

OCRU Series

Features

- 125°C, 1000 ~ 2,000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS compliance



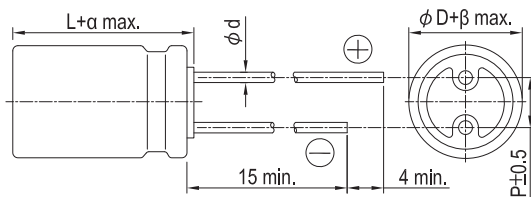
Marking color: Blue

Specifications

Items	Performance										
Category Temperature Range	-55°C ~ +125°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>1,000 Hrs for 2.5 ~ 4V; 2,000 Hrs for 6.3~ 20V</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table>	Test Time	1,000 Hrs for 2.5 ~ 4V; 2,000 Hrs for 6.3~ 20V	Capacitance Change	Within ±20% of initial value	Tanδ	Less than 200% of specified value	ESR	Less than 200% of specified value	Leakage Current	Within specified value
	Test Time	1,000 Hrs for 2.5 ~ 4V; 2,000 Hrs for 6.3~ 20V									
	Capacitance Change	Within ±20% of initial value									
	Tanδ	Less than 200% of specified value									
	ESR	Less than 200% 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 specified hours at 125°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 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>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	<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						
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

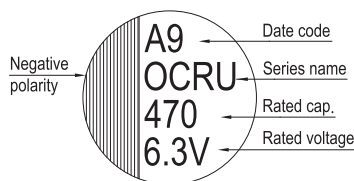


Lead Spacing and Diameter

Unit: mm

ϕD	8	10
L	11.5	12
P	3.5	5.0
ϕd	0.6	
α	1.0	
β	0.5	

Marking



Dimension: ϕ D×L(mm)

Ripple Current: mA/rms at 100k Hz

Standard Ratings

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μ F)	Size ϕ D×L(mm)	Tan δ (120 Hz, 20°C)	L C (μ A)	E S R (m Ω /at 100k ~ 300k Hz, 20°C max.)	Rated R. C.(mA/rms at 100k Hz)	
							T \leq 105°C	105°C < T \leq 125°C
2.5V (0E)	2.9	680	8 × 11.5	0.18	340	13	4,520	1,430
		1,200	10 × 12	0.18	600	13	5,440	1,721
4V (0G)	4.6	560	8 × 11.5	0.18	448	13	4,520	1,430
		1,200	10 × 12	0.18	960	12	5,440	1,721
6.3V (0J)	7.2	470	8 × 11.5	0.15	592	15	4,210	1,332
		820	10 × 12	0.15	1,033	12	5,440	1,721
10V (1A)	12.0	330	8 × 11.5	0.12	660	16	3,950	1,250
		560	10 × 12	0.12	1,120	13	5,230	1,655
16V (1C)	18.0	180	8 × 11.5	0.12	576	18	3,640	1,151
		330	10 × 12	0.12	1,056	16	4,720	1,493
20V (1D)	23.0	100	8 × 11.5	0.15	400	24	3,320	1,050
		150	10 × 12	0.15	600	20	4,320	1,367

Part Numbering System

OCRU Series	470 μ F	\pm 20%	6.3V	Bulk Package	Gas Type	8 ϕ × 11.5L	Pb-free and PET coating case
ORU	471	M	0J	BK	-	0811	
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration and Package	Rubber Type	Case Size	Lead Wire and Coating Type

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