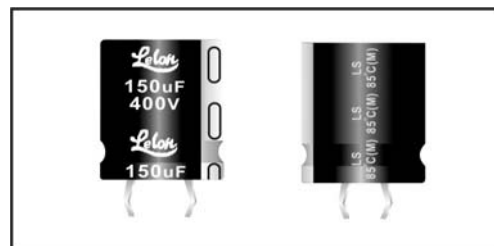


Large Type

Features

- Has a snap-in terminal which can solder to PCB directly and need not fixture to save processing time
- Suitable for electronic equipment with medium-high voltage circuits
- Printed circuit board terminal snap-in type and lug terminal type available.



SPECIFICATIONS

Items	Performance																																																						
Operating Temperature Range	-40℃ ~ +85℃																																																						
Capacitance Tolerance	±20% (at 120Hz, 20℃)																																																						
Leakage Current (at 20℃)	I = 0.02CV 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>100</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>Tan δ (max)</td><td>0.40</td><td>0.30</td><td>0.25</td><td>0.20</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.20</td><td>0.20</td><td>0.20</td></tr></table>													Rated Voltage	16	25	35	50	63	100	160	200	250	350	400	450	Tan δ (max)	0.40	0.30	0.25	0.20	0.15	0.15	0.15	0.15	0.15	0.20	0.20	0.20																
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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>100</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>Impedance</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>4</td><td>4</td><td>4</td><td>4</td><td>8</td><td>8</td></tr><tr><td>Ratio</td><td>Z(-40℃)/Z(+20℃)</td><td>15</td><td>10</td><td>8</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>20</td></tr></table>													Rated Voltage		16	25	35	50	63	100	160	200	250	350	400	450	Impedance	Z(-25℃)/Z(+20℃)	4	3	3	2	2	2	4	4	4	4	8	8	Ratio	Z(-40℃)/Z(+20℃)	15	10	8	6	6	5	4	8	10	16	18	20
Rated Voltage		16	25	35	50	63	100	160	200	250	350	400	450																																										
Impedance	Z(-25℃)/Z(+20℃)	4	3	3	2	2	2	4	4	4	4	8	8																																										
Ratio	Z(-40℃)/Z(+20℃)	15	10	8	6	6	5	4	8	10	16	18	20																																										
Load Life Test	<table><tr><td>Test Time</td><td>2000 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 for 2000 hrs at 85℃.													Test Time	2000 Hrs	Capacitance Change	Within ±20%of initial value	Dissipation Factor	Less than 200% of specified value	Leakage Current	Within specified value																																		
Test Time	2000 Hrs																																																						
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Dissipation Factor	Less than 200% of specified value																																																						
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Shelf Life Test	<table><tr><td>Test Time</td><td>1000 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 1000 hrs at 85℃ without voltage applied.													Test Time	1000 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 colspan="2">Freq.(Hz)</td><td>60</td><td>120</td><td>500</td><td>1K</td><td>10K up</td></tr><tr><td>W. V.(V)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td colspan="2">Under 100</td><td>0.92</td><td>1.00</td><td>1.13</td><td>1.19</td><td>1.20</td></tr><tr><td colspan="2">160 ~ 250</td><td>0.81</td><td>1.00</td><td>1.32</td><td>1.45</td><td>1.50</td></tr><tr><td colspan="2">350 to up</td><td>0.77</td><td>1.00</td><td>1.30</td><td>1.41</td><td>1.43</td></tr></table>													Freq.(Hz)		60	120	500	1K	10K up	W. V.(V)							Under 100		0.92	1.00	1.13	1.19	1.20	160 ~ 250		0.81	1.00	1.32	1.45	1.50	350 to up		0.77	1.00	1.30	1.41	1.43							
Freq.(Hz)		60	120	500	1K	10K up																																																	
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350 to up		0.77	1.00	1.30	1.41	1.43																																																	
Other Standards	JIS C 5101-4																																																						

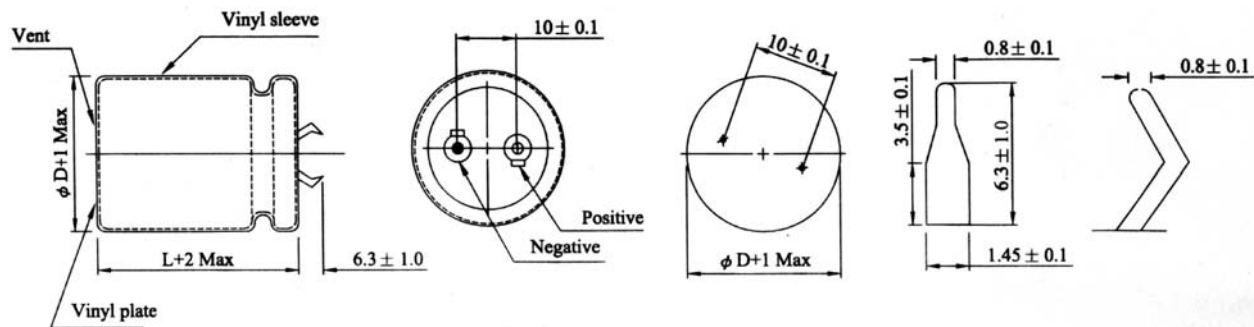
* 3000 Hrs specifications are available upon request

Large Type

Type I

Snap-in terminal type (diagram of dimensions)

Unit: mm

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

Ripple Current: A/rms at 120 Hz, 85°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC μF ϕD		16V (1C)				25V (1E)				35V (1V)			
		22	25	30	35	22	25	30	35	22	25	30	35
4700	472									22×30 2.41	25×25 2.42		
5600	562					22×25 2.31				22×35 2.79			
6800	682					22×30 2.56	25×25 2.78			22×40 2.89	25×30 2.89	30×25 3.09	
8200	822	22×25 2.56				22×35 2.81	25×25 2.78			22×45 3.47	25×35 3.33	30×30 3.29	
10000	103	22×30 2.81	25×30 3.03			22×35 3.18	25×30 3.16	30×25 3.21		22×50 3.59	25×40 3.59	30×30 3.61	35×25 3.32
12000	123	22×30 3.13	25×25 2.96			22×40 3.53	25×35 3.48	30×30 3.86	35×25 3.58		25×45 4.01	30×35 4.01	35×30 4.02
15000	153	22×35 3.69	25×30 3.64	30×25 3.73		22×50 4.08	25×40 4.00	30×35 4.12				30×40 4.80	35×35 5.01
18000	183	22×40 3.98	25×35 3.98				25×45 4.68	30×35 4.66	35×30 4.68			30×45 5.18	35×40 5.71
22000	223	22×50 4.52	25×40 4.44	30×30 4.38	35×25 4.15			30×45 5.26	35×35 5.20				35×45 6.38

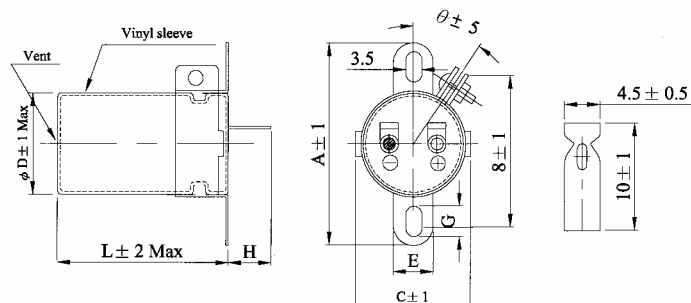
V.DC μF ϕD		50V (1H)				63V (1J)				100V (2A)			
		22	25	30	35	22	25	30	35	22	25	30	35
1200	122									22×30 2.12	25×25 2.10		
1500	152									22×35 2.45	25×30 2.43	30×25 2.46	
1800	182					22×25 1.90				22×40 2.77	25×35 2.77	30×25 2.65	
2200	222	22×25 1.93				22×30 2.35	25×25 2.30			22×45 3.12	25×40 3.20	30×30 3.10	35×25 3.14
2700	272	22×30 2.21				22×35 2.50	25×30 2.52				25×45 3.61	30×35 3.60	35×30 3.71
3300	332	22×30 2.41	25×25 2.38			22×35 2.62	25×30 2.69	30×25 2.78			25×50 4.06	30×40 4.05	35×35 4.07
3900	392	22×35 2.72	25×30 2.68			22×45 3.10	25×35 3.09	30×30 3.09				30×45 4.60	35×35 4.50
4700	472	22×40 3.01	25×30 3.03	30×25 3.01		22×50 3.49	25×40 3.37	30×30 3.37	35×25 3.36			30×50 5.13	35×40 5.12
5600	562	22×45 3.43	25×35 3.37	30×30 3.43	35×25 3.47		25×45 3.77	30×35 3.75		Case size $\phi \times L$ (mm)		35×45	
6800	682	22×50 3.94	25×40 3.87	30×35 3.87			25×50 4.41	30×40 4.41	35×35 4.33	Ripple current A/rms		5.75	
8200	822		25×45 4.37	30×35 4.42	35×30 4.41			30×45 4.90	35×35 4.80				35×50 6.01
10000	103			30×40 5.02	35×35 4.92			30×50 5.49	35×40 5.47				
12000	123			30×50 5.60	35×40 5.60				35×50 6.30				
15000	153				35×45 6.44								

Large Type

■ Type II

Lug terminal type (diagram of dimensions)

Unit: mm



MECHANICAL SPECIFICATIONS

ϕD	A	B	C	E	G	H	θ
22	43	35	30	10	5.5	12	45
25	48	38	33	10	6.0	12	45
30	52	42	38	10	6.0	12	45
35	48	48	44	10	7.0	12	30

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

Ripple Current: A/rms at 120 Hz, 85°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC μF ϕD		160V (2C)				200V (2D)				250V (2E)			
		22	25	30	35	22	25	30	35	22	25	30	35
150	151	22×25 0.95				22×25 0.95				22×25 0.91			
180	181	22×25 1.04				22×25 1.04				22×25 1.01			
220	221	22×25 1.15				22×25 1.15				22×30 1.27	25×25 1.24		
270	271	22×25 1.27				22×25 1.30				22×35 1.52	25×25 1.49		
330	331	22×25 1.40				22×30 1.44	25×25 1.43			22×30 1.43			
390	391	22×30 1.62				22×35 1.76	25×30 1.74			22×35 1.67	25×30 1.62	30×25 1.59	
470	471	22×30 1.77	25×25 1.77			22×40 1.97	25×30 1.86	30×25 1.85		22×40 1.89	25×35 1.87	30×30 1.85	
560	561	22×35 2.05	25×30 2.05	30×25 2.02		22×45 2.18	25×35 2.16	30×30 2.15		22×40 2.08	25×30 2.05		
680	681	22×40 2.24	25×35 2.31	30×25 2.22		22×50 2.47	25×40 2.43	30×35 2.43		22×45 2.36	25×35 2.36		
820	821	22×45 2.55	25×35 2.52	30×30 2.51	35×25 2.50	22×50 2.68	25×45 2.79	30×35 2.77		22×50 2.43	25×45 2.41	30×35 2.32	35×30 2.30
1000	102	22×50 2.88	25×45 2.98	30×35 2.94	35×30 2.92	22×50 2.96	25×50 3.12	30×40 3.10	35×35 3.09	22×50 2.88	25×45 2.86	30×35 2.82	35×30 2.79
1200	122		25×50 3.43	30×40 3.42	35×35 3.40		25×50 3.44	30×45 3.53	35×40 3.50				
1500	152			30×45 3.92	35×40 3.90			30×50 3.93	35×45 3.95				
1800	182			30×50 4.32	35×40 4.30				35×50 4.45				
2200	222			30×45 4.10	35×35 4.08				35×45 4.37				
					35×50 4.88				35×50 5.00				
					35×45 4.72								

Large Type

DIMENSION & PERMISSIBLE RIPPLE CURRENT

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

Ripple Current: A/rms at 120 Hz, 85°C

$\frac{\text{V.DC}}{\mu F}$ φD		350V (2V)				400V (2G)				450V (2W)			
		22	25	30	35	22	25	30	35	22	25	30	35
56	560									22×25 0.68			
68	680					22×25 0.72				22×30 0.80			
										22×25 0.72			
82	820	22×25 0.81				22×25 0.80				22×30 0.87	25×25 0.85		
100	101	22×25 0.90				22×30 0.94	25×25 0.97			22×35 1.00	25×25 0.98		
120	121	22×30 1.05	25×25 1.04			22×35 1.12	25×30 1.16			22×40 1.15	25×35 1.12	30×25 1.10	
		22×25 0.99				22×30 1.04	25×25 1.08			22×35 1.05	25×30 1.09		
150	151	22×35 1.24	25×30 1.24	30×25 1.24		22×40 1.25	25×30 1.21	30×25 1.24		22×45 1.25	25×40 1.35	30×30 1.32	
		22×30 1.14	25×25 1.16			22×35 1.18				22×40 1.20	25×35 1.27		
180	181	22×40 1.38	25×35 1.37	30×25 1.37		22×45 1.40	25×35 1.37	30×30 1.52	35×25 1.54	22×50 1.51	25×45 1.50	30×35 1.49	35×30 1.49
		22×35 1.28	25×30 1.30			22×40 1.34		30×25 1.45			25×40 1.45	30×30 1.43	
220	221	22×45 1.49	25×40 1.51	30×30 1.52		22×50 1.56	25×40 1.62	30×35 1.64	35×25 1.60		25×50 1.73	30×40 1.72	35×30 1.61
		22×40 1.40	25×35 1.46	30×25 1.47		22×45 1.50	25×35 1.56	30×30 1.58			25×45 1.65	30×35 1.63	
270	271	22×50 1.69	25×40 1.73	30×35 1.76	35×25 1.72		25×45 1.76	30×40 1.79	35×30 1.75		25×50 1.72	30×45 1.95	35×35 1.86
		22×45 1.62	25×35 1.65	30×30 1.71			25×40 1.70	30×35 1.73				30×40 1.83	
330	331	22×50 1.94	25×45 1.96	30×40 1.98	35×30 1.96		25×50 1.90	30×45 2.02	35×35 2.02			30×50 2.19	35×40 2.13
			25×40 1.88	30×35 1.93				30×40 1.97	35×30 1.95			30×45 2.10	35×35 2.06
390	391		25×45 2.04	30×40 2.18	35×35 2.24			30×45 2.22	35×40 2.24			30×50 2.24	35×45 2.34
				30×35 2.12	35×30 2.19			30×40 2.15	35×35 2.17				
470	471			30×45 2.48	35×40 2.50			30×50 2.40	35×45 2.48				35×50 2.63
				30×40 2.41	35×35 2.43				35×40 2.42				
560	561			30×45 2.60	35×40 2.69	Case size $\varphi \times L(\text{mm})$ → 35×50							
					35×35 2.62	Ripple current A/rms → 2.78							
680	681				35×45 3.08				35×50 2.95				

※ Special design is available upon request.

Part Numbering System

