

OCRZ Series

Features

- 105°C, 2000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS compliant



Marking color: Blue

Specifications

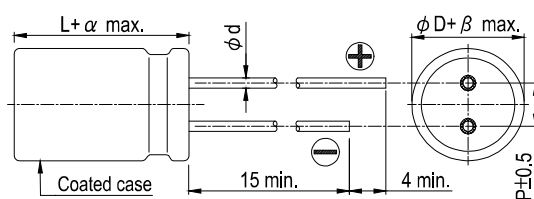
Items	Performance				
Category Temperature Range	-55℃ ~ +105℃				
Capacitance Tolerance	± 20% (at 120 Hz, 20℃)				
Leakage Current (at 20℃)*	Rated voltage applied, after 2 minutes at 20℃ . See Standard Ratings				
Tanδ (at 120 Hz, 20℃)	See Standard Ratings				
ESR (at 100k ~ 300k Hz, 20℃)	See Standard Ratings				
Endurance	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 18 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.

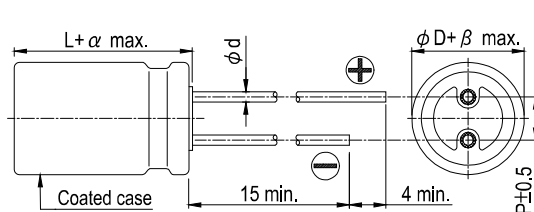
Voltage treatment: DC rated voltage is applied to the capacitors for 2 hours at 105 °C.

Diagram of Dimensions

5φ, 6.3φ and 8φ×8L



8φ×12L and 10φ×12L



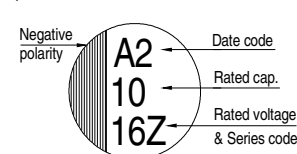
Lead Spacing and Diameter

Unit: mm

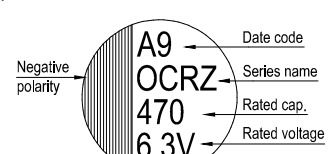
φ D	5	6.3	6.3	8	8	10
L	8	6	8	8	12	12
P	2.0	2.5		3.5		5.0
φ d	0.5	0.45		0.6		
α				1.0		
β				0.5		

Marking

φ D = 5 ~ 6.3



φ D = 8 ~ 10



Dimension: $\phi D \times L$ (mm)

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

Standard Ratings

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μF)	Size φD×L(mm)	Tanδ (120 Hz, 20°C)	L C (μA)	E S R (mΩ/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 × 8	0.10	500	7	5,600	
		390	6.3 × 6*			10	3,900	
		470	5 × 8		235	7	4,200	
			8 × 8				5,000	
		560	5 × 8		500	10	4,200	
			6.3 × 6*				4,000	
			6.3 × 8	7		5,600		
			8 × 8			6,200		
		820	6.3 × 8		0.10	500	5,600	
			8 × 8		0.10	410	6,200	
			8 × 12		410			
		1,000	8 × 8		0.12	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			6,500
			10 × 12		1,200			
		1,500			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	0.12	592	7	5,600	
			8 × 8				6,200	
			8 × 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: ϕ D×L(mm)

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

Standard Ratings

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μF)	Size φ D×L(mm)	Tanδ (120 Hz, 20°C)	L C (μA)	E S R (mΩ/at 100k ~ 300k Hz, 20°C max.)	Rated R. C. (mA/rms at 100k Hz, 105°C)
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	0.12	864		8
			8 × 8				
			8 × 12	0.10	1,056	10	6,000
		330	8 × 8	0.12	1,056	8	4,000
			10 × 12		1,504	10	5,400
		470	8 × 8		8	6,000	
			8 × 12		10	6,100	
		820	10 × 12	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	470 μ F	± 20%	6.3V	Bulk Package	Gas Type	6.3 ϕ × 8L	General Purpose
ORZ	471	M	0J	BK	-	0608	
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.