

## OCVZ Series

### Features

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



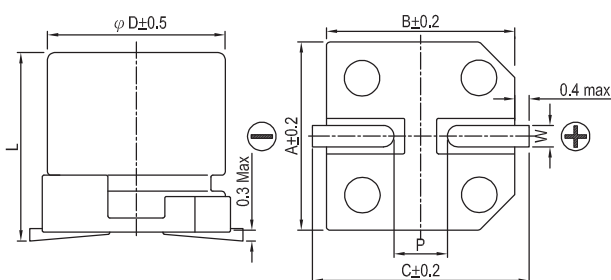
Marking color: Blue

### Specifications

Items	Performance										
Category Temperature Range	-55°C ~ +105°C										
Capacitance Tolerance	±20% (at 120Hz, 20°C)										
Leakage Current (at 20°C)*	Rated voltage applied, after 2 minutes at 20°C. See Standard Ratings										
Tanδ (at 120Hz, 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
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	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 to 95% RH for 1,000 hours. Leakage current should be tested voltage treatment*.											
Resistance to Soldering Heat * (Please refer to page 25 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		
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	Tanδ	Within specified value									
	ESR	Within specified value									
Leakage Current	Within specified value										
Ripple Current and Frequency Multipliers	<table border="1"> <tr> <th>Frequency (Hz)</th> <th>120 ≤ f &lt; 1k</th> <th>1k ≤ f &lt; 10k</th> <th>10k ≤ f &lt; 100k</th> <th>100k ≤ f &lt; 500k</th> </tr> <tr> <td>Multiplier</td> <td>0.05</td> <td>0.3</td> <td>0.7</td> <td>1.0</td> </tr> </table>	Frequency (Hz)	120 ≤ f < 1k	1k ≤ f < 10k	10k ≤ f < 100k	100k ≤ f < 500k	Multiplier	0.05	0.3	0.7	1.0
	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



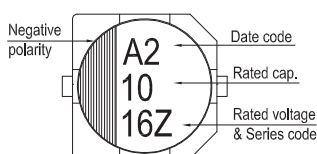
### Lead Spacing and Diameter

Unit: mm

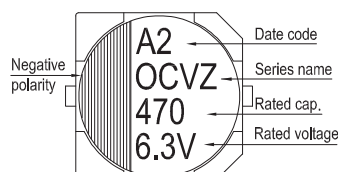
φ D	L	A	B	C	W	P ± 0.2
5	5.7 ± 0.3	5.3	5.3	5.9	0.5 ~ 0.8	1.5
6.3	4.4 ± 0.2	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	5.9 +0.1/-0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
6.3	7.7 ± 0.3	6.6	6.6	7.2	0.5 ~ 0.8	2.0
8	6.7 ± 0.3	8.4	8.4	9.0	0.7 ~ 1.1	3.1
8	12.0 ± 0.5	8.4	8.4	9.0	0.7 ~ 1.1	3.1
10	7.7 ± 0.3	10.4	10.4	11.0	0.7 ~ 1.3	4.7
10	9.9 +0.1/-0.3	10.4	10.4	11.0	0.7 ~ 1.3	4.7
10	12.6 +0.1/-0.4	10.4	10.4	11.0	0.7 ~ 1.3	4.7

### 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

W. V. (V)	Surge Voltage (V)	Capacitance ( $\mu$ F)	Size $\phi D \times L$ (mm)	Tan $\delta$ (120Hz, 20°C)	L C ( $\mu$ A)	E S R (m $\Omega$ /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:  $\phi$  D×L(mm)  
Ripple Current: mA/rms at 100k Hz, 105°C

Standard Ratings

W. V. (V)	Surge Voltage (V)	Capacitance (μF)	Size $\phi$ D×L(mm)	Tan $\delta$ (120Hz, 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  $\phi$  × 7.7L    Pb-free and PET coating case

**OVZ**    **821**    **M**    **0J**    **TR**    -    **1008**

Series Name    Capacitance    Capacitance Tolerance    Rated Voltage    Package Type    Terminal Type    Case size    Lead Wire and Coating Type

Note: For more details, please refer to "Part Numbering System (SMD Type)" on page 15.

OP-CAP