

ORG Series

Features

- 105°C, 20,000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS compliant



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	<table border="1"> <tr> <td>Test Time</td> <td>16V: 20,000 Hrs 20 ~ 35V: 15,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table>	Test Time	16V: 20,000 Hrs 20 ~ 35V: 15,000 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
	Test Time	16V: 20,000 Hrs 20 ~ 35V: 15,000 Hrs									
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	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°C after the rated voltage applied for 20,000 / 15,000 hours at 105°C.											
Moisture Resistance	<table border="1"> <tr> <td>Test Time</td> <td>1,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>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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	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°C after subjecting them at 60°C, 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 border="1"> <tr> <td>Capacitance Change</td> <td>Within ±10% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Within specified value</td> </tr> <tr> <td>ESR</td> <td>Within specified value</td> </tr> <tr> <td>Leakage Current</td> <td>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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Ripple Current and Frequency Multipliers	<table border="1"> <tr> <th>Frequency (Hz)</th> <th>120 ≤ f < 1k</th> <th>1k ≤ f < 10k</th> <th>10k ≤ f < 100k</th> <th>100k ≤ f < 500k</th> </tr> <tr> <th>Multiplier</th> <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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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

Fig. 1

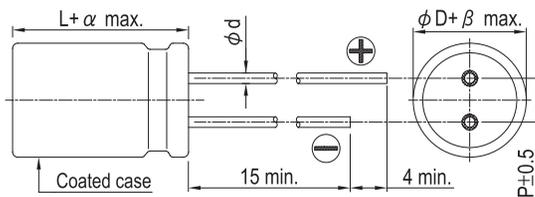
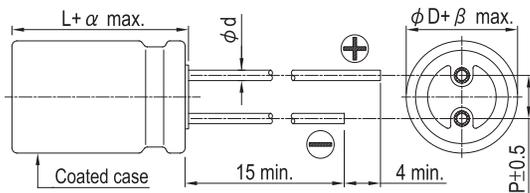


Fig. 2

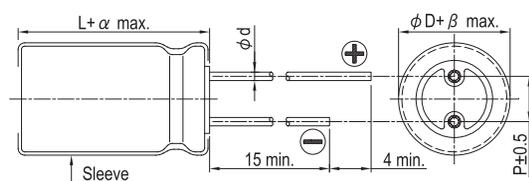


Lead Spacing and Diameter

Unit: mm

φD	6.3		8				10		
L	5.5	8	8	11.5	16	20	12	16	20
P	2.5		3.5				5.0		
φd	0.45		0.6						
α	0.5	1.0	1.0	1.0	1.5	2.0	1.0	1.5	2.0
β	0.5								
Fig. No.	1		2	3	2	3			

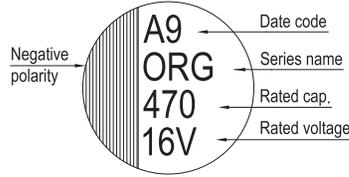
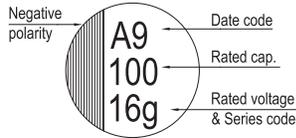
Fig. 3



Marking

$\phi D = 6.3$

$\phi D = 8 \sim 10$



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 $\phi D \times L$ (mm)	Tan δ (120 Hz, 20°C)	L C (μA)	E S R (m Ω /at 100k ~ 300k Hz, 20°C max.)	Rated R. C. (mA/rms at 100k Hz, 105°C)
16V (1C)	18.0	150	6.3 × 5.5	0.12	480	20	3,200
		270	6.3 × 8		864	10	5,080
		330	6.3 × 8		1,056	10	5,080
		470	8 × 8		1,504	8	5,400
		560	8 × 11.5		1,792	8	6,100
		680	8 × 11.5		2,176	8	6,100
		820	8 × 16		2,624	8	7,000
			10 × 12		2,624	12	5,400
		1,000	8 × 16		3,200	8	7,000
			8 × 20			8	7,500
			10 × 12			12	5,400
		1,200	8 × 20		3,840	8	7,500
			10 × 12		3,840	12	5,400
		1,500	8 × 20		4,800	8	7,500
			10 × 16		4,800		7,700
		1,800	10 × 16		5,760	5,760	7,700
10 × 20	5,760		8,100				
2,200	10 × 20	7,040					
2,700	10 × 20	8,640					
20V (1D)	23.0	120	6.3 × 5.5	0.12	480	20	3,200
		180	6.3 × 8		720	18	3,460
		330	8 × 8		1,320	17	3,880
		390	8 × 11.5		1,560	14	4,970
		680	10 × 12		2,720	12	5,400
25V (1E)	29.0	56	6.3 × 5.5	0.12	280	30	2,600
		82	6.3 × 8		410	28	2,780
		100			500		
		120			600		
		180	8 × 8		900	18	3,770
		220	8 × 11.5		900	16	4,650
			8 × 11.5		1,100	16	4,650
		330	10 × 12		1,650	14	5,000
		390	10 × 12		1,950	14	5,000
35V(1V)	40.0	68	8 × 11.5	0.12	476	18	4,380
		120	10 × 12	0.12	840	16	4,670

Part Numbering System

ORG Series 560 μF $\pm 20\%$ 16V Bulk Package Gas Type 8 $\phi \times 11.5L$ General Purpose

ORG **561** **M** **1C** **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.