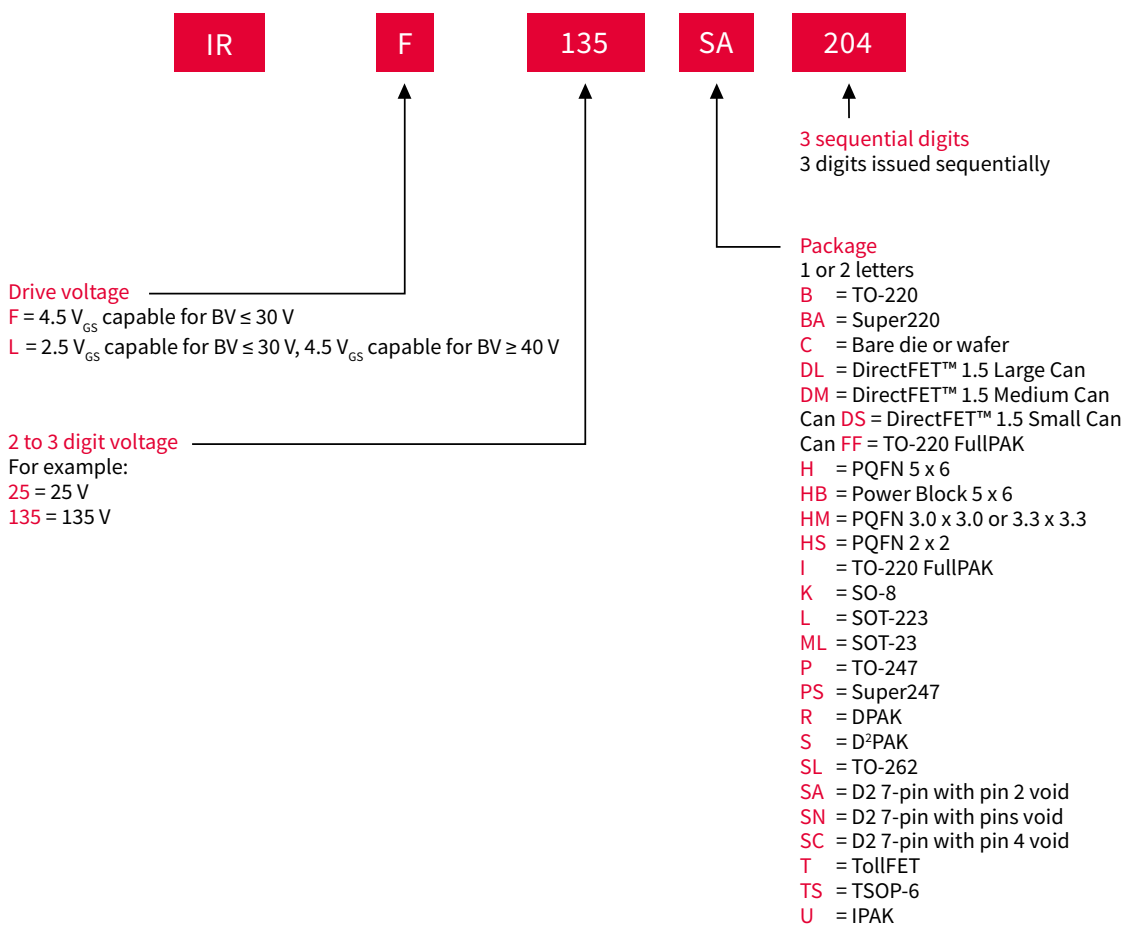
## OptiMOS™ 30 V



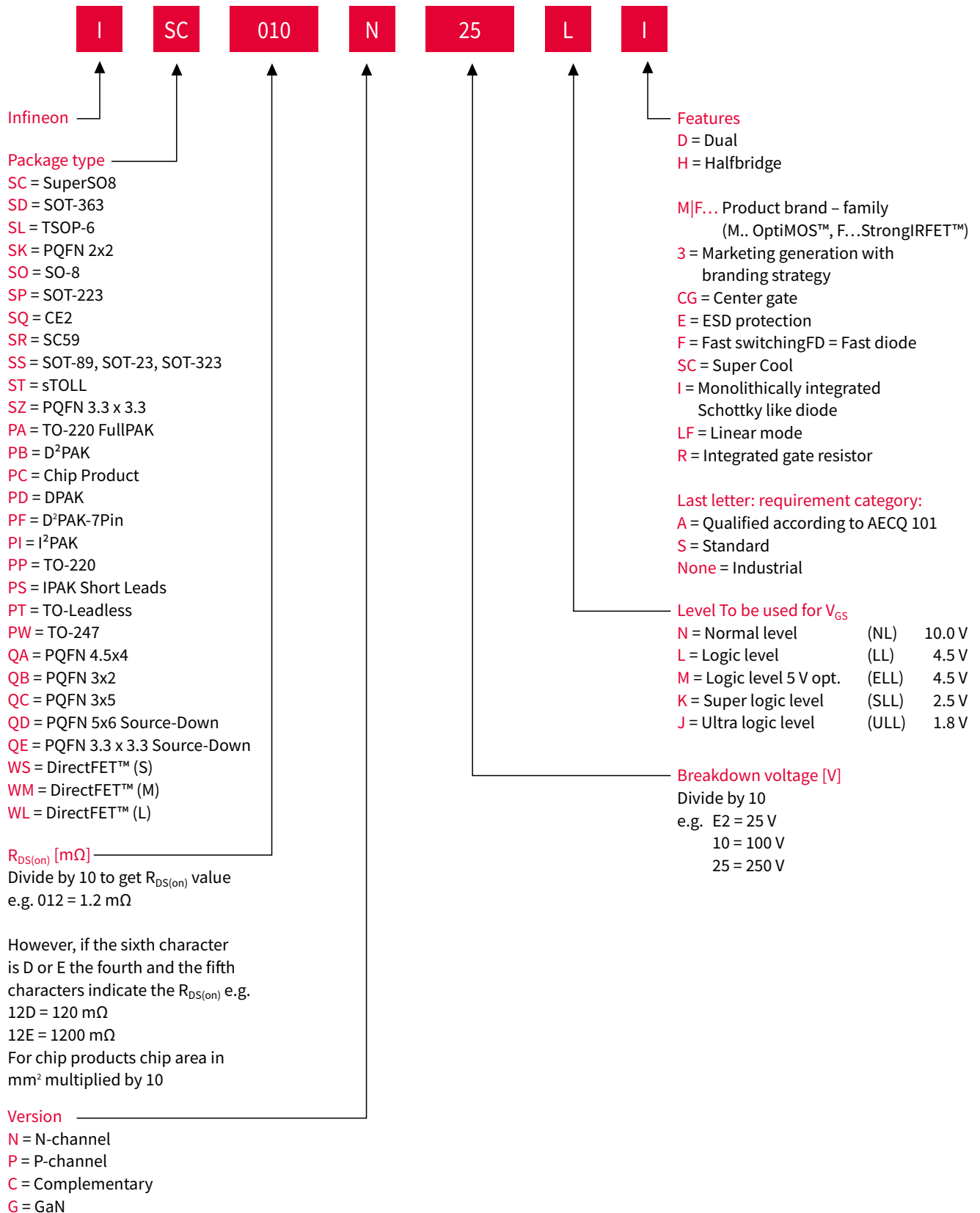
## Small signal



## StrongIRFET™ (from May 2015 to 2019)



## New nomenclature for OptiMOS™ and StrongIRFET™ MOSFETs (2019 onward)





# Infineon support for low voltage MOSFETs

Useful links and helpful information

## Further information, data sheets and documents

[www.infineon.com/powermosfet-12V-300V](http://www.infineon.com/powermosfet-12V-300V)

[www.infineon.com/smallsignal](http://www.infineon.com/smallsignal)

[www.infineon.com/pchannel](http://www.infineon.com/pchannel)

[www.infineon.com/depletion](http://www.infineon.com/depletion)

[www.infineon.com/complementary](http://www.infineon.com/complementary)

## Evaluation boards and simulation models

[www.infineon.com/to-leadless-evaluationboard](http://www.infineon.com/to-leadless-evaluationboard)

[www.infineon.com/powermosfet-simulationmodels](http://www.infineon.com/powermosfet-simulationmodels)

Support



Evaluation  
Board



Tools



Simulation





# Infineon powerful support

Useful links and helpful information

## General support

[www.infineon.com/support](http://www.infineon.com/support)  
[www.infineon.com/wheretobuy](http://www.infineon.com/wheretobuy)  
[www.infineon.com/quality](http://www.infineon.com/quality)  
[www.infineon.com/packages](http://www.infineon.com/packages)  
[www.infineon.com/green](http://www.infineon.com/green)  
[www.infineon.com/opn](http://www.infineon.com/opn)

## Request reliability (FIT) data

[http://infineon-community.com/FIT\\_1](http://infineon-community.com/FIT_1)

## Tools, desks and more

[www.infineon.com/solutionfinder](http://www.infineon.com/solutionfinder)  
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- › Germany ..... 0800 951 951 951 (German/English)
- › China, mainland ..... 4001 200 951 (Mandarin/English)
- › India ..... 000 800 4402 951 (English)
- › USA ..... 1-866 951 9519 (English/German)
- › Other countries ..... 00\* 800 951 951 951 (English/German)
- › Direct access ..... +49 89 234-0 (interconnection fee, German/English)

\* Please note: Some countries may require you to dial a code other than "00" to access this international number.  
Please visit [www.infineon.com/service](http://www.infineon.com/service) for your country!



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Published by  
Infineon Technologies Austria AG  
9500 Villach, Austria

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Document number: B118-I1022-V1-7600-EU-EC-P  
Date: 06 / 2020

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