

OCRZ Series

Features

- 105°C, 2000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS Compliance



Marking color: Blue

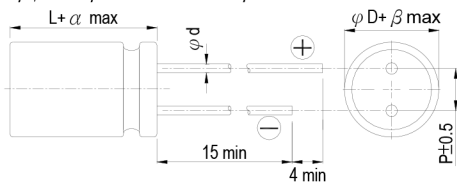
Specifications

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 2000 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 to 95% RH for 1,000 hours. Leakage current should be tested after voltage treatment*.											
Resistance to Soldering Heat * (Please refer to page 8 for soldering conditions)	<table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±10% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 130% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 130% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table>	Capacitance Change	Within ±10% of initial value	Tanδ	Less than 130% of specified value	ESR	Less than 130% of specified value	Leakage Current	Within specified value		
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	Tanδ	Less than 130% of specified value									
	ESR	Less than 130% of specified value									
Leakage Current	Within specified value										
* 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.											
Ripple Current & Frequency Multipliers	<table border="1"> <tr> <td>Frequency (Hz)</td> <td>120 ≤ f < 1k</td> <td>1k ≤ f < 10k</td> <td>10k ≤ f < 100k</td> <td>100k ≤ f < 500k</td> </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

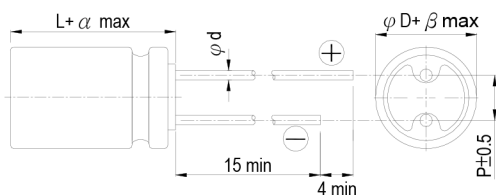
5 φ, 6.3 φ × 6 ~ 8L and 8 φ × 8L



Lead Spacing and Diameter Unit: mm

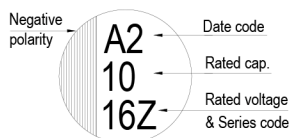
φ D	5	6.3	6.3	8	8	10
L	8	6	8	8	12	12
P	2.0	2.5		3.5	5.0	
φ d	0.6	0.45	0.6			
α	1.0					
β	0.5					

8 φ × 12L and 10 φ × 12L

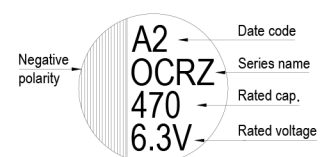


Marking

φ D = 5 ~ 6.3



φ D = 8 ~ 10



Dimension: ϕ D×L(mm)

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

Standard Ratings

W. V. (V)	Surge Voltage (V)	Capacitance (μF)	Size ϕ D×L(mm)	Tan δ (120Hz, 20°C)	LC (μA)	E S R (mΩ/at 100k ~ 300k Hz, 20°C Max)	Rated R. C. (mA/rms at 100k Hz, 105°C)
2.5V (0E)	2.9	330	6.3 × 8	0.10	500	7	5,600
		390	6.3 × 6*	0.10	500	10	3,900
		470	5 × 8	0.10	500	7	4,200
			8 × 8	0.10	235	7	5,000
		560	5 × 8	0.10	500	7	4,200
			6.3 × 6*	0.10	500	10	4,000
			6.3 × 8	0.10	500	7	5,600
			8 × 8	0.12	280	7	6,200
		820	6.3 × 8	0.10	500	7	5,600
			8 × 8	0.10	410	7	6,200
			8 × 12	0.12	410	7	6,200
		1,000	8 × 8	0.12	500	7	6,200
			8 × 12	0.12	500	7	6,200
			10 × 12	0.12	500	7	6,200
1,200	8 × 8	0.12	600	7	6,200		
1,500	10 × 12	0.12	750	7	6,500		
2,700	10 × 12	0.12	1,350	7	7,200		
4V (0G)	4.6	560	6.3 × 8	0.10	500	7	5,600
			8 × 8	0.10	448	7	6,200
			8 × 12	0.12	448	7	6,200
		820	8 × 8	0.10	656	7	6,200
		1,000	8 × 8	0.10	800	7	6,200
		1,200	8 × 12	0.12	960	7	6,200
			10 × 12	0.12	960	7	6,200
		1,500	10 × 12	0.12	1,200	7	6,500
2,200	10 × 12	0.12	1,760	8	7,200		
6.3V (0J)	7.2	270	5 × 8	0.10	680	8	3,900
		470	6.3 × 8	0.10	592	7	5,600
			8 × 8	0.12	592	7	6,200
			8 × 12	0.12	592	7	6,200
			8 × 12	0.12	592	7	6,200
		560	6.3 × 8	0.10	706	7	5,600
			8 × 8	0.10	706	7	6,200
			8 × 12	0.12	706	7	6,200
		820	8 × 8	0.10	1,033	7	6,200
			8 × 12	0.10	1,033	8	5,500
			10 × 12	0.12	1,033	7	6,200
		1,000	8 × 8	0.10	1,260	7	6,200
			8 × 12	0.12	1,260	8	5,500
1,500	10 × 12	0.12	1,890	7	6,200		

Remark: The case size with "*" of case length is 6.0 mm maximum.

Dimension: ϕ D×L(mm)

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

Standard Ratings

W. V. (V)	Surge Voltage (V)	Capacitance (μF)	Size ϕ D×L(mm)	Tanδ (120Hz, 20°C)	LC (μA)	E S R (mΩ/at 100k ~ 300k Hz, 20°C Max)	Rated R. C. (mA/rms at 100k Hz, 105°C)
10V (1A)	12.0	390	8 × 12	0.12	780	8	5,000
		470	10 × 12	0.12	940	8	6,000
		560	10 × 12	0.12	1,120	8	6,000
		820	10 × 12	0.12	1,640	8	6,000
16V (1C)	18.0	100	6.3 × 6*	0.10	320	24	2,490
			6.3 × 8	0.10	500	10	4,680
		180	6.3 × 8	0.10	576	10	4,680
			8 × 8	0.10	576	10	5,000
		270	8 × 8	0.10	864	10	5,000
			8 × 12	0.12	864	8	5,000
		330	8 × 8	0.10	1,056	10	5,000
			10 × 12	0.12	1,056	8	6,000
		470	8 × 12	0.12	1,504	10	5,400
			10 × 12	0.12	1,504	8	6,000
		820	10 × 12	0.10	2,624	10	6,100
		1,000	10 × 12	0.10	3,200	10	6,100

Remark: The case size with "*" of case length is 6.0 mm maximum.

Part Numbering System

OCRZ series	470μF	±20%	6.3V	Bulk Package	Gas Type	6.3 ϕ × 8L	Pb-free and PET coating case
ORZ	471	M	0J	BK	-	0608	
Series	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration & Package	Rubber Type	Case Size	Lead Wire and Coating Type

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 10.