



SEA Series

Features

- 85°C, 2,000 hours assured, standard miniature type with 7mm height for compact circuits
- RoHS Compliance

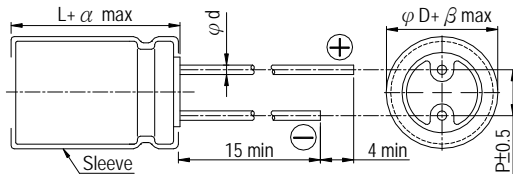


Sleeve & Marking Color: Blue & Black

Specifications

Items	Performance																													
Category Temperature Range	-40°C ~ +85°C																													
Capacitance Tolerance	±20% (at 120Hz, 20°C)																													
Leakage Current (at 20°C)	$I = 0.01CV$ or $3 (\mu A)$ whichever is greater (after 2 minutes) Where, C = rated capacitance in μF V = rated DC working voltage in V																													
Dissipation Factor (Tan δ at 120Hz, 20°C)	<table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.35</td> <td>0.23</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> </tr> </tbody> </table>	Rated Voltage	4	6.3	10	16	25	35	50	63	Tan δ (max)	0.35	0.23	0.20	0.16	0.14	0.12	0.10	0.10											
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Low Temperature Characteristics (at 120Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th colspan="2">Rated Voltage</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>7</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>14</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> </tr> </tbody> </table>	Rated Voltage		4	6.3	10	16	25	35	50	63	Impedance Ratio	Z(-25°C)/Z(+20°C)	7	4	3	3	2	2	2	2	Z(-40°C)/Z(+20°C)	14	10	8	6	4	4	4	4
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Shelf Life Test	Test time: 500 hours; other items are the same as those for the Endurance.																													
Ripple Current & Frequency Multipliers	<table border="1"> <thead> <tr> <th rowspan="2">Cap. (μF)</th> <th colspan="6">Freq. (Hz)</th> </tr> <tr> <th>60 (50)</th> <th>120</th> <th>500</th> <th>1k</th> <th>10k up</th> <th></th> </tr> </thead> <tbody> <tr> <td>Under 47</td> <td>0.70</td> <td>1.00</td> <td>1.20</td> <td>1.30</td> <td>1.45</td> <td></td> </tr> <tr> <td>100 to 1,000</td> <td>0.80</td> <td>1.00</td> <td>1.10</td> <td>1.15</td> <td>1.20</td> <td></td> </tr> </tbody> </table>	Cap. (μF)	Freq. (Hz)						60 (50)	120	500	1k	10k up		Under 47	0.70	1.00	1.20	1.30	1.45		100 to 1,000	0.80	1.00	1.10	1.15	1.20			
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Diagram of Dimensions



Lead Spacing and Diameter

Unit: mm

ϕD	4	5	6.3	8	10
P	1.5	2.0	2.5	3.5	5.0
ϕd	0.45	0.5			0.6
α	1.0				1.5
β	0.5				

Dimension & Permissible Ripple Current

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

Ripple Current: mA/rms at 120 Hz, 85°C

μF	V. DC Contents	4V (0G)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (1J)	
		$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA
1	010													4×7	10	4×7	11
2.2	2R2													4×7	15	4×7	17
3.3	3R3													4×7	18	4×7	21
4.7	4R7													4×7	22	5×7*	26
10	100						4×7	25	4×7	26	5×7*	30	6.3×7*	34	6.3×7*	40	
22	220			4×7	31	4×7	32	5×7*	39	5×7*	41	6.3×7*	47	6.3×7	53	8×7*	70
33	330	4×7	32	4×7	32	4×7	35	5×7	43	6.3×7	53	8×7*	71	8×7*	76	8×7	80
47	470	4×7	38	4×7	38	5×7*	47	6.3×7*	59	6.3×7	65	8×7*	83	8×7	85	8×7	95
100	101	5×7	61	6.3×7*	75	6.3×7	80	6.3×7	90	8×7	125	8×7	115	8×9	130	10×9	170
220	221	6.3×7	90	6.3×7	99	8×7	140	8×7	146	8×9	190	10×9	215				
330	331	8×7	129	8×7	156	8×7	165	8×9	185	10×9	265						
470	471	8×7	154	8×7	175	8×9	215	10×9	255								
1,000	102	8×9	200	10×9	205												

Note: Case size in mark of "*" is available to product down size.