



VZT/VZU Series

Features

- $4\phi \sim 10\phi$, 105°C, 2,000 ~ 5,000 hours assured
- Capacitance more than VZS series
- Designed for surface mounting on high density PC board
- RoHS compliant
- AEC-Q200 compliant

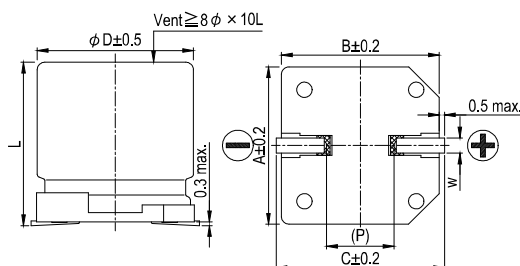


Marking color: Black

Specifications

Items	Performance																													
Category Temperature Range	-55℃ ~ +105℃																													
Capacitance Tolerance	± 20% (at 120 Hz, 20℃)																													
Leakage Current (at 20℃)	I = 0.01CV or 3 (μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF, V = rated DC working voltage in V																													
Tanδ (at 120 Hz, 20℃)	<table><tr><td>Rated Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td>Tanδ (max.)</td><td>0.26</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td></tr></table> When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase.							Rated Voltage	6.3	10	16	25	35	50	Tanδ (max.)	0.26	0.19	0.16	0.14	0.12	0.10									
Rated Voltage	6.3	10	16	25	35	50																								
Tanδ (max.)	0.26	0.19	0.16	0.14	0.12	0.10																								
Low Temperature Characteristics (at 120 Hz)	Impedance ratio shall not exceed the values given in the table below. <table><tr><td colspan="2">Rated Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td rowspan="2">Impedance Ratio</td><td>Z(-25℃) / Z(+20℃)</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>Z(-55℃) / Z(+20℃)</td><td>8</td><td>5</td><td>4</td><td>3</td><td>3</td><td>3</td></tr></table>							Rated Voltage		6.3	10	16	25	35	50	Impedance Ratio	Z(-25℃) / Z(+20℃)	4	3	2	2	2	2	Z(-55℃) / Z(+20℃)	8	5	4	3	3	3
Rated Voltage		6.3	10	16	25	35	50																							
Impedance Ratio	Z(-25℃) / Z(+20℃)	4	3	2	2	2	2																							
	Z(-55℃) / Z(+20℃)	8	5	4	3	3	3																							
Endurance of VZT Series (For ϕD = 4 ~ 10 mm)	<table><tr><td>Test Time</td><td>2,000 Hrs</td></tr><tr><td>Capacitance Change</td><td>Within ± 30% of initial value</td></tr><tr><td>Tanδ</td><td>Less than 200% of specified value</td></tr><tr><td>Leakage Current</td><td>Within specified value</td></tr></table> * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 2,000 hours at 105℃.							Test Time	2,000 Hrs	Capacitance Change	Within ± 30% of initial value	Tanδ	Less than 200% of specified value	Leakage Current	Within specified value															
Test Time	2,000 Hrs																													
Capacitance Change	Within ± 30% of initial value																													
Tanδ	Less than 200% of specified value																													
Leakage Current	Within specified value																													
Endurance of VZU Series (Only for ϕD = 8 ~ 10 mm)	<table><tr><td>Test Time</td><td>3,000 Hrs for voltage = 6.3V 5,000 Hrs for voltage ≥ 10V</td></tr><tr><td>Capacitance Change</td><td>Within ± 35% of initial value</td></tr><tr><td>Tanδ</td><td>Less than 300% of specified value</td></tr><tr><td>Leakage Current</td><td>Within specified value</td></tr></table> * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 3,000 ~ 5,000 hours at 105℃.							Test Time	3,000 Hrs for voltage = 6.3V 5,000 Hrs for voltage ≥ 10V	Capacitance Change	Within ± 35% of initial value	Tanδ	Less than 300% of specified value	Leakage Current	Within specified value															
Test Time	3,000 Hrs for voltage = 6.3V 5,000 Hrs for voltage ≥ 10V																													
Capacitance Change	Within ± 35% of initial value																													
Tanδ	Less than 300% of specified value																													
Leakage Current	Within specified value																													
Shelf Life Test	Test time: 1,000 hours; other items are the same as those for the Endurance.																													
Ripple Current and Frequency Multipliers	<table><tr><th>Frequency (Hz) Cap. (μF)</th><th>50, 60</th><th>120</th><th>1k</th><th>10k up</th></tr><tr><td>≤ 470</td><td>0.50</td><td>0.65</td><td>0.85</td><td>1.00</td></tr><tr><td>470 < C ≤ 2,200</td><td>0.55</td><td>0.70</td><td>0.90</td><td>1.00</td></tr></table>							Frequency (Hz) Cap. (μF)	50, 60	120	1k	10k up	≤ 470	0.50	0.65	0.85	1.00	470 < C ≤ 2,200	0.55	0.70	0.90	1.00								
Frequency (Hz) Cap. (μF)	50, 60	120	1k	10k up																										
≤ 470	0.50	0.65	0.85	1.00																										
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Diagram of Dimensions



Lead Spacing and Diameter

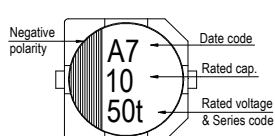
Unit: mm

φD	L	A	B	C	W	P
4	5.8 ± 0.3	4.3	4.3	5.1	0.5 ~ 0.8	1.0
5	5.8 ± 0.3	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	5.8 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	7.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
8	10 ± 0.5	8.3	8.3	9.0	0.7 ~ 1.1	3.1
10	10 ± 0.5	10.3	10.3	11	0.7 ~ 1.1	4.7

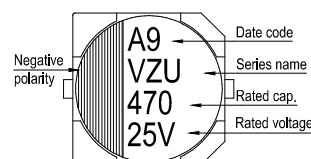
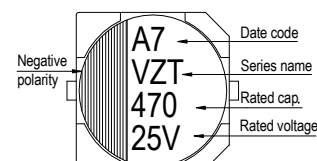
The diagram is marking " () " for reference dimension.

Marking

$\phi D \leq 6.3$ mm



$\phi D = 8 \sim 10$ mm





Dimension: $\phi D \times L$ (mm)

Ripple Current: mA/rms at 100k Hz, 105°C

Impedance: Ω / at 100k Hz, 20°C

Dimension and Permissible Ripple Current

Cap. (μF)	Contents	6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)			50V (1H)		
		$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA	$\phi D \times L$	Imp.	mA
10	100																4×5.8 5×5.8	2.30 0.88	85 165
22	220										4×5.8	0.85	160	4×5.8	0.85	160	5×5.8	0.88	165
33	330										4×5.8	0.85	160	5×5.8	0.36	240			
47	470							4×5.8	0.85	160	5×5.8	0.36	240	5×5.8	0.36	240	6.3×5.8	0.68	195
68	680				4×5.8	0.85	160	5×5.8	0.36	240	5×5.8	0.36	240	6.3×5.8	0.26	300			
100	101	4×5.8	0.85	160				5×5.8	0.36	240	6.3×5.8	0.26	300	6.3×5.8	0.26	300	6.3×7.7	0.34	350
150	151				5×5.8	0.36	240	6.3×5.8	0.26	300	6.3×7.7	0.16	600	6.3×7.7	0.16	600			
220	221	5×5.8	0.36	240	6.3×5.8	0.26	300	6.3×5.8	0.26	300	6.3×7.7	0.16	600				8×10*	0.18	670
330	331	6.3×5.8	0.26	300	6.3×7.7	0.16	600	6.3×7.7	0.16	600				8×10*	0.08	850	10×10*	0.12	900
470	471	6.3×7.7	0.16	600	6.3×7.7	0.16	600				8×10*	0.08	850						
560	561													10×10*	0.06	1,190			
680	681	6.3×7.7	0.16	600				8×10*	0.08	850									
820	821										10×10*	0.06	1,190						
1,000	102				8×10*	0.08	850	10×10*	0.06	1,190									
1,500	152	8×10*	0.08	850	10×10*	0.06	1,190												
2,200	222	10×10*	0.06	1,190															

Note: For the case sizes with the mark of " * ", the endurance requirements of VZU series are available.

Part Numbering System

VZT Series	1500 μF	± 20%	6.3V	Carrier Tape		8 ϕ × 10L	General Purpose
<u>VZT</u>	<u>152</u>	<u>M</u>	<u>0J</u>	<u>TR</u>	-	<u>0810</u>	
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case Size	Application

Note: 1. If the life time of product was required 5,000 hours, the series name is VZU.

2. For more details, please refer to "Part Numbering System - SMD Type" on page 106.



Part Numbering System – Organic Conductive Polymer (OP-CAP)

Product Code Guide

OCV series	82μF	± 20%	16V	Carrier Tape		8 φ × 6.7L	General Purpose	
OCV	820	M	1C	TR	-	0807		
□ □ □	□ □ □	□	□ □	□ □	□	□ □ □ □	□	
①	②	③	④	⑤	⑥	⑦	⑧	⑨
Series	Capacitance	Capacitance Tolerance	Rated Voltage	Package	Terminal	Case Size	Application	Supplement Code

① **Series:** Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, “-”, to fill the third blank. When the series name has 4 letters, use the following series codes. OCVZ→OVZ; OCVU→OVU

② **Capacitance:** Capacitance in μF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. “R” represents the decimal point for capacitance under 10μF.

Example:

Capacitance	6.8	10	47	100	470	1,000	2,200
Part number	6R8	100	470	101	471	102	222

③ **Tolerance:**

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%
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④ **Rated voltage:** Rated voltage in volts (V) is represented by a two-digit code.

Rated Voltage (V)	2	2.5	4	6.3	10	16	20	25	35
Code	0D	0E	0G	0J	1A	1C	1D	1E	1V

⑤ **Package:**

SMD Type	TR = Reel package TT = Reel package of plastic	Radial Type	BK = Bulk Package SA = Straight Leader Taping CC = Cutting Leader
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⑥ **Terminal (SMD) / Rubber type (Radial):**

SMD Type	- = Standard	Radial Type	- = Gas escape type F = Flat rubber bung
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Note: For radial type: the case sizes of 5 φ, 6.3 φ × 5.5 ~ 8L and 8 φ × 8L are used flat rubber bung is the standard design, use a hyphen, “-”:

⑦ **Case size:** The first two digits indicate case diameter and the last two digits indicate case length in mm.

SMD Type

φ D × L	5 × 4.4	5 × 5.7 5 × 5.8	6.3 × 4.4	6.3 × 5.8 6.3 × 5.9	6.3 × 6.4 6.3 × 7.0	6.3 × 7.7	6.3 × 9.5
Code	0504	0506	0604	0606	0607	0608	0610
φ D × L	8 × 6.7	8 × 7.7	8 × 10	8 × 12	10 × 7.7	10 × 9.9 10 × 10	10 × 12.6
Code	0807	0808	0810	0812	1008	1010	1013

Radial Type

φ D × L	5 × 8	6.3 × 5.5	6.3 × 6 6.3 × 6.5	6.3 × 8	6.3 × 11	8 × 6.5	8 × 8	8 × 11.5
Code	0508	0605	0606	0608	0611	0807	0808	0811
φ D × L	8 × 12	8 × 16	8 × 20	10 × 10	10 × 12	10 × 16	10 × 20	
Code	0812	0816	0820	1010	1012	1016	1020	

⑧ **Application:**

None = General purpose

* When a supplement code following a blank digit code of Pb-free leader and coated case (standard design), use a hyphen, “-”, to fill the blank digit. When the automotive control code is required, please contact with us for further discussion.

⑨ **Supplement code (Optional):** For special control purposes



Part Numbering System – Conductive Polymer Hybrid

Product Code Guide

HBV series	470μF	± 20%	16V	Carrier Tape		10 φ × 10L	Automotive	
HBV	471	M	1C	TR	-	1010	K	
□ □ □	□ □ □	□	□ □	□ □	□	□ □ □ □	□	
①	②	③	④	⑤	⑥	⑦	⑧	⑨
Series	Capacitance	Capacitance Tolerance	Rated Voltage	Package and Lead Configuration	Terminal	Case Size	Application	Supplement Code

① **Series:** Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, “-”, to fill the third blank.

② **Capacitance:** Capacitance in μF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. “R” represents the decimal point for capacitance under 10μF.

Example:	Capacitance	10	47	56	100	470	560
	Part number	100	470	560	101	471	561

③ **Tolerance:**

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%
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④ **Rated voltage:** Rated voltage in volts (V) is represented by a two-digit code.

Rated Voltage (V)	16	25	35	50	63	80
Code	1C	1E	1V	1H	1J	1K

⑤ **Package and lead configuration** (Please refer to page 7 ~ 11):

SMD Type	TR = Reel package TT = Reel package of plastic
Radial Type	BK = Bulk Package SA = Straight Leader Taping CC = Cutting Leader

⑥ **Terminal (SMD) / Rubber type (Radial):**

SMD Type	- = Standard product A = For application 10G (“A” must be used with automotive control code “K” together) V = Anti-vibration structure
Radial Type	- = Standard product (used flat rubber bung)

⑦ **Case size:** The first two digits indicate case diameter and the last two digits indicate case length in mm.

SMD Type	φ D×L	6.3×5.8	6.3×7.7	8×10	10×10	10×12.5	10×16.5
	Code	0606	0608	0810	1010	1013	1016
Radial Type	φ D×L	6.3×6	6.3×8	8×10	10×10	10×12	
	Code	0606	0608	0810	1010	1012	

⑧ **Application:**

None = General Purpose	K = Automotive (AEC-Q200)
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* When a supplement code following a blank digit code of Pb-free leader and coated case (standard design), use a hyphen, “-”, to fill the blank digit.

* When the automotive control code is required, please contact with us for further discussion.

⑨ **Supplement code (Optional):** For special control purposes



Part Numbering System - SMD Type

Product Code Guide

VES series	10μF	± 20%	16V	Carrier Tape		4 φ × 5.3L	Automotive	
VES	100	M	1C	TR	-	0405	K	
□ □ □	□ □ □	□	□ □	□ □	□	□ □ □ □	□	
①	②	③	④	⑤	⑥	⑦	⑧	⑨
Series	Capacitance	Capacitance Tolerance	Rated Voltage	Package	Terminal	Case Size	Application	Supplement Code

① **Series:** Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank.

② **Capacitance:** Capacitance in μF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. "R" represents the decimal point for capacitance under 10μF.

Example:

Capacitance	0.47	1	4.7	10	47	100	470	1,000	4,700
Part number	R47	010	4R7	100	470	101	471	102	472

③ **Tolerance:**

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%
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④ **Rated voltage:** Rated voltage in volts (V) is represented by a two-digit code.

Rated Voltage (V)	4	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
Code	0G	0J	1A	1C	1E	1V	1H	1J	2A	2C	2D	2E	2V	2G	2W

⑤ **Package:**

TR	Reel package
TT	Reel package of plastic

⑥ **Terminal:**

-	Standard product
A	For application 10G ("A" must be used with automotive control code "K" together)
V	Anti-vibration structure

⑦ **Case size:** The first two digits indicate case diameter and the last two digits indicate case length in mm.

φ D×L	4×4.5	4×5.3	4×5.7 4×5.8 ^{*1}	5×4.5	5×5.3	5×5.7 5×5.8 ^{*1}	5×7 ^{*2}	6.3×4.5	6.3×5.3
Code	0404	0405	0406	0504	0505	0506	0507	0604	0605
φ D×L	6.3×5.7 6.3×5.8 ^{*1}	6.3×7.0 ^{*2}	6.3×7.7	6.3×8.7 ^{*2}	8×6.5	8×10	10×7.7	10×10	10×12.5
Code	0606	0607	0607	0608	0806	0810	1008	1010	1013
φ D×L	12.5×13.5	12.5×16	16×16.5	16×21.5	18×16.5	18×21.5			
Code	1313	1316	1616	1621	1816	1821			

Note: ^{*1}: The case size are for VZL, VZS, VZT, VZD series only.

^{*2}: The case size are for VZR series only.

When a case size is required and not shown in the table, please contact with us for further discussion.

⑧ **Application:**

None = General Purpose	K = Automotive (AEC-Q200)
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* When a supplement code following a blank digit code of Pb-free leader and coated case (standard design), use a hyphen, "-", to fill the blank digit.

* When the automotive control code is required, please contact with us for further discussion.

⑨ **Supplement code (Optional):**

For special control purposes



Part Numbering System - Radial Type

Product Code Guide

RGA series	10 μ F	$\pm 20\%$	50V	Lead Forming Tape	Gas Type	5 ϕ ×11L	Automotive	
RGA	100	M	1H	TA	-	0511	K	
□□□	□□□	□	□□	□□	□	□□□□	□	
①	②	③	④	⑤	⑥	⑦	⑧	⑨
Series	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration and Package	Rubber Type	Case Size	Application	Supplement Code

① **Series:** Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank.

② **Capacitance:** Capacitance in μ F is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. "R" represents the decimal point for capacitance under 10 μ F.

Example:

Capacitance	0.47	1	4.7	10	47	100	470	1,000	4,700	10,000
Part number	R47	010	4R7	100	470	101	471	102	472	103

③ **Tolerance:**

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%
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④ **Rated voltage:** Rated voltage in volts (V) is represented by a two-digit code.

Rated Voltage (V)	4	6.3	10	16	25	35	50	63	100
Code	0G	0J	1A	1C	1E	1V	1H	1J	2A

Rated Voltage (V)	160	200	250	350	400	420	450
Code	2C	2D	2E	2V	2G	2P	2W

⑤ **Lead configuration and package (Please refer to page 10 ~ 11):**

BK = Bulk Package	TA = Formed Lead Taping
FC = Formed & Cut Lead	SA = Straight Lead Taping
CC = Cut Lead	SD = Bent Cathode Lead
SF = Snap-in & Formed Cut Lead	BC = Bent & Cut Lead (Leads in Right Direction)
SC = Snap-in & Cut Lead	BU = Bent & Cut Lead (Leads in Left Direction)

⑥ **Rubber type:**

- = Gas escape type	F = Flat rubber bung
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Note: For case sizes of 3 ϕ ×5L, 12.5 ϕ ×16L, 16 ϕ ×16L, 16 ϕ ×20L, 18 ϕ ×16L, 18 ϕ ×20L, 18 ϕ ×25L which used flat rubber bung is the standard design, use a hyphen, "-".

⑦ **Case size:** The first two digits indicate case diameter and the last two digits indicate case length in mm.

ϕ D×L	4×5	4×7	5×5	5×7	5×11	6.3×5	6.3×7	6.3×11	6.3×15	8×5	8×7	8×9	8×11.5	8×15
Code	0405	0407	0505	0507	0511	0605	0607	0611	0615	0805	0807	0809	0811	0815

ϕ D×L	8×20	10×9	10×10	10×12.5	10×16	10×20	10×25	10×30	10×35	10×40	10×45	10×50	12.5×16	12.5×20
Code	0820	1009	1010*	1012	1016	1020	1025	1030	1035	1040	1045	1050	1316	1320

ϕ D×L	12.5×25	12.5×30	12.5×35	12.5×40	12.5×45	12.5×50	16×16	16×20	16×25	16×31.5	16×35.5	16×40	16×45	16×50
Code	1325	1330	1335	1340	1345	1350	1616	1620	1625	1632	1636	1640	1645	1650

ϕ D×L	18×16	18×20	18×25	18×31.5	18×35.5	18×40	18×45	18×50	22×40	22×45	25×40	25×45
Code	1816	1820	1825	1832	1836	1840	1845	1850	2240	2245	2540	2545

Note: When a case size is required and not shown in the table, please contact with us for further discussion.

⑧ **Application:**

None = General Purpose	K = Automotive (AEC-Q200)
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* When a supplement code following a blank digit code of Pb-free leader and PET sleeve (standard design), use a hyphen, "-", to fill the blank digit. When the automotive control code is required, please contact with us for further discussion.

⑨ **Supplement code (Optional):** For special control purposes



Part Numbering System - Snap-in Type

Product Code Guide

LS Series	100μF	± 20%	400V	3-pin Terminal	Terminal Length 4.0mm	22 φ × 30L	No Bottom insulation	
LS-	101	M	2G	L3	A	2230	N	
□ □ □	□ □ □	□	□ □	□ □	□	□ □ □ □	□	
①	②	③	④	⑤	⑥	⑦	⑧	⑨
Series	Capacitance	Capacitance Tolerance	Rated Voltage	Terminal Type	Terminal Length	Case Size	Application / Additional	Supplement Code

① **Series:** Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank.

② **Capacitance:** Capacitance in μF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure.

Example:

Capacitance	100	470	820	1,000	4,700	6,800	10,000	15,000
Part number	101	471	821	102	472	682	103	153

③ **Tolerance:**

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%
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④ **Rated voltage:** Rated voltage in volts (V) is represented by a two-digit code.

Rated Voltage (V)	16	25	35	50	63	80	100
Code	1C	1E	1V	1H	1J	1K	2A

Rated Voltage (V)	160	180	200	250	315	350	400	420	450	500
Code	2C	2S	2D	2E	2F	2V	2G	2P	2W	2H

⑤ **Terminal type (Refer to page 14):**

Terminal type(pins)	2 (Standard)	3	4	5	Vibration-resistant	Horizontal Mounting
Terminal code	- -	L3	L4	L5	T2	H2 G2

⑥ **Terminal length:**

Terminal length(mm)	4.0	6.3
Terminal code	A	-

⑦ **Case size:** The first two digits indicate case diameter in mm. The last two digits indicate case length in mm.

φ D×L	20×15	20×20	20×25	20×30	20×35	20×40	20×45	20×50	22×15	22×20	22×25	22×30	22×35	22×40
Code	2015	2020	2025	2030	2035	2040	2045	2050	2215	2220	2225	2230	2235	2240
φ D×L	22×45	22×50	22×55	22×60	25×15	25×20	25×25	25×30	25×35	25×40	25×45	25×50	25×55	25×60
Code	2245	2250	2255	2260	2515	2520	2525	2530	2535	2540	2545	2550	2555	2560
φ D×L	30×15	30×20	30×25	30×30	30×35	30×40	30×45	30×50	30×55	30×60	30×65	35×15	35×20	35×25
Code	3015	3020	3025	3030	3035	3040	3045	3050	3055	3060	3065	3515	3520	3525
φ D×L	35×30	35×35	35×40	35×45	35×50	35×60	35×70	35×80	35×90	35×100	40×25	40×30	40×35	40×40
Code	3530	3535	3540	3545	3550	3560	3570	3580	3590	35A0	4025	4030	4035	4040
φ D×L	40×45	40×50	40×55	40×60	40×65	40×70	40×80	40×90	40×100	45×70	45×80	45×90		
Code	4045	4050	4055	4060	4065	4070	4080	4090	40A0	4570	4580	4590		

Note: When a case size is required and not shown in the table, please contact with us for further discussion.

⑧ **Application / Additional:**

None = General Purpose	K = Automotive (AEC-Q200)
N = No bottom insulation	C = Nano carbon coating insulation

* When a supplement code following a blank digit code of Pb-free terminal and PET sleeve (standard design), use a hyphen, "-", to fill the blank digit. When the bottom insulation plate is not required or a rill construction is necessary, please consult with us.

⑨ **Supplement code (Optional):** For special control purposes



Part Numbering System - Screw Type

Product Code Guide

MEA series	3300μF	± 20%	400V	Rills + Stud Bottom Case	M5 Post	63.5 φ × 115L	General Purpose	
MEA	332	M	2G	H	-	C115		
□ □ □	□ □ □	□	□ □	□	□	□ □ □ □	□	
①	②	③	④	⑤	⑥	⑦	⑧	⑨
Series	Capacitance	Capacitance Tolerance	Rated Voltage	Case Type	Terminal Type	Case Size	Application	Supplement Code

① **Series:** Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank.

② **Capacitance:** Capacitance in μF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. "R" represents the decimal point for capacitance under 10μF.

Example:	Capacitance	100	470	820	1,000	4,700	6,800	10,000	15,000	47,000
	Part number	101	471	821	102	472	682	103	153	473

③ **Tolerance:**

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%
-----------------	-----------------	-----------------

④ **Rated voltage:**

Rated voltage in volts (V) is represented by a two-digit code.

Rated Voltage (V)	10	16	25	35	50	63	80	100
Code	1A	1C	1E	1V	1H	1J	1K	2A

Rated Voltage (V)	160	200	250	315	350	400	420	450	500	525
Code	2C	2D	2E	2F	2V	2G	2P	2W	2H	2Y

⑤ **Case type:**

- = Mounting clamp + Plain case	N = Mounting clamp + Rills case
X = Plain case	R = Rills case
S = Stud bottom case + Plain case	H = Stud bottom case + Rills case
I = Mounting clamp with 2 footed + Plain case (Only suit for φ D ≥ 51 mm)	

⑥ **Terminal type:**

Terminal Type	Post Diameter (mm)	Height (± 1 mm)	For Case Diameters	Code
M5 Post, Small	8	6.5	35	A
M5 Post	10	6.5	51 ~ 89	-
M5 Post, High Current	17.4	6.5	76.2 ~ 89	C
M6 Post, High Current	17.4	6.5	76.2 ~ 89	D

⑦ **Case size:** The first one digit indicates case diameter and the last three digits indicate case length in mm.

φ D × L	35×53	35×65	35×75	35×83	35×100	35×121	51×75	51×83	51×96	51×100	51×115
Code	A053	A065	A075	A083	A100	A121	B075	B083	B096	B100	B115

φ D × L	51×121	51×130	63.5×96	63.5×100	63.5×115	63.5×121	63.5×130	63.5×144	76.2×96	76.2×115	76.2×121
Code	B121	B130	C096	C100	C115	C121	C130	C144	D096	D115	D121

φ D × L	76.2×130	76.2×144	76.2×155	89×130	89×157	89×196	89×236
Code	D130	D144	D155	E130	E157	E196	E236

Note: When a case size is required and not shown in the table, please contact with us for further discussion.

⑧ **Application / Additional**

None = General purpose

* When a supplement code following a blank digit code of Pb-free terminal and PVC sleeve (standard design), use a hyphen, "-", to fill the blank digit.

⑨ **Supplement code (Optional):** For special control purposes