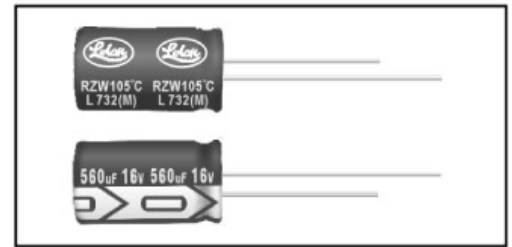


Features

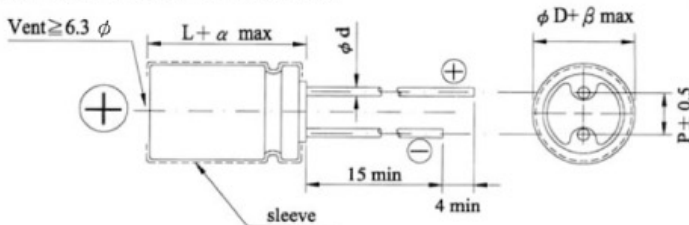
- 105°C, 4,000 ~ 10,000 hours assured
- Low ESR, suitable for switching power supplies
- Smaller size with large permissible ripple current
- RoHs Compliance



SPECIFICATIONS

Items	Performance																																		
Operating Temperature Range	-40°C ~ +105°C																																		
Capacitance Tolerance	±20% (at 120Hz, 20°C)																																		
Leakage Current (at 20°C)	I = 0.01CV or 3 (µA) whichever is greater (after 2 minutes) Where, C= rated capacitance in µF V = rated DC working voltage in V																																		
Dissipation Factor (Tan δ at 120 Hz, 20°C)	<table border="1"> <thead> <tr> <th>Rated Voltage</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>Tan δ (max)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> </tr> </tbody> </table> <p>When the capacitance exceeds 1000µF, 0.02 shall be added every 1000µF increase.</p>	Rated Voltage	6.3	10	16	25	35	50	63	Tan δ (max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09																		
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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>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>Impedance Ratio</td> <td>Z(-55°C)/Z(+20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	Rated Voltage		6.3	10	16	25	35	50	63	Impedance Ratio	Z(-55°C)/Z(+20°C)	3	3	3	3	3	3	3																
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DIAGRAM OF DIMENSIONS



LEAD SPACING AND DIAMETER

Unit: mm

	5	6.3	8	10	12.5	16	18
φD	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.5		0.6			0.8	
α	1.0			1.5			
β	0.5						

Dimension: $\phi D \times L$ (mm)
 Ripple Current: mA/rms at 100 KHz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\phi D \times L$	Item	6.3V (0J)			10V (1A)			16V (1C)					
		μF	Impedance (Ω , Max/100K Hz)		Ripple Current (mA/rms, 105°C) 100KHz	μF	Impedance (Ω , Max/100K Hz)		Ripple Current (mA/rms, 105°C) 100KHz	μF	Impedance (Ω , Max/100K Hz)		Ripple Current (mA/rms, 105°C) 100KHz
			20°C	-10°C			20°C	-10°C			20°C	-10°C	
5×11	150	0.58	2.3	210	100	0.58	2.3	210	56	0.58	2.3	210	
6.3×11	330	0.22	0.87	340	220	0.22	0.87	340	120	0.22	0.87	340	
8×11.5	680	0.13	0.52	640	470	0.13	0.52	640	330	0.13	0.52	640	
8×15	1,000	0.087	0.35	840	680	0.087	0.35	840	470	0.087	0.35	840	
8×20	1,200	0.069	0.27	1,050	1,000	0.069	0.27	1,050	680	0.069	0.27	1,050	
10×12.5	820	0.080	0.32	865	680	0.080	0.32	865	470	0.080	0.32	865	
10×16	1,200	0.060	0.24	1,210	1,000	0.060	0.24	1,210	680	0.060	0.24	1,210	
10×20	1,500	0.046	0.18	1,400	1,200	0.046	0.18	1,400	1,000	0.046	0.18	1,400	
10×25	2,200	0.042	0.17	1,650	1,500	0.042	0.17	1,650	1,200	0.042	0.17	1,650	
10×30	2,700	0.031	0.12	1,910	2,200	0.031	0.12	1,910	1,500	0.031	0.12	1,910	
12.5×16*	1,800	0.049	0.16	1,450	1,500	0.049	0.16	1,450	1,000	0.049	0.16	1,450	
12.5×20	3,300	0.035	0.12	1,900	2,200	0.035	0.12	1,900	1,500	0.035	0.12	1,900	
12.5×25	3,900	0.027	0.089	2,230	3,300	0.027	0.089	2,230	2,200	0.027	0.089	2,230	
12.5×30	4,700	0.024	0.078	2,650	3,900	0.024	0.078	2,650	2,700	0.024	0.078	2,650	
12.5×35	5,600	0.020	0.065	2,880	4,700	0.020	0.065	2,880	3,300	0.020	0.065	2,880	
12.5×40	6,800	0.017	0.056	3,350	5,600	0.017	0.056	3,350	3,900	0.017	0.056	3,350	
16×16*	2,700	0.042	0.12	1,940	2,200	0.042	0.12	1,940	1,500	0.042	0.12	1,940	
16×20*	5,600	0.027	0.078	2,530	3,900	0.027	0.078	2,530	2,700	0.027	0.078	2,530	
16×25	6,800	0.021	0.060	2,930	5,600	0.021	0.060	2,930	3,900	0.021	0.060	2,930	
16×31.5	8,200	0.017	0.050	3,450	6,800	0.017	0.050	3,450	4,700	0.017	0.050	3,450	
16×35.5	10,000	0.015	0.044	3,610	8,200	0.015	0.044	3,610	5,600	0.015	0.044	3,610	
16×40	12,000	0.013	0.038	4,080	10,000	0.013	0.038	4,080	6,800	0.013	0.038	4,080	
18×16*	3,900	0.043	0.11	2,210	2,700	0.043	0.11	2,210	2,200	0.043	0.11	2,210	
18×20*	6,800	0.026	0.067	2,860	5,600	0.026	0.067	2,860	3,900	0.026	0.067	2,860	
18×25*	10,000	0.019	0.049	3,140	6,800	0.019	0.049	3,140	4,700	0.019	0.049	3,140	
18×31.5	12,000	0.015	0.040	4,170	8,200	0.015	0.040	4,170	5,600	0.015	0.040	4,170	
18×35.5	15,000	0.014	0.038	4,220	10,000	0.014	0.038	4,220	8,200	0.014	0.038	4,220	
18×40	18,000	0.012	0.032	4,280	12,000	0.012	0.032	4,280	10,000	0.012	0.032	4,280	

Remark: Case size in mark of "*" is used flat type rubber bung.

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

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

DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\phi D \times L$	Item	25V (1E)			35V (1V)			50V (1H)					
		μF	Impedance (Ω , Max/100K Hz)		Ripple Current (mA/rms, 105°C) 100KHz	μF	Impedance (Ω , Max/100K Hz)		Ripple Current (mA/rms, 105°C) 100KHz	μF	Impedance (Ω , Max/100K Hz)		Ripple Current (mA/rms, 105°C) 100KHz
			20°C	-10°C			20°C	-10°C			20°C	-10°C	
5x11									0.47	5.5	22.0	17	
5x11									1.0	4.0	16.0	30	
5x11									2.2	2.5	10.0	43	
5x11									3.3	2.2	8.8	53	
5x11									4.7	1.9	7.6	88	
5x11									10	1.5	6.0	100	
5x11	47	0.58	2.3	210	33	0.58	2.3	210	22	0.70	2.8	180	
6.3x11	100	0.22	0.87	340	56	0.22	0.87	340	56	0.30	1.2	295	
8x11.5	220	0.13	0.52	640	150	0.13	0.52	640	100	0.17	0.68	555	
8x15	330	0.087	0.35	840	220	0.087	0.35	840	120	0.12	0.48	730	
8x20	470	0.069	0.27	1,050	270	0.069	0.27	1,050	180	0.091	0.36	910	
10x12.5	330	0.080	0.32	865	220	0.080	0.32	865	150	0.12	0.48	760	
10x16	470	0.060	0.24	1,210	330	0.060	0.24	1,210	220	0.084	0.34	1,050	
10x20	680	0.046	0.18	1,400	470	0.046	0.18	1,400	270	0.060	0.24	1,220	
10x25	820	0.042	0.17	1,650	560	0.042	0.17	1,650	330	0.055	0.22	1,440	
10x30	1,000	0.031	0.12	1,910	680	0.031	0.12	1,910	470	0.043	0.17	1,690	
12.5x16*	680	0.049	0.16	1,450	470	0.049	0.16	1,450	270	0.061	0.20	1,260	
12.5x20	1,000	0.035	0.12	1,900	680	0.035	0.12	1,900	470	0.045	0.15	1,660	
12.5x25	1,500	0.027	0.089	2,230	1,000	0.027	0.089	2,230	560	0.034	0.11	1,950	
12.5x30	1,800	0.024	0.078	2,650	1,200	0.024	0.078	2,650	680	0.030	0.10	2,310	
12.5x35	2,200	0.020	0.065	2,880	1,500	0.020	0.065	2,880	820	0.025	0.083	2,510	
12.5x40	2,700	0.017	0.056	3,350	1,800	0.017	0.056	3,350	1,000	0.021	0.069	2,920	
16x16*	1,000	0.042	0.12	1,940	680	0.042	0.12	1,940	470	0.055	0.17	1,690	
16x20*	1,800	0.027	0.078	2,530	1,200	0.027	0.078	2,530	820	0.034	0.10	2,210	
16x25	2,700	0.021	0.060	2,930	1,800	0.021	0.060	2,930	1,000	0.025	0.075	2,555	
16x31.5	3,300	0.017	0.050	3,450	2,200	0.017	0.050	3,450	1,200	0.022	0.066	3,010	
16x35.5	3,900	0.015	0.044	3,610	2,700	0.015	0.044	3,610	1,500	0.019	0.057	3,150	
16x40	4,700	0.013	0.038	4,080	3,300	0.013	0.038	4,080	1,800	0.016	0.048	3,710	
18x16*	1,200	0.043	0.11	2,210	1,000	0.043	0.11	2,210	560	0.054	0.15	1,930	
18x20*	2,200	0.026	0.067	2,860	1,800	0.026	0.067	2,860	1,000	0.036	0.097	2,490	
18x25*	3,300	0.019	0.049	3,140	2,200	0.019	0.049	3,140	1,200	0.026	0.070	2,740	
18x31.5	3,900	0.015	0.040	4,170	2,700	0.015	0.040	4,170	1,800	0.021	0.057	3,635	
18x35.5	4,700	0.014	0.038	4,220	3,300	0.014	0.038	4,220	2,200	0.017	0.046	3,680	
18x40	5,600	0.012	0.032	4,280	3,900	0.012	0.032	4,280	2,700	0.014	0.038	3,800	

Remark: Case size in mark of "*" is used flat type rubber bung.

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

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

DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\phi D \times L$	Item	μF	63V (1J)		Ripple Current (mA/rms, 105°C) 100KHz
			Impedance (Ω , Max/100K Hz)		
			20°C	-10°C	
5×11		15	0.88	3.5	165
6.3×11		33	0.35	1.4	265
8×11.5		56	0.22	0.88	500
8×15		82	0.16	0.64	665
8×20		120	0.12	0.48	820
10×12.5		82	0.11	0.44	690
10×16		120	0.076	0.31	950
10×20		180	0.056	0.23	1,150
10×25		220	0.046	0.19	1,350
12.5×16*		180	0.072	0.29	1,150
12.5×20		270	0.041	0.13	1,500
12.5×25		390	0.031	0.093	1,900
12.5×30		470	0.028	0.084	2,300
12.5×35		560	0.024	0.072	2,500
12.5×40		680	0.021	0.063	2,800
16×20*		470	0.032	0.096	2,000
16×25		680	0.025	0.075	2,600
16×31.5		820	0.021	0.063	2,850
16×35.5		1,000	0.019	0.057	2,900
16×40		1,200	0.018	0.054	3,400
18×20*		680	0.030	0.090	2,500
18×25*		820	0.024	0.072	2,800
18×31.5		1,200	0.020	0.060	3,300
18×35.5		1,500	0.018	0.054	3,400
18×40		1,800	0.017	0.051	3,500

Remark: Case size in mark of "*" is used flat type rubber bung.