VZT/VZU Series

FeaturesU

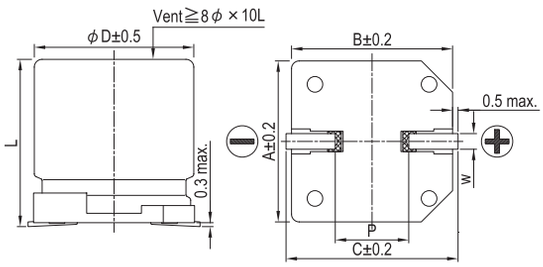
- 4ϕ ~ 10ϕ, 105℃, 2,000 ~ 5,000 hours assured
- Capacitance more than VZS series
- Designed for surface mounting on high density PC board
- RoHS compliant
- AEC-Q200 compliant

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℃)	Rated Voltage: 6.3 / 10 / 16 / 25 / 35 / 50 Tanδ (max): 0.26 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase.
Low Temperature Characteristics (at 120 Hz)	Impedance ratio shall not exceed the values given in the table below. Rated Voltage: 6.3 / 10 / 16 / 25 / 35 / 50 Impedance Ratio Z(-25℃)/Z(+20℃): 4 / 3 / 2 / 2 / 2 / 2 Impedance Ratio Z(-55℃)/Z(+20℃): 8 / 5 / 4 / 3 / 3 / 3
Endurance of VZT Series	Test Time: 2,000 Hrs Capacitance Change: Within ±30% of initial value Tanδ: Less than 200% of specified value Leakage Current: Within specified value * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 2,000 hours at 105℃.
Endurance of VZU Series	Test Time: 3,000 Hrs for voltage = 6.3 V; 5,000 Hrs for voltage ≧ 10 V Capacitance Change: Within ±35% of initial value Tanδ: Less than 300% of specified value Leakage Current: Within specified value * 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℃.
Shelf Life Test	Test time: 1,000 hours; other items are the same as those for the Endurance.
Ripple Current and Frequency Multipliers	Cap. (μF) \ Frequency (Hz): 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

Diagram of Dimensions

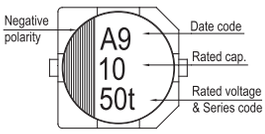


Lead Spacing and Diameter Unit: mm

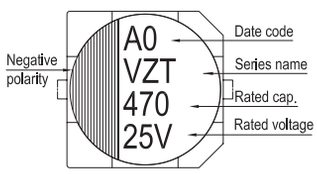
ϕD	L	A	B	C	W	P ± 0.2
4	5.8 ± 0.3	4.3	4.3	5.1	0.5 ~ 0.8	1.0
5	5.8 ± 0.3	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	5.8 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	7.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
8	10 ± 0.5	8.3	8.3	9.0	0.7 ~ 1.1	3.1
10	10 ± 0.5	10.3	10.3	11	0.7 ~ 1.3	4.7

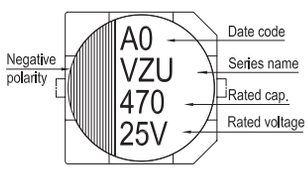
Marking

ϕD ≦ 6.3 mm



ϕD = 8 ~ 10 mm





Dimension: ϕD × L(mm)
Ripple Current: mA/rms at 100k Hz, 105℃
Impedance: Ω/ at 100k Hz, 20℃

Dimension and Permissible Ripple Current

Rated Volt. (V_{DC}) / Cap. (μF)	Contents	6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)			50V (1H)		
		ϕD×L	Imp.	mA	ϕD×L	Imp.	mA	ϕD×L	Imp.	mA	ϕD×L	Imp.	mA	ϕD×L	Imp.	mA	ϕD×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		8ϕ×10L	General Purpose
VZT	**152**	**M**	**0J**	**TR**	**-**	**0810**	
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.