OCR Series

Features
- 105℃, 2,000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS Compliance

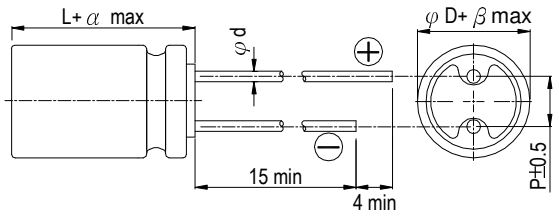
Marking color: Blue

Specifications

Items	Performance
Category Temperature Range	-55℃ ~ +105℃
Capacitance Tolerance	±20% (at 120Hz, 20℃)
Leakage Current (at 20℃)*	Rated voltage applied, after 2 minutes at 20℃. See Standard Ratings
Tanδ (at 120Hz, 20℃)	See Standard Ratings
ESR (at 100k ~ 300k Hz, 20℃)	See Standard Ratings
Endurance	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℃ after the rated voltage applied for 2,000 hours at 105℃.
Moisture Resistance	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℃ after subjecting them at 60℃, 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)	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
Ripple Current & Frequency Multipliers	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 ℃.

Diagram of Dimensions



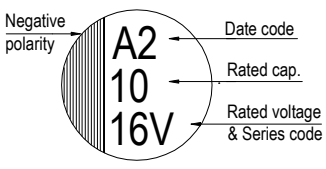
Lead Spacing and Diameter

Unit: mm

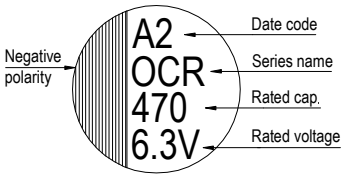
φD	6.3	6.3	6.3	8	10	10
L	5.5	6.5	11	11.5	10	12
P	2.5	2.5	2.5	3.5	5.0	5.0
φd	0.45		0.6			
α	1.0					
β	0.5					

Marking

φD = 6.3



φD = 8 ~ 10



Dimension: φD×L(mm)

Standard Ratings

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

W. V. (V)	Surge Voltage (V)	Capacitance (μF)	Size φD×L(mm)	Tanδ (120Hz, 20℃)	L C (μA)	E S R (mΩ/at 100k ~ 300k Hz, 20℃ Max)	Rated R. C. (mA/rms at 100k Hz, 105℃)
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	0.18	500	14	4,700
		1,500	10 × 12	0.18	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	0.12	277	18	3,160
		330	6.3 × 6.5	0.12	416	28	2,390
		390	8 × 11.5	0.15	491	12	4,770
		470	8 × 11.5	0.15	592	12	4,770
		820	10 × 12	0.15	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	0.12	1,056	16	4,360
		330	10 × 12	0.12	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
		100	10 × 10	0.15	400	24	3,320
		150	10 × 12	0.15	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	0.12	280	24	3,320
			10 × 12.5	0.12	280	20	4,320
		68	8 × 11.5	0.12	340	24	3,320
		100	10 × 12	0.12	500	20	4,320
		270	10 × 12	0.12	1,350	25	2,800
35V (1V)	40.0	22	8 × 11.5	0.12	154	31	2,300
		39	8 × 11.5	0.12	273	31	2,300
		47	10 × 12	0.12	329	30	3,650
		68	10 × 12	0.12	476	28	2,700
		150	10 × 12	0.12	1,050	26	2,700
50V (1H)	58.0	27	8 × 11.5	0.12	390	29	2,200
		47	10 × 12	0.12	680	28	2,600
63V (1J)	73.0	27	8 × 11.5	0.12	340	33	2,100
		47	10 × 12	0.12	592	29	2,600

Part Numbering System

OCR series	470μF	±20%	6.3V	Bulk Package	Gas Type	8φ×11.5L	Pb-free and PET coating case
OCR	**471**	**M**	**0J**	**BK**	**-**	**0811**	
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.