

OCRZ Series

Features

- 105°C, 2000 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 120 Hz, 20°C)
Leakage Current (at 20°C)*	Rated voltage applied, after 2 minutes at 20°C. See Standard Ratings
Tanδ (at 120 Hz, 20°C)	See Standard Ratings
ESR (at 100k ~ 300k Hz, 20°C)	See Standard Ratings
Endurance	Test Time
	2,000 Hrs
	Capacitance Change
	Within ±20% of initial value
	Tanδ
Moisture Resistance	Less than 150% of specified value
	ESR
	Less than 150% of specified value
	Leakage Current
	Within specified value
Resistance to Soldering Heat *	Test Time
	1,000 Hrs
	Capacitance Change
	Within ±20% of initial value
	Tanδ
Ripple Current and Frequency Multipliers	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 2000 hours at 105°C.

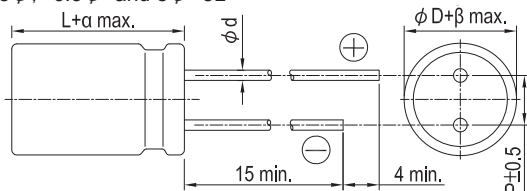
* The above specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them at 60°C, 90 ~ 95% RH for 1,000 hours. Leakage current should be tested after voltage treatment*.

* 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.

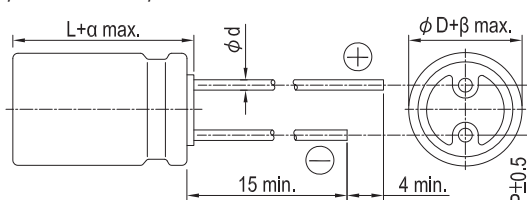
Frequency (Hz)	120 ≤ f < 1k	1k ≤ f < 10k	10k ≤ f < 100k	100k ≤ f < 500k
Multiplier	0.05	0.3	0.7	1.0

Diagram of Dimensions

5φ, 6.3φ and 8φ×8L



8φ×12L and 10φ×12L



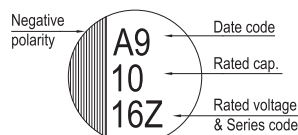
Lead Spacing and Diameter

Unit: mm

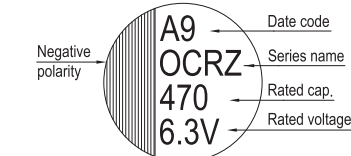
φ D	5	6.3	6.3	8	8	10
L	8	6	8	8	12	12
P	2.0	2.5		3.5		5.0
φ d	0.5	0.45		0.6		
α				1.0		
β				0.5		

Marking

φ D = 5 ~ 6.3



φ D = 8 ~ 10





Standard Ratings

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

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

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μ F)	Size $\phi D \times L$ (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	330	6.3 $\times$ 8	0.10	500	7	5,600
		390	6.3 $\times$ 6*	0.10	500	10	3,900
		470	5 $\times$ 8	0.10	500	7	4,200
			8 $\times$ 8	0.10	235	7	5,000
		560	5 $\times$ 8	0.10	500	7	4,200
			6.3 $\times$ 6*	0.10	500	10	4,000
			6.3 $\times$ 8	0.10	500	7	5,600
			8 $\times$ 8	0.12	280	7	6,200
		820	6.3 $\times$ 8	0.10	500	7	5,600
			8 $\times$ 8	0.10	410	7	6,200
			8 $\times$ 12	0.12	410	7	6,200
		1,000	8 $\times$ 8	0.12	500	7	6,200
			8 $\times$ 12	0.12	500	7	6,200
			10 $\times$ 12	0.12	500	7	6,200
4V (0G)	4.6	560	6.3 $\times$ 8	0.10	500	7	5,600
			8 $\times$ 8	0.10	448	7	6,200
			8 $\times$ 12	0.12	448	7	6,200
		820	8 $\times$ 8	0.10	656	7	6,200
		1,000	8 $\times$ 8	0.10	800	7	6,200
		1,200	8 $\times$ 12	0.12	960	7	6,200
			10 $\times$ 12	0.12	960	7	6,200
		1,500	10 $\times$ 12	0.12	1,200	7	6,500
6.3V (0J)	7.2	2,200	10 $\times$ 12	0.12	1,760	8	7,200
		270	5 $\times$ 8	0.10	680	8	3,900
			6.3 $\times$ 8	0.10	592	7	5,600
			8 $\times$ 8	0.12	592	7	6,200
			8 $\times$ 12	0.12	592	7	6,200
		560	6.3 $\times$ 8	0.10	706	7	5,600
			8 $\times$ 8	0.10	706	7	6,200
			8 $\times$ 12	0.12	706	7	6,200
		820	8 $\times$ 8	0.10	1,033	7	6,200
			8 $\times$ 12	0.10	1,033	8	5,500
			10 $\times$ 12	0.12	1,033	7	6,200
		1,000	8 $\times$ 8	0.10	1,260	7	6,200
			8 $\times$ 12	0.12	1,260	8	5,500
		1,500	10 $\times$ 12	0.12	1,890	7	6,200

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

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

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

Standard Ratings

Rated Volt. (V)	Surge Voltage (V)	Capacitance (μ F)	Size $\phi D \times L$ (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)
10V (1A)	12.0	390	8 $\times$ 12	0.12	780	8	5,000
		470	10 $\times$ 12	0.12	940	8	6,000
		560	10 $\times$ 12	0.12	1,120	8	6,000
		820	10 $\times$ 12	0.12	1,640	8	6,000
16V (1C)	18.0	100	6.3 $\times$ 6*	0.10	320	24	2,490
			6.3 $\times$ 8	0.10	500	10	4,680
		180	6.3 $\times$ 8	0.10	576	10	4,680
			8 $\times$ 8	0.10	576	10	5,000
		270	8 $\times$ 8	0.10	864	10	5,000
			8 $\times$ 12	0.12	864	8	5,000
		330	8 $\times$ 8	0.10	1,056	10	5,000
			10 $\times$ 12	0.12	1,056	8	6,000
		470	8 $\times$ 12	0.12	1,504	10	5,400
			10 $\times$ 12	0.12	1,504	8	6,000
		820	10 $\times$ 12	0.10	2,624	10	6,100
		1,000	10 $\times$ 12	0.10	3,200	10	6,100
20V (1D)	23.0	330	8 $\times$ 8	0.12	1,320	17	3,880
		390	8 $\times$ 12	0.12	1,560	14	4,970
		680	10 $\times$ 12	0.12	2,720	12	5,400
25V (1E)	29.0	180	8 $\times$ 8	0.12	900	18	3,770
		220	8 $\times$ 12	0.12	1,100	16	4,650
		390	10 $\times$ 12	0.12	1,950	14	5,000

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

Part Numbering System

OCRZ Series	470 μ F	$\pm 20\%$	6.3V	Bulk Package	Gas Type	6.3 $\phi \times 8L$	Pb-free and PET coating 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 Coating Type

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