

Features

- Snap-in terminal type
- 105°C, 3,000 hours assured
- RoHS Compliance



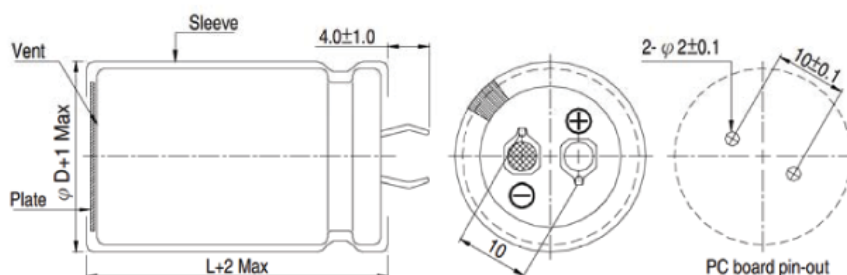
Sleeve & Marking Color: Black & White

SPECIFICATIONS

Items	Performance																																																																
Category Temperature Range	-40℃ ~ +105℃																																																																
Capacitance Tolerance	±20% (at 120Hz, 20℃)																																																																
Leakage Current (at 20℃)	$I = 3\sqrt{CV}$ or 1.5 mA whichever is smaller (after 5 minutes) Where, C = rated capacitance in μF V = rated DC working voltage in V																																																																
Dissipation Factor (Tan δ at 120Hz, 20℃)	<table><tr><td>Rated Voltage</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>80</td><td>100</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>420</td><td>450</td><td>500</td></tr><tr><td>Tan δ (max)</td><td>0.50</td><td>0.45</td><td>0.40</td><td>0.35</td><td>0.30</td><td>0.25</td><td>0.20</td><td>0.10*</td><td>0.10*</td><td>0.10*</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td></tr></table> *: 0.15 for φ D = 35 mm	Rated Voltage	16	25	35	50	63	80	100	160	200	250	350	400	420	450	500	Tan δ (max)	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.10*	0.10*	0.10*	0.15	0.15	0.15	0.15	0.15																																
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Tan δ (max)	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.10*	0.10*	0.10*	0.15	0.15	0.15	0.15	0.15																																																		
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below. <table><tr><td colspan="2">Rated Voltage</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>80</td><td>100</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>420</td><td>450</td><td>500</td></tr><tr><td rowspan="2">Impedance Ratio</td><td>Z(-25℃)/ Z(+20℃)</td><td>4</td><td>3</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>4</td><td>4</td><td>4</td><td>4</td><td>8</td><td>8</td><td>8</td><td>8</td></tr><tr><td>Z(-40℃)/ Z(+20℃)</td><td>15</td><td>10</td><td>8</td><td>6</td><td>6</td><td>6</td><td>5</td><td>4</td><td>8</td><td>10</td><td>16</td><td>18</td><td>18</td><td>20</td><td>20</td></tr></table>															Rated Voltage		16	25	35	50	63	80	100	160	200	250	350	400	420	450	500	Impedance Ratio	Z(-25℃)/ Z(+20℃)	4	3	3	2	2	2	2	4	4	4	4	8	8	8	8	Z(-40℃)/ Z(+20℃)	15	10	8	6	6	6	5	4	8	10	16	18	18	20	20
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Impedance Ratio	Z(-25℃)/ Z(+20℃)	4	3	3	2	2	2	2	4	4	4	4	8	8	8	8																																																	
	Z(-40℃)/ Z(+20℃)	15	10	8	6	6	6	5	4	8	10	16	18	18	20	20																																																	
Endurance	<table><tr><td>Test Time</td><td>3,000 Hrs</td></tr><tr><td>Capacitance Change</td><td>Within ±20% of initial value</td></tr><tr><td>Dissipation Factor</td><td>Less than 200% of specified value</td></tr><tr><td>Leakage Current</td><td>Within specified value</td></tr></table> * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied with rated ripple current for 3,000 hours at 105℃.															Test Time	3,000 Hrs	Capacitance Change	Within ±20% of initial value	Dissipation Factor	Less than 200% of specified value	Leakage Current	Within specified value																																										
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Shelf Life Test	<table><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>Leakage Current</td><td>Within specified value</td></tr></table> * The above specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. The rated voltage shall be applied to the capacitors before the measurements (Refer to JIS C 5101-4 4.1).															Test Time	1,000 Hrs	Capacitance Change	Within ±20% of initial value	Dissipation Factor	Less than 150% of specified value	Leakage Current	Within specified value																																										
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Ripple Current & Frequency Multipliers	<table><tr><td>Frequency (Hz)</td><td>50 / 60</td><td>100 / 120</td><td>300</td><td>1k</td><td>10k up</td></tr><tr><td>Multiplier</td><td>0.8</td><td>1.0</td><td>1.1</td><td>1.3</td><td>1.4</td></tr></table>															Frequency (Hz)	50 / 60	100 / 120	300	1k	10k up	Multiplier	0.8	1.0	1.1	1.3	1.4																																						
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DIAGRAM OF DIMENSIONS

Unit: mm





DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension: $\phi D \times L(\text{mm})$

Ripple Current: A/rms at 120 Hz, 105°C

μF	ϕD	16V (1C)								25V (1E)							
		22 ϕ	25 ϕ	30 ϕ	35 ϕ					22 ϕ	25 ϕ	30 ϕ	35 ϕ				
3,300										22x25	1.25						
4,700	22x25	1.30								22x30	1.61	25x25	1.61				
6,800	22x35	1.80	25x30	1.80						22x35	1.91	25x30	1.91	30x25	1.91		
10,000	22x45	2.34	25x35	2.25	30x25	2.19				22x45	2.51	25x40	2.42	30x30	2.42	35x25	2.42
15,000			25x45	2.83	30x35	2.82	35x30	2.82				25x45	3.12	30x35	3.11	35x30	3.11
22,000					30x45	3.13	35x35	3.09						30x45	3.85	35x40	3.85

μF	ϕD	35V (1V)								50V (1H)							
		22 ϕ	25 ϕ	30 ϕ	35 ϕ					22 ϕ	25 ϕ	30 ϕ	35 ϕ				
1,500										22x25	1.22						
2,200	22x25	1.14	25x25	1.51						22x30	1.59	25x25	1.59				
3,300	22x30	1.51	25x30	1.92						22x35	1.93	25x30	1.88	30x25	1.88		
4,700	22x35	1.92	25x40	2.31	30x25	1.92				22x45	2.43	25x35	2.34	30x30	2.42	35x25	2.42
6,800	22x45	2.31	25x45	2.87	30x30	2.33	35x25	2.33				25x45	3.10	30x35	3.10	35x30	3.10
10,000					30x35	2.87	35x30	2.87						30x45	4.18	35x40	4.20
15,000					30x45	3.66	35x40	3.66									
22,000							35x45	4.53									

μF	ϕD	63V (1C)								80V (1K)							
		22 ϕ	25 ϕ	30 ϕ	35 ϕ					22 ϕ	25 ϕ	30 ϕ	35 ϕ				
1,000	22x25	1.09								22x30	1.17	25x25	1.17				
1,500	22x30	1.44	25x25	1.44						22x35	1.54	25x30	1.54	30x25	1.54		
2,200	22x35	1.70	25x30	1.71	30x25	1.78						25x35	1.94	30x30	1.91	35x25	1.91
3,300	22x45	2.19	25x40	2.24	30x30	2.03	35x25	2.03						30x40	2.23	35x30	2.18
4,700					30x35	2.66	35x30	2.66								35x40	3.08
6,800					30x45	3.49	35x40	3.49									
8,200							35x45	3.87									

μF	ϕD	100V (2A)								160V (2C)							
		22 ϕ	25 ϕ	30 ϕ	35 ϕ					22 ϕ	25 ϕ	30 ϕ	35 ϕ				
330										22x25	0.98						
390										22x30	1.10	25x25	1.09				
470										22x30	1.21	25x25	1.19				
560										22x35	1.40	25x30	1.40	30x25	1.40		
680										22x40	1.62	25x35	1.61	30x25	1.54		
820										22x45	1.86	25x40	1.86	30x30	1.79	35x25	1.79
1,000	22x30	1.36	25x25	1.36								25x45	2.15	30x35	2.09	35x25	1.98
1,200														30x35	2.29	35x30	2.29
1,500	22x40	1.82	25x35	1.82	30x25	1.80								30x35	2.56	35x35	2.72
1,800														30x45	2.77	35x40	3.09
2,200			25x45	2.41	30x35	2.48	35x30	2.48									
3,300					30x45	3.11	35x35	3.07									
4,700							35x40	3.47									

μF	ϕD	200V (2D)								250V (2E)							
		22 ϕ	25 ϕ	30 ϕ	35 ϕ					22 ϕ	25 ϕ	30 ϕ	35 ϕ				
220	22x25	0.92								22x30	1.00	25x25	0.98				
270	22x25	1.03								22x35	1.16	25x25	1.08				
330	22x30	1.21	25x25	1.20						22x40	1.28	25x30	1.27	30x25	1.28		
390	22x35	1.39	25x25	1.31						22x45	1.48	25x35	1.46	30x25	1.39		
470	22x40	1.62	25x30	1.52	30x25	1.54						25x40	1.69	30x30	1.63	35x25	1.62
560	22x45	1.85	25x35	1.75	30x30	1.78						25x45	1.93	30x35	1.87	35x25	1.78
680	22x45	2.04	25x40	2.04	30x30	1.96	35x25	1.96						30x35	2.06	35x30	2.06
820			25x45	2.34	30x35	2.27	35x30	2.27						30x45	2.48	35x35	2.41
1,000					30x40	2.63	35x30	2.51								35x40	2.76
1,200					30x45	3.00	35x35	2.92								35x45	3.14
1,500							35x45	3.38									