

## 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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	ESR	Less than 150% of specified value									
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* 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><math>120 \leq f &lt; 1k</math></th> <th><math>1k \leq f &lt; 10k</math></th> <th><math>10k \leq f &lt; 100k</math></th> <th><math>100k \leq f &lt; 500k</math></th> </tr> <tr> <td>Multiplier</td> <td>0.05</td> <td>0.3</td> <td>0.7</td> <td>1.0</td> </tr> </table>	Frequency (Hz)	$120 \leq f < 1k$	$1k \leq f < 10k$	$10k \leq f < 100k$	$100k \leq f < 500k$	Multiplier	0.05	0.3	0.7	1.0
	Frequency (Hz)	$120 \leq f < 1k$	$1k \leq f < 10k$	$10k \leq f < 100k$	$100k \leq f < 500k$						
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\* 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

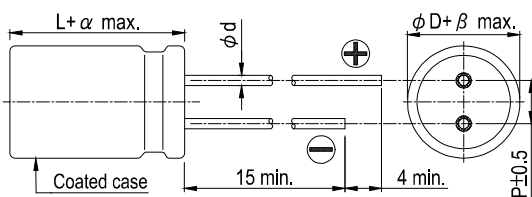
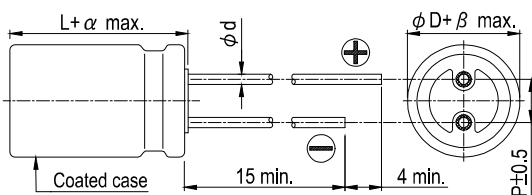


Fig. 2

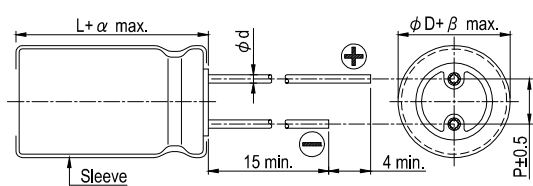


### Lead Spacing and Diameter

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

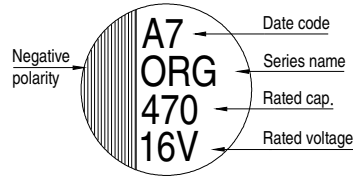
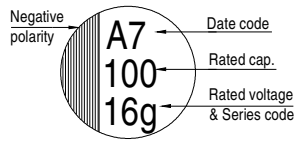
Fig. 3



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

### Part Numbering System

ORG Series    560 $\mu$ F     $\pm$  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.