

ORC Series

Features

- 105°C, 15,000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS Compliance



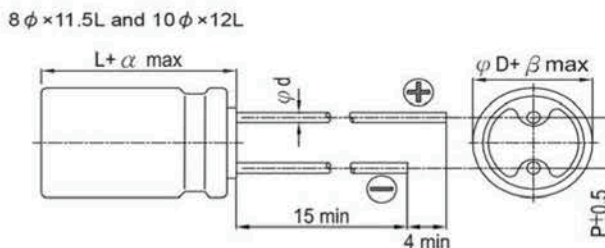
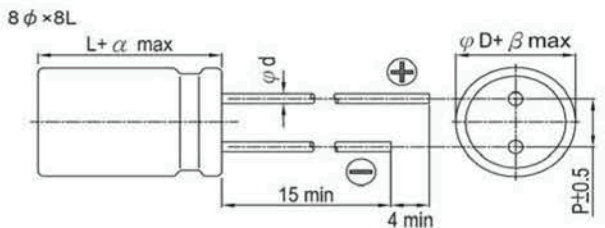
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Specifications

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>15,000 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	15,000 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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	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 15,000 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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	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 11 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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* 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 and Frequency Multipliers	<table border="1"> <tr> <th>Frequency (Hz)</th> <th>120 ≤ f < 1k</th> <th>1k ≤ f < 10k</th> <th>10k ≤ f < 100k</th> <th>100k ≤ f < 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						
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* 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	8	8	10
L	8	11.5	12
P	3.5		5.0
φ d	0.6		
α	1.0		
β	0.5		

Marking



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

Standard Ratings

W. V. (V)	Surge Voltage (V)	Capacitance (μF)	Size ϕ D×L(mm)	Tanδ (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)
2.5V (0E)	2.9	560	8 × 8	0.10	500	7	6,100
		820	8 × 8	0.10	500	7	6,100
		1,000	8 × 8	0.10	500	7	6,100
			8 × 11.5	0.10	500	7	6,100
		1,500	8 × 11.5	0.10	750	7	6,100
2,700	10 × 12	0.10	1,350	8	5,560		
4V (0G)	4.6	560	8 × 8	0.10	448	7	6,100
		680	8 × 11.5	0.10	544	7	6,100
		1,000	10 × 12	0.10	800	6	6,640
6.3V(0J)	7.2	470	8 × 8	0.10	592	8	5,700
		560	8 × 8	0.10	706	8	5,700
		820	10 × 12	0.10	1,033	7	6,640
		1,500	10 × 12	0.10	1,890	10	5,560
10V (1A)	12.0	390	8 × 11.5	0.10	780	9	5,650
		680	10 × 12	0.10	1,360	7	6,100
16V (1C)	18.0	270	8 × 11.5	0.12	864	11	5,080
		330	10 × 12	0.10	1,056	10	6,100
		470	10 × 12	0.10	1,504	10	6,100

OP-CAP

Part Numbering System

ORC Series	470μF	±20%	6.3V	Bulk Package	Gas Type	8 ϕ × 11.5L	Pb-free and PET coating case
ORC	471	M	0J	BK	-	0811	S
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration & Package	Rubber Type	Case size	Lead Wire and Coating Type
							Supplement Code

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