

Features

- 5φ ~ 10φ, 105°C, 7,000 hours assured
- Low Impedance temperature range up to +105°C
- For automobile modules and high temperature applications
- RoHS Compliance
- AEC-Q200 qualified

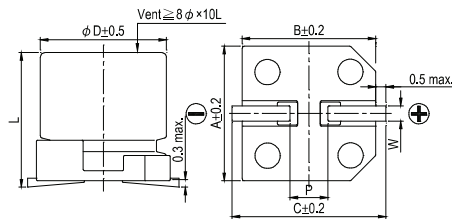


Marking color: Black

Specifications

Items	Performance														
Category Temperature Range	-25°C ~ +105°C														
Capacitance Tolerance	±20% (at 120 Hz, 20°C)														
Leakage Current (at 20°C)	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°C)	<table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.32</td> <td>0.28</td> <td>0.26</td> <td>0.16</td> <td>0.14</td> <td>0.14</td> </tr> </tbody> </table>	Rated Voltage	6.3	10	16	25	35	50	Tanδ (max)	0.32	0.28	0.26	0.16	0.14	0.14
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Low Temperature Characteristics (at 120 Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>Impedance Ratio Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> </tbody> </table>	Rated Voltage	6.3	10	16	25	35	50	Impedance Ratio Z(-25°C)/Z(+20°C)	4	3	2	2	2	2
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Ripple Current and Frequency Multipliers	<table border="1"> <thead> <tr> <th>Frequency(Hz)</th> <th>50</th> <th>120</th> <th>1k</th> <th>10k up</th> </tr> </thead> <tbody> <tr> <td>Multiplier</td> <td>0.35</td> <td>0.50</td> <td>0.83</td> <td>1.0</td> </tr> </tbody> </table>	Frequency(Hz)	50	120	1k	10k up	Multiplier	0.35	0.50	0.83	1.0				
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Diagram of Dimensions



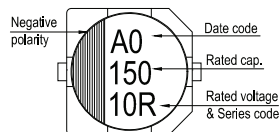
Lead Spacing and Diameter

Unit: mm

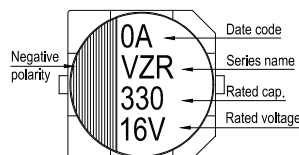
φD	L	A	B	C	W	P ± 0.2
5	7 ± 0.3	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	8.7 ± 0.5	6.6	6.6	7.2	0.5 ~ 0.8	2.0
8	10 ± 0.5	8.3	8.3	9.0	0.7 ~ 1.1	3.1
10	10 ± 0.5	10.3	10.3	11.0	0.7 ~ 1.3	4.7

Marking

φD = 5 ~ 6.3 mm



φD = 8 ~ 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

Rated Volt. (V _{DC})		6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)			50V (1H)		
Cap. (μ F)	Contents	$\phi D \times L$	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													5×7	2.2	95			
22	220							5×7	2.2	95	5×7	2.2	95	5×7	2.2	95			
33	330				5×7	2.2	95				6.3×7	1.1	140	6.3×8.7	1.0	230			
47	470	5×7	2.2	95				6.3×7	1.1	140	6.3×7	1.1	140	6.3×8.7	1.0	230	8×10	0.53	350
100	101	6.3×7	1.1	140				6.3×7	1.1	140	6.3×8.7	1.0	230				8×10	0.53	350
150	151				6.3×7	1.1	140	6.3×8.7	1.0	230									
220	221	6.3×8.7	1.0	230				6.3×8.7	1.0	230	8×10	0.22	600	8×10	0.22	600	10×10	0.35	670
330	331	6.3×8.7	1.0	230				8×10	0.22	600	8×10	0.22	600	10×10	0.16	850			
470	471	8×10	0.22	600				8×10	0.22	600	10×10	0.16	850						

Part Numbering System

VZR Series 470 μ F $\pm 20\%$ 6.3V Carrier Tape 8 ϕ × 10L

VZR **471** **M** **0J** **TR** - **0810** **XX**

Series Name Capacitance Capacitance Tolerance Rated Voltage Package Type Terminal Type Case Size

XX
 S = Standard
 KS = AEC-Q200 Qualified,
 Safety Critical Application
 LS = AEC-Q200 Qualified,
 Non-Safety Critical Application