

OCVZ Series

Features

- 105°C, 2,000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS Compliance

AEC-Q200 Qualified Parts Available: Use "LS" or "KS" Suffix

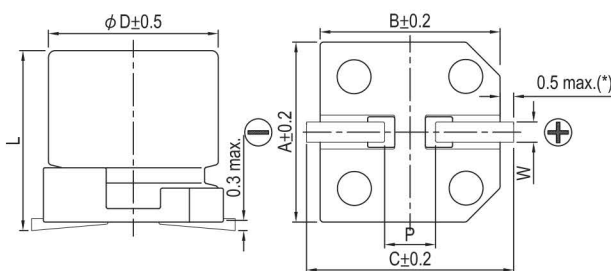
Marking color: Blue

Specifications

Items	Performance										
Category Temperature Range	-55°C ~ +105°C										
Capacitance Tolerance	±20% (at 120 Hz, 20°C)										
Leakage Current (at 20°C)*	Rated voltage applied, after 2 minutes at 20°C. See Standard Ratings										
Tanδ (at 120 Hz, 20°C)	See Standard Ratings										
ESR (at 100k ~ 300k Hz, 20°C)	See Standard Ratings										
Endurance	<table border="1"> <tr><td>Test Time</td><td>2,000 Hrs</td></tr> <tr><td>Capacitance Change</td><td>Within ±20% of initial value</td></tr> <tr><td>Tanδ</td><td>Less than 150% of specified value</td></tr> <tr><td>ESR</td><td>Less than 150% of specified value</td></tr> <tr><td>Leakage Current</td><td>Within specified value</td></tr> </table>	Test Time	2,000 Hrs	Capacitance Change	Within ±20% of initial value	Tanδ	Less than 150% of specified value	ESR	Less than 150% of specified value	Leakage Current	Within specified value
	Test Time	2,000 Hrs									
	Capacitance Change	Within ±20% of initial value									
	Tanδ	Less than 150% of specified value									
	ESR	Less than 150% of specified value									
Leakage Current	Within specified value										
* The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied for 2,000 hours at 105°C.											
Moisture Resistance	<table border="1"> <tr><td>Test Time</td><td>1,000 Hrs</td></tr> <tr><td>Capacitance Change</td><td>Within ±20% of initial value</td></tr> <tr><td>Tanδ</td><td>Less than 150% of specified value</td></tr> <tr><td>ESR</td><td>Less than 150% of specified value</td></tr> <tr><td>Leakage Current</td><td>Within specified value</td></tr> </table>	Test Time	1,000 Hrs	Capacitance Change	Within ±20% of initial value	Tanδ	Less than 150% of specified value	ESR	Less than 150% of specified value	Leakage Current	Within specified value
	Test Time	1,000 Hrs									
	Capacitance Change	Within ±20% of initial value									
	Tanδ	Less than 150% of specified value									
	ESR	Less than 150% of specified value									
Leakage Current	Within specified value										
* The above specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them at 60°C, 90 ~ 95% RH for 1,000 hours. Leakage current should be tested voltage treatment*.											
Resistance to Soldering Heat * (Please refer to page 26 for reflow soldering conditions)	<table border="1"> <tr><td>Capacitance Change</td><td>Within ±10% of initial value</td></tr> <tr><td>Tanδ</td><td>Within specified value</td></tr> <tr><td>ESR</td><td>Within specified value</td></tr> <tr><td>Leakage Current</td><td>Within specified value</td></tr> </table>	Capacitance Change	Within ±10% of initial value	Tanδ	Within specified value	ESR	Within specified value	Leakage Current	Within specified value		
	Capacitance Change	Within ±10% of initial value									
	Tanδ	Within specified value									
	ESR	Within specified value									
Leakage Current	Within specified value										
Ripple Current and Frequency Multipliers											
Frequency (Hz)	120 ≤ f < 1k	1k ≤ f < 10k	10k ≤ f < 100k	100k ≤ f < 500k							
Multiplier	0.05	0.3	0.7	1.0							

* For any doubt about measured values, measure the leakage current again after the following voltage treatment.
Voltage treatment: DC rated voltage is applied to the capacitors for 2 hours at 105 °C.

Diagram of Dimensions



Lead Spacing and Diameter

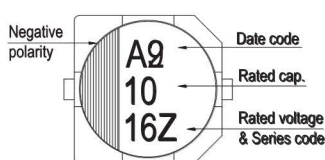
Unit: mm

φD	L	A	B	C	W	P ± 0.2
5	5.7 ± 0.3	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	4.4 ± 0.2	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	5.9 +0.1/-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	6.7 ± 0.3	8.3	8.3	9.0	0.7 ~ 1.1	3.1
8	12.0 ± 0.5	8.3	8.3	9.0	0.7 ~ 1.1	3.1
10	7.7 ± 0.3	10.3	10.3	11.0	0.7 ~ 1.3	4.7
10	9.9 +0.1/-0.3	10.3	10.3	11.0	0.7 ~ 1.3	4.7
10	12.6 +0.1/-0.4	10.3	10.3	11.0	0.7 ~ 1.3	4.7

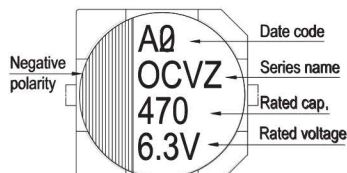
(*): For 5 ~ 6.3 φ is 0.4 max.

Marking

φ D = 5 ~ 6.3



φ D = 8 ~ 10



Dimension: $\phi D \times L$ (mm)
Ripple Current: mA/rms at 100k Hz, 105°C

Standard Ratings

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μF)	Size $\phi D \times L$ (mm)	Tan δ (120 Hz, 20°C)	L C (μA)	E S R (m Ω /at 100k ~ 300k Hz, 20°C max.)	Rated R. C. (mA/rms at 100k Hz, 105°C)
2.5V (0E)	2.9	180	5 × 5.7	0.12	300	19	2,800
		330	6.3 × 4.4	0.12	500	16	3,180
		390	6.3 × 5.9	0.12	300	14	3,160
		560	6.3 × 5.9	0.12	300	16	3,500
			6.3 × 7.7	0.12	420	9	4,200
		680	8 × 6.7	0.12	500	20	3,370
		820	8 × 12	0.15	500	9	5,380
		1,200	10 × 7.7	0.12	600	13	4,450
		1,500	8 × 12	0.15	750	12	5,150
2,700	10 × 12.6	0.15	1,350	9	5,600		
4V (0G)	4.6	150	5 × 5.7	0.12	300	20	2,730
		270	6.3 × 5.9	0.12	300	15	3,160
		330	6.3 × 5.9	0.12	300	15	3,160
		390	6.3 × 7.7	0.12	468	9	4,200
		560	8 × 6.7	0.12	500	22	3,220
			8 × 12	0.15	500	9	5,380
		1,000	10 × 7.7	0.12	800	14	4,300
		1,200	8 × 12	0.15	960	12	4,700
		1,500	8 × 12	0.15	1,200	12	4,700
2,200	10 × 12.6	0.15	1,760	9	5,700		
6.3V (0J)	7.2	120	5 × 5.7	0.12	300	21	2,660
		220	6.3 × 4.4	0.12	500	18	3,000
			6.3 × 5.9	0.12	300	15	3,160
		330	6.3 × 5.9	0.12	415	17	3,390
			6.3 × 7.7	0.12	623	9	4,200
		390	8 × 6.7	0.12	491	22	3,220
		820	8 × 12	0.15	1,033	13	4,700
			10 × 7.7	0.12	1,033	14	4,300
1,500	10 × 12.6	0.15	1,890	10	5,560		
10V (1A)	12.0	68	5 × 5.7	0.12	300	23	2,540
		120	6.3 × 5.9	0.12	300	22	2,600
		150	6.3 × 7.7	0.12	450	15	3,400
		270	8 × 6.7	0.12	500	22	3,220
		470	10 × 7.7	0.12	940	19	3,800
16V (1C)	18.0	39	5 × 5.7	0.12	300	27	2,350
			6.3 × 5.9	0.12	300	24	2,460
		68	6.3 × 5.9	0.12	300	25	2,440
		100	6.3 × 5.9	0.12	320	24	2,490
		150	8 × 6.7	0.12	500	22	3,220
		220	10 × 7.7	0.12	704	22	3,450
		270	8 × 12	0.15	864	12	4,850
		330	10 × 12.6	0.15	1,056	12	5,300
		470	10 × 12.6	0.15	1,504	10	6,100
		820	10 × 12.6	0.12	2,624	12	5,400
1,000	10 × 12.6	0.12	3,200	12	5,400		

OP-CAP

Dimension: ϕ D×L(mm)
 Ripple Current: mA/rms at 100k Hz, 105°C

Standard Ratings

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μF)	Size ϕ D×L(mm)	Tanδ (120 Hz, 20°C)	L C (μA)	E S R (mΩ/at 100k ~ 300k Hz, 20°C max.)	Rated R. C. (mA/rms at 100k Hz, 105°C)
20V(1D)	23.0	120	6.3 × 5.9	0.12	480	25	3,200
		390	8 × 12	0.12	1,560	14	4,950
		560	10 × 9.9	0.12	2,240	18	4,100
			10 × 12.6	0.12	2,240	12	5,600
25V(1E)	29.0	56	6.3 × 5.9	0.12	280	30	2,800
		180	8 × 12	0.12	900	16	4,650
		220	10 × 9.9	0.12	1,100	20	3,800
		330	10 × 12.6	0.12	1,650	14	5,000
35V(1V)	40.0	22	6.3 × 5.9	0.12	154	35	2,600
		82	8 × 12	0.12	574	20	4,000
		120	10 × 12.6	0.12	840	18	4,400

Part Numbering System

OCVZ Series	820μF	±20%	6.3V	Carrier Tape	10 ϕ × 7.7L	Pb-free and PET coating case
<u>OVZ</u>	<u>821</u>	<u>M</u>	<u>0J</u>	<u>TR</u>	<u>-</u>	<u>S</u>
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Package Type	Terminal Type	Case size
						Lead Wire and Coating Type

For automotive application, please replace “S” suffix with an “LS” or “KS” suffix, for non-safety critical and safety critical applications respectively

Note: For more details, please refer to “Part Numbering System (Radial Type)” on page 13.

OP-CAP