

OCR Series

Features

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



Marking color: Blue

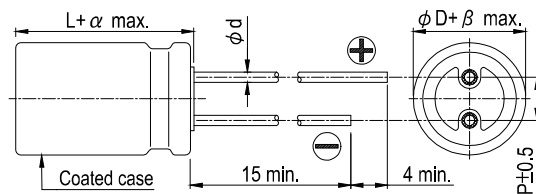
Specifications

Items	Performance																							
Category Temperature Range	-55℃ ~ +105℃																							
Capacitance Tolerance	± 20% (at 120 Hz, 20℃)																							
Leakage Current (at 20℃)*	Rated voltage applied, after 2 minutes at 20℃. See Standard Ratings																							
Tanδ (at 120 Hz, 20℃)	See Standard Ratings																							
ESR (at 100k ~ 300k Hz, 20℃)	See Standard Ratings																							
Endurance	<table><tr><td>Test Time</td><td colspan="3">2,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="3">Within ± 20% of initial value</td></tr><tr><td>Tanδ</td><td colspan="3">Less than 150% of specified value</td></tr><tr><td>ESR</td><td colspan="3">Less than 150% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="3">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		
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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℃ after the rated voltage applied for 2,000 hours at 105℃.																								
Moisture Resistance	<table><tr><td>Test Time</td><td colspan="3">1,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="3">Within ± 20% of initial value</td></tr><tr><td>Tanδ</td><td colspan="3">Less than 150% of specified value</td></tr><tr><td>ESR</td><td colspan="3">Less than 150% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="3">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℃ after subjecting them at 60℃, 90 ~ 95% RH for 1,000 hours. Leakage current should be tested after voltage treatment*.																								
Resistance to Soldering Heat * (Please refer to page 18 for soldering conditions)	<table><tr><td>Capacitance Change</td><td colspan="3">Within ± 10% of initial value</td></tr><tr><td>Tanδ</td><td colspan="3">Within specified value</td></tr><tr><td>ESR</td><td colspan="3">Within specified value</td></tr><tr><td>Leakage Current</td><td colspan="3">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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Leakage Current	Within specified value																							
Ripple Current and Frequency Multipliers	<table><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										
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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



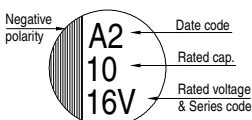
Lead Spacing and Diameter

Unit: mm

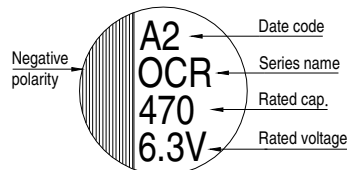
ϕD	6.3	6.3	6.3	8	10	10
L	5.5	6.5	11	11.5	10	12
P	2.5			3.5	5.0	
ϕd	0.45		0.5	0.6		
α	1.0					
β	0.5					

Marking

φ D = 6.3



φ D = 8 ~ 10



Dimension: ϕ D×L(mm)

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

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, 105°C)
2.5V (0E)	2.9	220	6.3 × 5.5	0.12	110	28	2,390
		390	6.3 × 11	0.12	195	18	3,160
		680	8 × 11.5	0.18	340	10	5,230
		1,000	10 × 10		500	14	4,700
		1,500	10 × 12		750	12	5,500
4V (0G)	4.6	150	6.3 × 5.5	0.12	120	40	1,810
		270	6.3 × 11	0.12	216	15	3,200
		560	8 × 11.5	0.18	448	10	5,230
		1,200	10 × 12	0.18	960	12	5,500
6.3V (0J)	7.2	100	6.3 × 5.5	0.12	126	40	1,810
		220	6.3 × 11		277	18	3,160
		330	6.3 × 6.5		416	28	2,390
		390	8 × 11.5	0.15	491	12	4,770
		470	8 × 11.5		592	12	4,770
		820	10 × 12		1,033	12	5,500
10V (1A)	12.0	100	6.3 × 6.5	0.12	200	45	1,700
		220	10 × 10	0.15	440	17	3,950
		330	8 × 11.5	0.12	660	14	4,420
		560	10 × 12	0.12	1,360	12	5,300
16V (1C)	18.0	47	6.3 × 5.5	0.10	150	50	1,650
		100	6.3 × 11	0.10	320	22	2,820
		180	8 × 11.5	0.12	576	16	4,360
		330	10 × 10		1,056	16	4,360
		330	10 × 12		1,056	14	5,050
20V (1D)	23.0	22	6.3 × 5.5	0.10	88	60	1,450
		56	6.3 × 11	0.10	224	25	2,650
		100	8 × 11.5	0.15	400	24	3,320
			10 × 10		400	24	3,320
		150	10 × 12		600	20	4,320
		330	10 × 12	0.12	1,320	24	2,800
25V (1E)	29.0	6.8	6.3 × 5.5	0.10	170	80	1,200
		33	8 × 11.5	0.12	165	24	3,320
		56	8 × 11.5		280	24	3,320
			10 × 12.5		280	20	4,320
		68	8 × 11.5		340	24	3,320
		100	10 × 12		500	20	4,320
		270	10 × 12		1,350	25	2,800
35V (1V)	40.0	22	8 × 11.5	0.12	154	31	2,300
		39	8 × 11.5		273	31	2,300
		47	10 × 12		329	30	3,650
		68	10 × 12		476	28	2,700
		150	10 × 12		1,050	26	2,700

Part Numbering System

OCR Series	470 μ F	± 20%	6.3V	Bulk Package	Gas Type	8 ϕ × 11.5L	General Purpose
OCR	471	M	0J	BK	-	0811	
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration and Package	Rubber Type	Case Size	Application

Note: For more details, please refer to "Part Numbering System" on page 20.