



## Features

- 105°C, 2,000 hours assured
- Ultra low ESR with large permissible ripple current
- RoHS Compliance



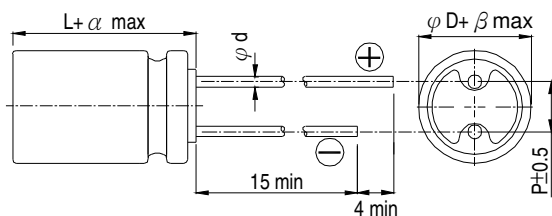
Marking color: Blue

## SPECIFICATIONS

Items	Performance										
Category Temperature Range	-55°C ~ +105°C										
Capacitance Tolerance	±20% (at 120Hz, 20°C)										
Leakage Current (at 20°C)*	Rated voltage applied, after 2 minutes at 20°C. See Standard Ratings										
Dissipation Factor (Tan δ at 120Hz, 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>2,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Dissipation Factor</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	2,000 Hrs	Capacitance Change	Within ±20% of initial value	Dissipation Factor	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									
	Dissipation Factor	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 2,000 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>Dissipation Factor</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	Dissipation Factor	Less than 150% of specified value	ESR	Less than 150% of specified value	Leakage Current	Within specified value
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	Dissipation Factor	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 to 95% RH for 1,000 hours. Leakage current should be tested after voltage treatment*.											
Resistance to Soldering Heat * (Please refer to page 10 for soldering conditions)	<table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±10% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 130% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 130% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table>	Capacitance Change	Within ±10% of initial value	Dissipation Factor	Less than 130% of specified value	ESR	Less than 130% of specified value	Leakage Current	Within specified value		
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* For any doubt about measured values, measure the leakage current again after the following voltage treatment. Voltage treatment: Applying DC rated voltage to the capacitors for 2 hours at 105°C.											
Ripple Current & Frequency Multipliers	<table border="1"> <tr> <th>Frequency (Hz)</th> <th>120 ≤ f &lt; 1k</th> <th>1k ≤ f &lt; 10k</th> <th>10k ≤ f &lt; 100k</th> <th>100k ≤ f &lt; 500k</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 ≤ 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: Applying DC rated voltage to the capacitors for 2 hours at 105°C.

## DIAGRAM OF DIMENSIONS

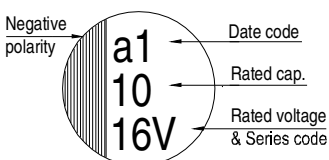


## LEAD SPACING AND DIAMETER Unit: mm

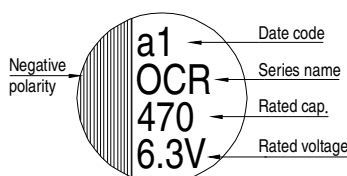
φD	6.3		8	10		
L	5.5	6.5	11	11.5	10	12.5
P	2.5		3.5	5.0		
φd	0.45		0.6			
α	1.0			1.5		
β	0.5					

## MARKING

φD = 6.3



φD = 8 ~ 10





Dimension:  $\phi$ D×L(mm)

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

## STANDARD RATINGS

W. V. (V)	Capacitance (μF)	Size $\phi$ D×L(mm)	Tan $\delta$ (120Hz, 20°C)	LC (μA)	ESR (mΩ/at 100k ~ 300k Hz, 20°C Max)	Rated R. C. (mA/rms at 100k Hz, 105°C)
2.5V (0E)	220	6.3×5.5	0.12	110	28	2,390
	390	6.3×11	0.12	195	18	3,160
	680	8×11.5	0.18	340	10	5,230
	1,000	10×10	0.18	500	14	4,700
	1,500	10×12.5	0.18	750	8	5,500
4V (0G)	150	6.3×5.5	0.12	120	40	1,810
	270	6.3×11	0.12	216	15	3,200
	560	8×11.5	0.18	448	10	5,230
	1,200	10×12.5	0.18	960	8	5,500
6.3V (0J)	100	6.3×5.5	0.12	126	40	1,810
	220	6.3×11	0.12	277	18	3,160
	330	6.3×6.5	0.12	416	28	2,390
	390	8×11.5	0.15	491	12	4,770
	470	8×11.5	0.15	592	12	4,770
	820	10×12.5	0.15	1,033	10	5,500
10V (1A)	100	6.3×6.5	0.12	200	45	1,700
	220	10×10	0.15	440	17	3,950
	330	8×11.5	0.12	660	14	4,420
	560	10×12.5	0.12	1,360	12	5,300
16V (1C)	47	6.3×5.5	0.10	150	50	1,650
	100	6.3×11	0.10	320	22	2,820
	180	8×11.5	0.12	576	16	4,360
	330	10×10	0.12	1,056	16	4,360
	330	10×12.5	0.12	1,056	14	5,050
20V (1D)	22	6.3×5.5	0.10	88	60	1,450
	56	6.3×11	0.10	224	25	2,650
	100	8×11.5	0.15	400	24	3,320
	100	10×10	0.15	400	24	3,320
	150	10×12.5	0.15	600	20	4,320
25V (1E)	6.8	6.3×5.5	0.10	170	80	1,200
	33	8×11.5	0.12	165	24	3,320
	56	8×11.5	0.12	280	24	3,320
		10×12.5	0.12	280	20	4,320
	68	8×11.5	0.12	340	24	3,320
	100	10×12.5	0.12	500	20	4,320
35V (1V)	22	8×11.5	0.12	154	50	2,300
	39	8×11.5	0.12	273	31	2,100
	47	10×12.5	0.12	329	30	3,650
	68	10×12.5	0.12	476	28	2,700
50V (1H)	27	8×11.5	0.12	270	36	2,000
	47	10×12.5	0.12	470	31	2,500