

## OCRK Series

### Features

- 105°C, 5,000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS Compliance



Marking color: Blue

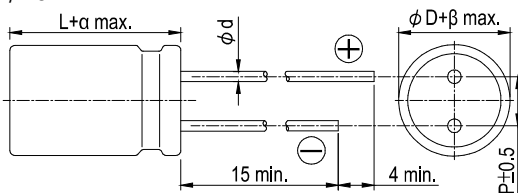
### Specifications

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>5,000 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	5,000 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 the rated voltage applied for 5,000 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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	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>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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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> <th>Multiplier</th> <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
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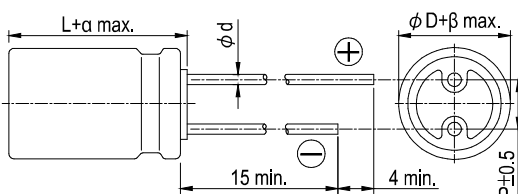
\* For any doubt about measured values, measure the leakage current again after the following voltage treatment.  
Voltage treatment: DC rated voltage is applied to the capacitors for 2 hours at 105 °C.

### Diagram of Dimensions

6.3 φ x 8L



8 φ x 11.5L and 10 φ x 12L



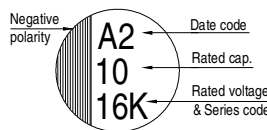
### Lead Spacing and Diameter

Unit: mm

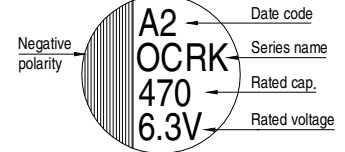
φ D	6.3	8	10
L	8	11.5	12
P	2.5	3.5	5.0
φ d	0.6		
α	1.0		
β	0.5		

### Marking

φ D = 6.3



φ D = 8 ~ 10





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

Standard Ratings

Rated Volt. (V)	Surge Voltage (V)	Capacitance ( $\mu$ F)	Size $\phi$ D x 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	330	6.3 x 8	0.10	500	7	5,600
		470	6.3 x 8	0.10	500	7	5,600
		560	6.3 x 8	0.10	500	7	5,600
		820	6.3 x 8	0.10	500	7	5,600
4V (0G)	4.6	560	6.3 x 8	0.10	500	7	5,000
6.3V (0J)	7.2	390	8 x 11.5	0.15	491	15	4,210
		470	6.3 x 8	0.10	592	8	4,700
			8 x 11.5	0.15	592	15	4,210
		560	6.3 x 8	0.10	706	8	4,700
10V (1A)	12.0	330	8 x 11.5	0.12	660	17	3,950
		560	10 x 12	0.12	1,360	16	4,720
16V (1C)	18.0	180	8 x 11.5	0.12	576	20	3,640
		270	6.3 x 8	0.12	864	15	3,800
		330	10 x 12	0.12	1,056	16	4,720
20V (1D)	23.0	100	8 x 11.5	0.12	400	28	2,300
		330	10 x 12	0.12	1,320	26	2,800
25V (1E)	29.0	100	8 x 11.5	0.12	500	28	2,200
		270	10 x 12	0.12	1,350	27	2,700
35V (1V)	40.0	68	8 x 11.5	0.12	476	29	2,200
		150	10 x 12	0.12	1,050	28	2,600

Part Numbering System

OCRK Series    470 $\mu$ F     $\pm$ 20%    6.3V    Bulk Package    Gas Type    8  $\phi$  x 11.5L    Pb-free and PET coating case

**ORK**    **471**    **M**    **0J**    **BK**    -    **0811**

Series Name    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 13.