OCRZ Series

Features
- 105℃, 2000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS compliance

Marking color: Blue

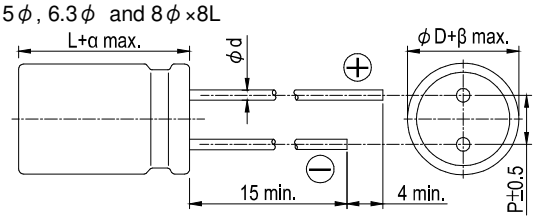
Specifications

Items	Performance
Category Temperature Range	-55℃ ~ +105℃
Capacitance Tolerance	±20% (at 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	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 2000 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 ~ 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)	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	Frequency (Hz): 120 ≦ f < 1k | 1k ≦ f < 10k | 10k ≦ f < 100k | 100k ≦ f < 500k Multiplier: 0.05 | 0.3 | 0.7 | 1.0

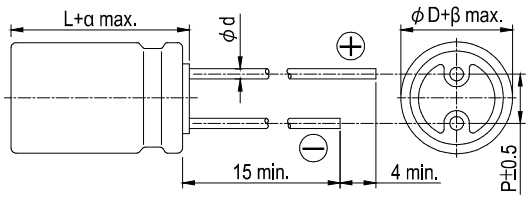
* For any doubt about measured values, measure the leakage current again after the following voltage treatment.
Voltage treatment: DC rated voltage is applied to the capacitors for 2 hours at 105 ℃.

Diagram of Dimensions

5φ, 6.3φ and 8φ×8L



8φ×12L and 10φ×12L

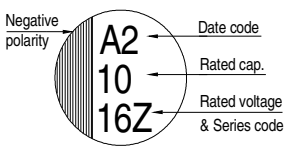


Lead Spacing and Diameter Unit: mm

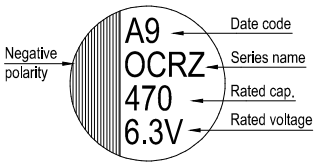
φD	5	6.3	6.3	8	8	10
L	8	6	8	8	12	12
P	2.0	2.5		3.5		5.0
φd	0.5	0.45	0.6			
α	1.0					
β	0.5					

Marking

φD = 5 ~ 6.3



φD = 8 ~ 10



Dimension: φD×L(mm)

Standard Ratings

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

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μF)	Size φD×L(mm)	Tanδ (120 Hz, 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	330	6.3 × 8	0.10	500	7	5,600
		390	6.3 × 6*			10	3,900
		470	5 × 8			7	4,200
			8 × 8		235		5,000
		560	5 × 8		500		4,200
			6.3 × 6*			10	4,000
			6.3 × 8			7	5,600
			8 × 8	0.12	280		6,200
		820	6.3 × 8	0.10	500		5,600
			8 × 8	0.10	410		6,200
			8 × 12	0.12	410		
		1,000	8 × 8		500		
			8 × 12				
			10 × 12				
		1,200	6.3 × 8	0.10	600		5,600
			8 × 8	0.12	600		6,200
		1,500	8 × 12		750		6,200
			10 × 12		750		6,500
		1,800	8 × 8		900		6,200
		2,200	8 × 12		1,100		6,200
		2,700	10 × 12		1,350		7,200
		3,900	10 × 12		1,950		7,200
4V (0G)	4.6	560	6.3 × 8	0.10	500	7	5,600
			8 × 8	0.10	448		6,200
			8 × 12	0.12	448		
		820	8 × 8	0.10	656		
		1,000			800		
		1,200	8 × 12	0.12	960		
			10 × 12				
		1,500			1,200		6,500
		2,200			1,760	8	7,200
		2,700			2,160	8	7,200
6.3V (0J)	7.2	270	5 × 8	0.10	680	8	3,900
		330	5 × 8		832	8	3,900
		470	6.3 × 8		592	7	5,600
			8 × 8	0.12			6,200
			8 × 12	0.12			6,200
		560	6.3 × 8	0.10	706		5,600
			8 × 8	0.10			6,200
			8 × 12	0.12			6,200
		680	6.3 × 8	0.10	857		5,600
		820	6.3 × 8		1,033		5,600
			8 × 8				6,200
			8 × 12			8	5,500
			10 × 12	0.12		7	6,200
		1,000	8 × 8	0.10	1,260	7	6,200
			8 × 12	0.12	1,260	8	5,500

Remark: The case size with " * " of case length is 6.0 mm maximum.

Dimension: φD×L(mm)

Standard Ratings

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

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μF)	Size φD×L(mm)	Tanδ (120 Hz, 20℃)	L C (μA)	E S R (mΩ/at 100k ~ 300k Hz, 20℃ max.)	Rated R. C. (mA/rms at 100k Hz, 105℃)
6.3V (0J)	7.2	1,200	10 × 12	0.12	1,512	8	5,500
		1,500			1,890	7	6,200
		1,800			2,268		
		2,200			2,772		
10V (1A)	12.0	270	8 × 12	0.12	540	8	5,000
		390	8 × 12		780		5,000
		470	10 × 12		940		6,000
		560	8 × 8		1,120	9	5,600
			10 × 12		1,120	8	6,000
		820	8 × 12		1,640		5,000
			10 × 12		1,640		6,000
		1,200	10 × 12		2,400		6,000
16V (1C)	18.0	100	6.3 × 6*	0.10	320	24	2,490
			6.3 × 8		500	10	4,680
		180	6.3 × 8		576		4,680
			8 × 8		576		5,000
		270	6.3 × 8		864		4,680
			8 × 8				5,000
			8 × 12	0.12		8	
		330	8 × 8	0.10	1,056	10	
			10 × 12	0.12	1,056	8	6,000
		470	8 × 8		1,504	16	4,000
			8 × 12			10	5,400
			10 × 12			8	6,000
		820		0.10	2,624	10	6,100
		1,000		0.10	3,200	10	6,100
20V (1D)	23.0	330	8 × 8	0.12	1,320	17	3,880
		390	8 × 12		1,560	14	4,970
		680	10 × 12		2,720	12	5,400
25V (1E)	29.0	180	8 × 8	0.12	900	18	3,770
		220	8 × 12		1,100	16	4,650
		390	10 × 12		1,950	14	5,000
35V (1V)	40.0	47	8 × 12	0.12	329	24	3,600
		82	8 × 12		574	20	4,000
		120	10 × 12		840	18	4,400
		150	10 × 12		1,050	20	3,800

Remark: The case size with " * " of case length is 6.0 mm maximum.

Part Numbering System

OCRZ Series	470μF	±20%	6.3V	Bulk Package	Gas Type	6.3φ×8L	Pb-free and Coated Case
ORZ	**471**	**M**	**0J**	**BK**	**-**	**0608**	
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration and Package	Rubber Type	Case Size	Lead Wire and Case Type

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