

●Serie

Standard Fast Recovery

●Application

General rectification

For PFC

(DCM : Discontinuous Current Mode)

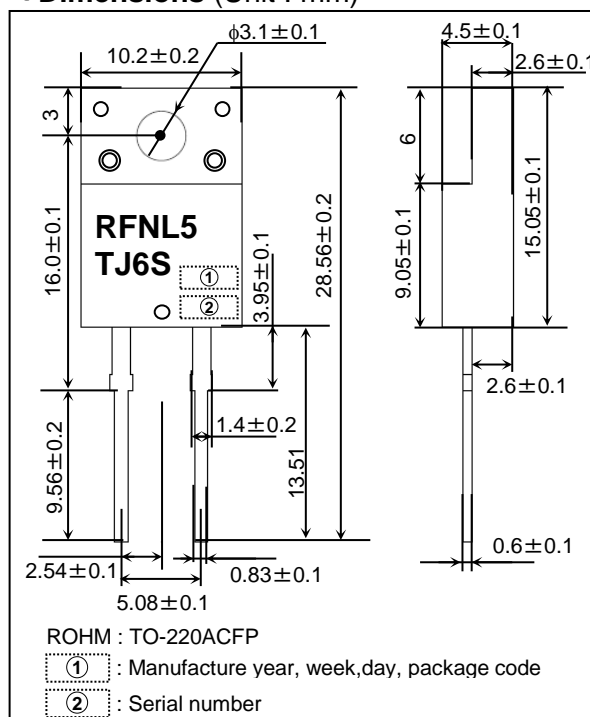
●Features

- 1) Ultra low forward voltage
- 2) Low switching loss
- 3) High current overload capacity

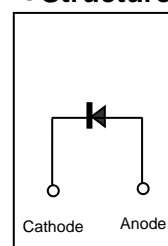
●Construction

Silicon epitaxial planar type

●Dimensions (Unit : mm)



●Structure



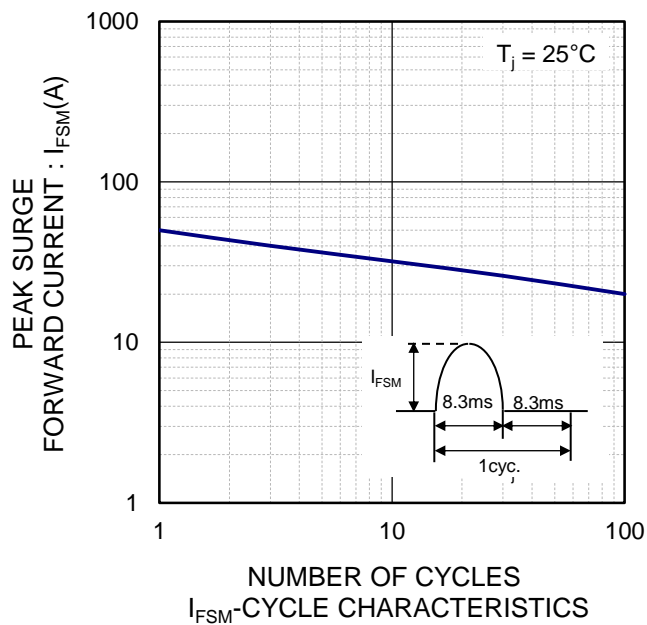
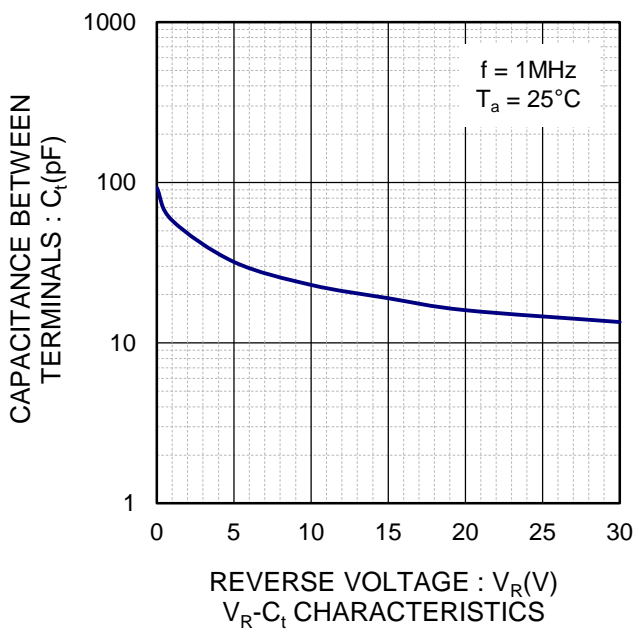
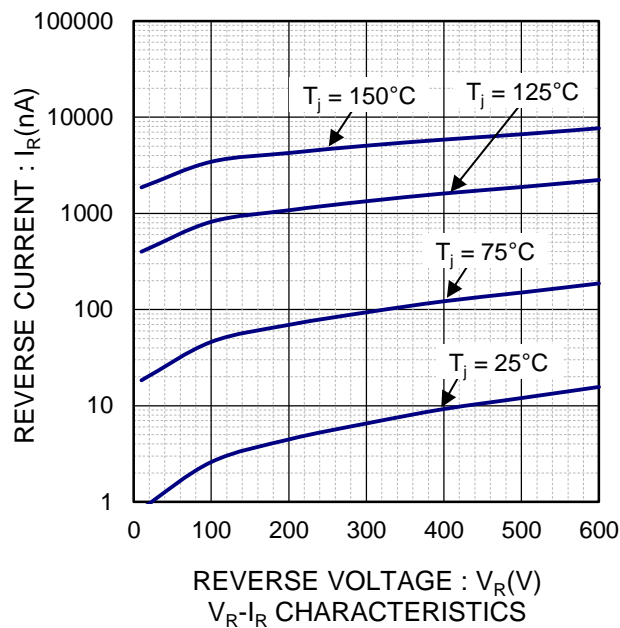
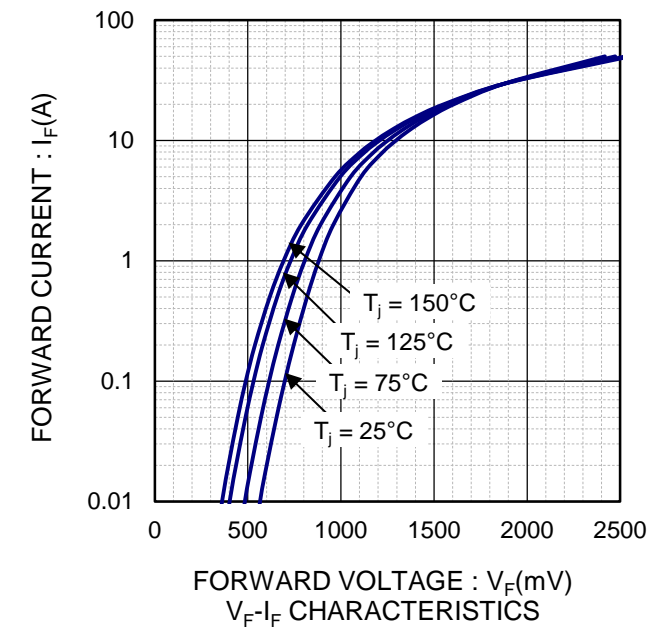
●Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	V_{RM}	Duty ≤ 0.5	600	V
Reverse voltage	V_R	Direct reverse voltage	600	V
Average current	I_o	60Hz half sin wave, resistive load	5	A
Non-repetitive forward surge current	I_{FSM}	60Hz half sin wave, one cycle, non-repetitive at $T_j = 25^\circ\text{C}$	50	A
Operating junction temperature	T_j	-	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$

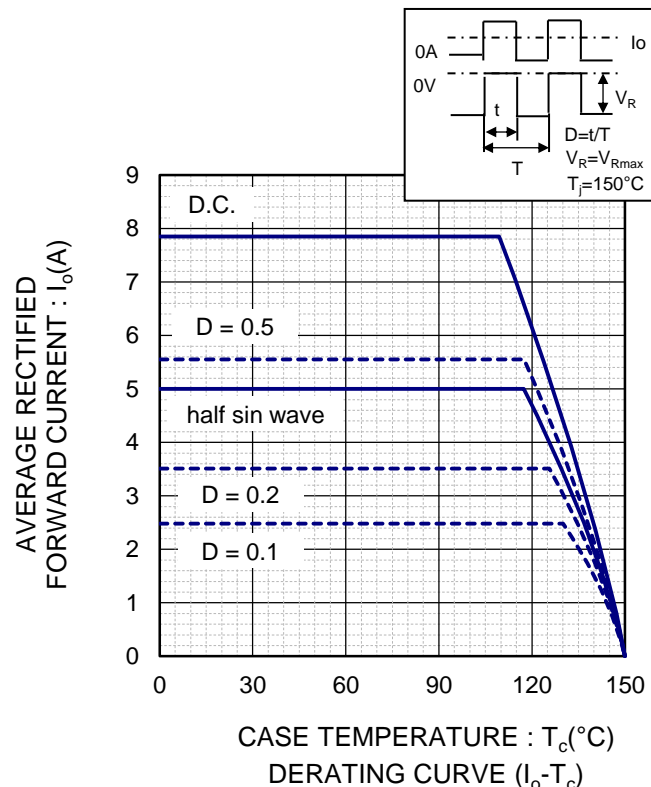
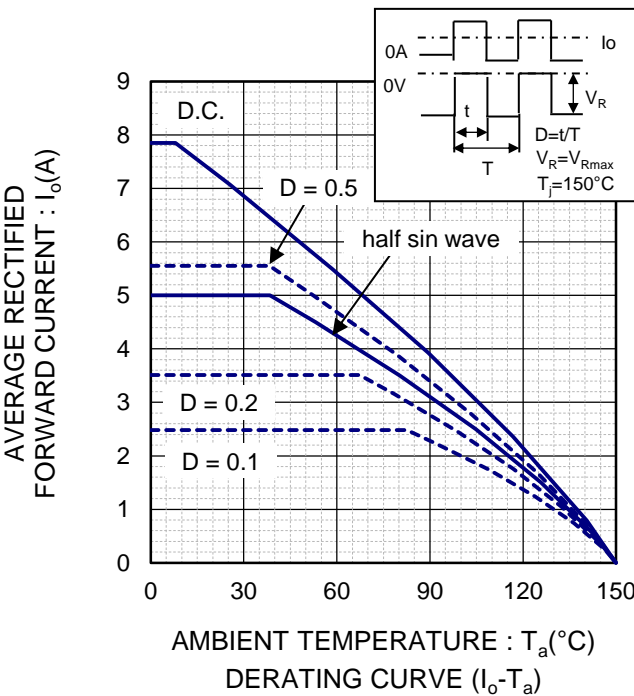
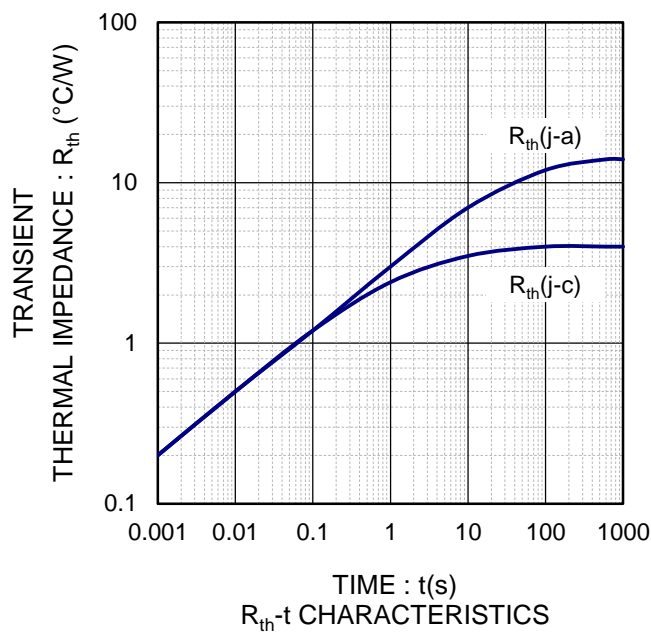
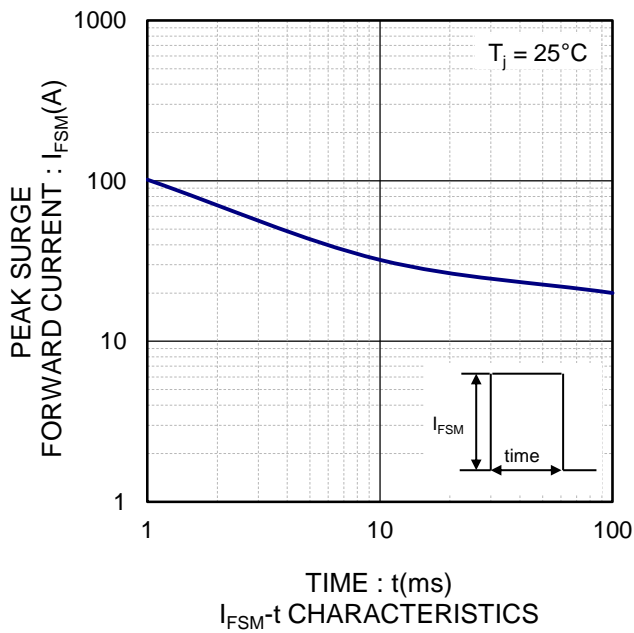
●Electrical Characteristics ($T_j = 25^\circ\text{C}$)

Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit
Forward voltage	V_F	$I_F=5A$	$T_j=25^{\circ}C$	0.9	1.1	1.3	V
			$T_j=125^{\circ}C$	-	0.95	-	V
Reverse current	I_R	$V_R=600V$	$T_j=25^{\circ}C$	-	0.02	10	μA
			$T_j=125^{\circ}C$	-	2	200	μA
Reverse recovery time	t_{rr}	$I_F=0.5A, I_R=1A, I_{rr}=0.25\times I_R$		-	38	60	ns
		$I_F=5A, V_R=400V, dI_F/dt=-100A/\mu s$		-	80	130	ns
Forward recovery time	t_{fr}	$I_F=5A, dI_F/dt=100A/\mu s,$		-	175	-	ns
Forward recovery voltage	V_{Fp}	$V_{FR}=1.1\times V_{Fmax}$		-	4.8	-	V
Thermal resistance	$R_{th(j-a)}$	Junction to ambient		-	-	14	$^{\circ}C/W$
	$R_{th(j-c)}$	Junction to case		-	-	4.0	$^{\circ}C/W$

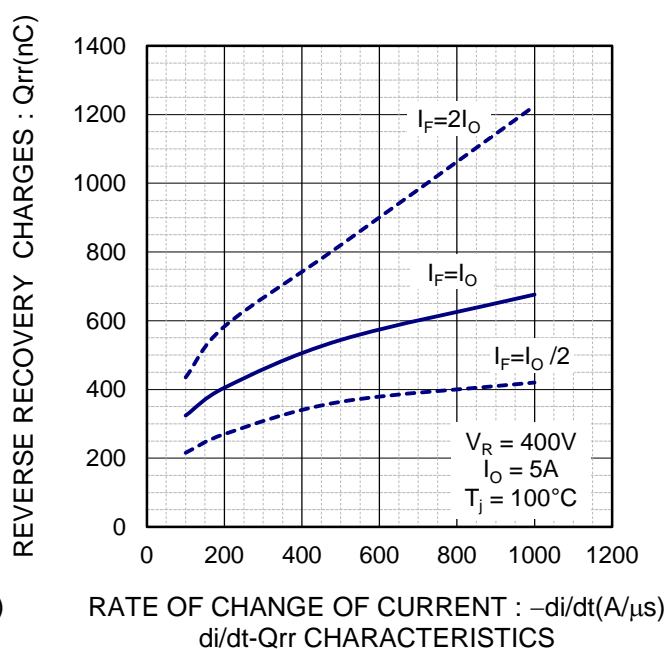
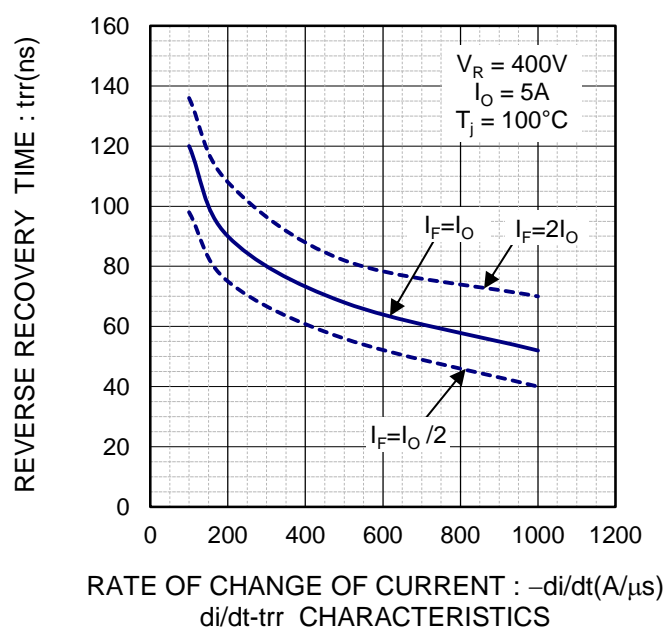
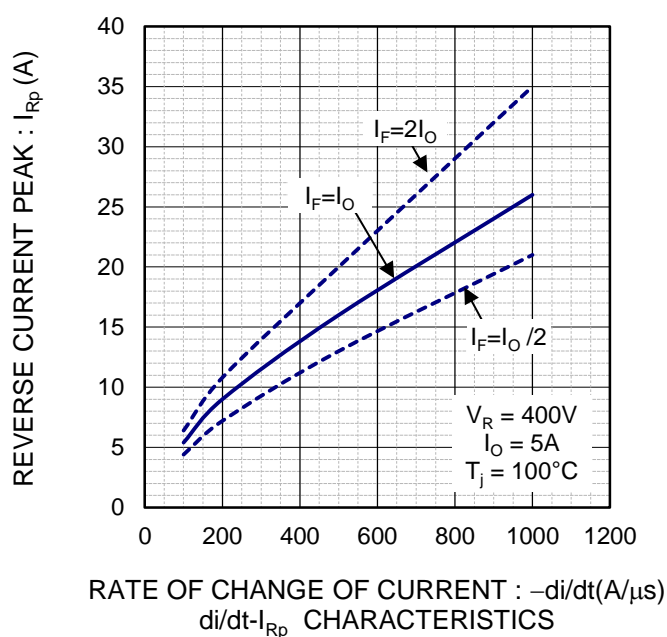
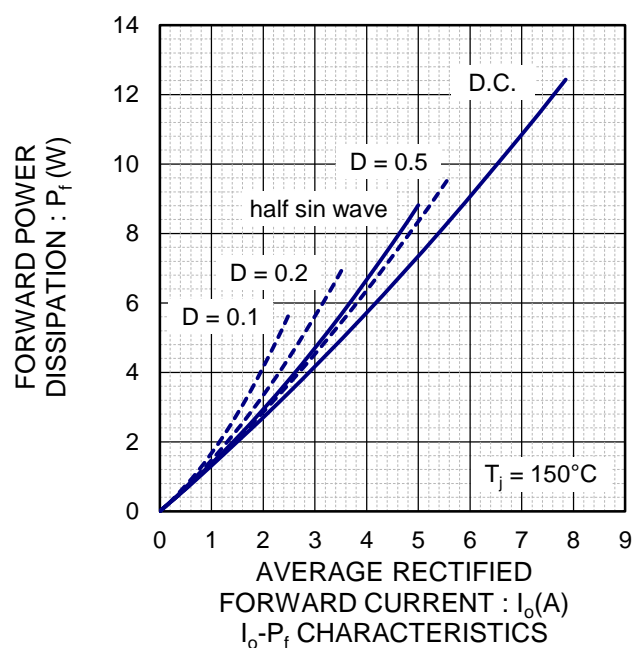
●Electrical Characteristic Curves



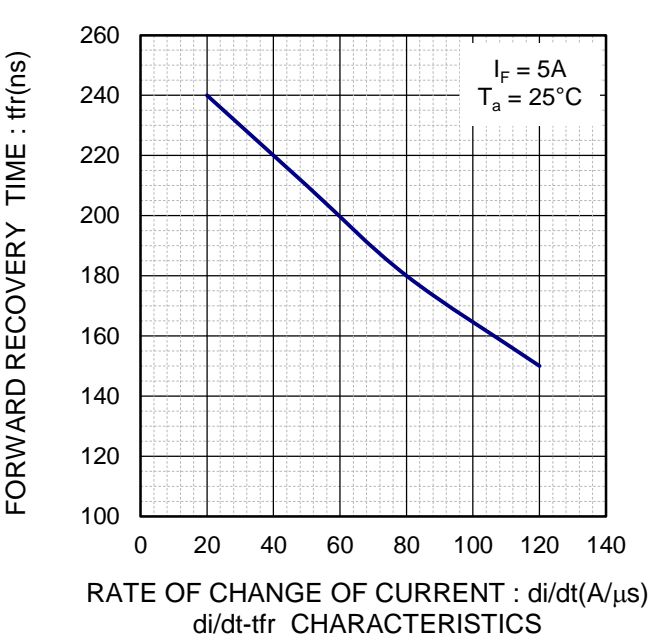
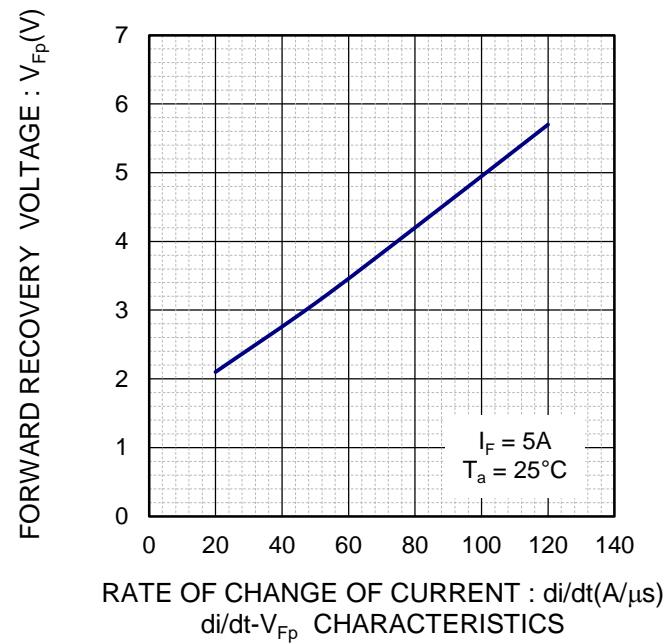
●Electrical characteristic curves



●Electrical characteristic curves



●Electrical characteristic curves



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