



RXY Series

Features

- 105°C, 2,000 ~ 3,000 hours assured
- Low ESR, suitable for switching power supplies
- Smaller size with large permissible ripple current
- RoHS Compliance

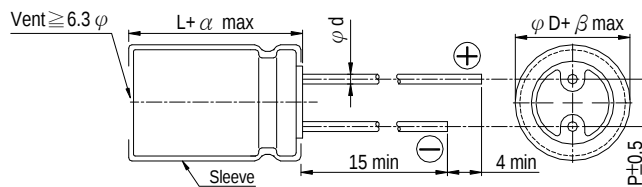


Sleeve & Marking Color: Black & White

Specifications

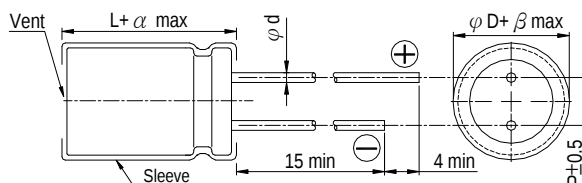
Items	Performance																														
Category Temperature Range	-40°C ~ +105°C																														
Capacitance Tolerance	±20% (at 120Hz, 20°C)																														
Leakage Current (at 20°C)	I = 0.01CV or 3 (μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF V = rated DC working voltage in V																														
Dissipation Factor (Tanδ at 120Hz, 20°C)	<table><tr><td>Rated Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td>Tanδ (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></tr></table> When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase.	Rated Voltage	6.3	10	16	25	35	50	Tanδ (max)	0.22	0.19	0.16	0.14	0.12	0.10																
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Tanδ (max)	0.22	0.19	0.16	0.14	0.12	0.10																									
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>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td rowspan="2">Impedance Ratio</td><td>Z(-25°C)/Z(+20°C)</td><td>4</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>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td></tr></table>	Rated Voltage		6.3	10	16	25	35	50	Impedance Ratio	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	Z(-40°C)/Z(+20°C)	8	6	4	3	3	3							
Rated Voltage		6.3	10	16	25	35	50																								
Impedance Ratio	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2																								
	Z(-40°C)/Z(+20°C)	8	6	4	3	3	3																								
Endurance	<table><tr><td>Test Time</td><td>2,000 Hrs for ϕ D = 5 ~ 8 mm; 3,000 Hrs for ϕ D ≥ 10 mm</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°C after the rated voltage applied with rated ripple current for 2,000 ~ 3,000 hours at 105°C.	Test Time	2,000 Hrs for ϕ D = 5 ~ 8 mm; 3,000 Hrs for ϕ D ≥ 10 mm	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 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°C after exposing them for 1,000 hours at 105°C without voltage applied.	Test Time	1,000 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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Ripple Current & Frequency Multipliers	<table><tr><td>Freq.(Hz) Cap.(μF)</td><td>120</td><td>1k</td><td>10k</td><td>100k up</td></tr><tr><td>0.47 ~ 180</td><td>0.40</td><td>0.75</td><td>0.9</td><td>1.0</td></tr><tr><td>220 ~ 560</td><td>0.50</td><td>0.85</td><td>0.94</td><td>1.0</td></tr><tr><td>680 ~ 1,800</td><td>0.60</td><td>0.87</td><td>0.95</td><td>1.0</td></tr><tr><td>2,200 ~ 3,900</td><td>0.75</td><td>0.90</td><td>0.95</td><td>1.0</td></tr><tr><td>4,700 up above</td><td>0.85</td><td>0.95</td><td>0.98</td><td>1.0</td></tr></table>	Freq.(Hz) Cap.(μF)	120	1k	10k	100k up	0.47 ~ 180	0.40	0.75	0.9	1.0	220 ~ 560	0.50	0.85	0.94	1.0	680 ~ 1,800	0.60	0.87	0.95	1.0	2,200 ~ 3,900	0.75	0.90	0.95	1.0	4,700 up above	0.85	0.95	0.98	1.0
Freq.(Hz) Cap.(μF)	120	1k	10k	100k up																											
0.47 ~ 180	0.40	0.75	0.9	1.0																											
220 ~ 560	0.50	0.85	0.94	1.0																											
680 ~ 1,800	0.60	0.87	0.95	1.0																											
2,200 ~ 3,900	0.75	0.90	0.95	1.0																											
4,700 up above	0.85	0.95	0.98	1.0																											

Diagram of Dimensions



Lead Spacing and Diameter							Unit: mm
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			L<20: 1.5, L $\geq$ 20: 2.0			
β	0.5						

The case size of 12.5×16, 16×16, 16×20, 18×16, 18×20 and 18×25 are suitable for below diagram:





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

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

Dimension & Permissible Ripple Current

V. DC Contents μF	6.3V (0J)					10V (1A)					16V (1C)				
	$\phi D \times L$	Impedance (Ω , Max/100k Hz)		Ripple Current (mA/rms, 105°C)		$\phi D \times L$	Impedance (Ω , Max/100k Hz)		Ripple Current (mA/rms, 105°C)		$\phi D \times L$	Impedance (Ω , Max/100k Hz)		Ripple Current (mA/rms, 105°C)	
		20°C	-10°C	120 Hz	100k Hz		20°C	-10°C	120 Hz	100k Hz		20°C	-10°C	120 Hz	100k Hz
56											5×11	0.58	2.3	84	210
100						5×11	0.58	2.3	84	210					
120											6.3×11	0.22	0.87	136	340
150	5×11	0.58	2.3	84	210										
220						6.3×11	0.22	0.87	170	340					
330	6.3×11	0.22	0.87	170	340						8×11.5	0.13	0.52	320	640
470						8×11.5	0.13	0.52	320	640	8×15 10×12.5	0.087 0.080	0.35 0.32	420 432	840 865
680	8×11.5 10×12.5	0.13 0.08	0.52 0.32	384 519	640 865	8×15 10×12.5	0.087 0.080	0.35 0.32	504 519	840 865	8×20 10×16	0.069 0.060	0.27 0.24	630 726	1,050 1,210
1,000	8×15	0.087	0.35	504	840	8×20 10×16	0.069 0.060	0.27 0.24	630 726	1,050 1,210	10×20 12.5×16	0.046 0.049	0.18 0.16	840 870	1,400 1,450
1,200	8×20 10×16	0.069 0.060	0.27 0.24	630 726	1,050 1,210	10×20	0.046	0.18	840	1,400	10×25	0.042	0.17	990	1,650
1,500	10×20	0.046	0.18	840	1,400	10×25 12.5×16	0.042 0.049	0.17 0.16	990 870	1,650 1,450	10×30 12.5×20 16×16	0.031 0.035 0.042	0.12 0.12 0.12	1,146 1,140 1,164	1,910 1,900 1,940
1800	12.5×16	0.049	0.16	870	1,450										
2,200	10×25	0.042	0.17	1,238	1,650	10×30 12.5×20 16×16	0.031 0.035 0.042	0.12 0.12 0.12	1,432 1,425 1,455	1,910 1,900 1,940	12.5×25 18×16	0.027 0.043	0.089 0.11	1,673 1,658	2,230 2,210
2,700	10×30 16×16	0.031 0.042	0.12 0.12	1,432 1,455	1,910 1,940	18×16	0.043	0.11	1,657	2,210	12.5×30 16×20	0.024 0.027	0.078 0.078	1,988 1,898	2,650 2,530
3,300	12.5×20	0.035	0.12	1,425	1,900	12.5×25	0.027	0.089	1,672	2,230	12.5×35	0.020	0.065	2,160	2,880
3,900	12.5×25 18×16	0.027 0.043	0.089 0.11	1,672 1,657	2,230 2,210	12.5×30 16×20	0.024 0.027	0.078 0.078	1,987 1,897	2,650 2,530	12.5×40 16×25 18×20	0.017 0.021 0.026	0.056 0.060 0.067	2,513 2,198 2,145	3,350 2,930 2,860
4,700	12.5×30	0.024	0.078	2,252	2,650	12.5×35	0.020	0.065	2,448	2,880	16×31.5 18×25	0.017 0.019	0.050 0.049	2,933 2,669	3,450 3,140
5,600	12.5×35 16×20	0.020 0.027	0.065 0.078	2,448 2,150	2,880 2,530	12.5×40 16×25 18×20	0.017 0.021 0.026	0.056 0.060 0.067	2,847 2,490 2,431	3,350 2,930 2,860	16×35.5 18×31.5	0.015 0.015	0.044 0.040	3,069 3,545	3,610 4,170
6,800	12.5×40 16×25 18×20	0.017 0.021 0.026	0.056 0.060 0.067	2,847 2,490 2,431	3,350 2,930 2,860	16×31.5 18×25	0.017 0.019	0.050 0.049	2,932 2,669	3,450 3,140	16×40	0.013	0.038	3,468	4,080
8,200	16×31.5	0.017	0.050	2,932	3,450	16×35.5 18×31.5	0.015 0.015	0.044 0.040	3,068 3,544	3,610 4,170	18×35.5	0.014	0.038	3,587	4,220
10,000	16×35.5 18×25	0.015 0.019	0.044 0.049	3,068 2,669	3,610 3,140	16×40 18×35.5	0.013 0.014	0.038 0.038	3,468 3,587	4,080 4,220	18×40	0.012	0.032	3,638	4,280
12,000	16×40 18×31.5	0.013 0.015	0.038 0.040	3,468 3,544	4,080 4,170	18×40	0.012	0.032	3,638	4,280					
15,000	18×35.5	0.014	0.038	3,587	4,220										
18,000	18×40	0.012	0.032	3,638	4,280										



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

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

Dimension & Permissible Ripple Current

V. DC Contents μF	25V (1E)					35V (1V)					50V (1H)				
	$\phi D \times L$	Impedance (Ω , Max/100k Hz)		Ripple Current (mA/rms, 105°C)		$\phi D \times L$	Impedance (Ω , Max/100k Hz)		Ripple Current (mA/rms, 105°C)		$\phi D \times L$	Impedance (Ω , Max/100k Hz)		Ripple Current (mA/rms, 105°C)	
		20°C	-10°C	120 Hz	100k Hz		20°C	-10°C	120 Hz	100k Hz		20°C	-10°C	120 Hz	100k Hz
2.2											5×11	2.50	10.0	17	42
3.3											5×11	2.20	8.8	21	52
4.7											5×11	1.90	7.6	35	87
10											5×11	1.50	6.0	40	100
22											5×11	0.70	2.8	72	180
33						5×11	0.58	2.30	84	210					
47	5×11	0.58	2.30	84	210										
56						6.3×11	0.22	0.87	136	340	6.3×11	0.30	1.2	86	217
100	6.3×11	0.22	0.87	136	340						8×11.5	0.17	0.68	148	371
120											8×15	0.12	0.48	156	392
150						8×11.5	0.13	0.52	256	640	10×12.5	0.12	0.48	235	588
180											8×20	0.091	0.36	210	525
220	8×11.5	0.13	0.52	320	640	8×15 10×12.5	0.087 0.080	0.35 0.32	420 432	840 865	10×16	0.084	0.34	364	728
270						8×20	0.069	0.27	525	1,050	10×20 12.5×16	0.060 0.061	0.24 0.20	305 318	610 637
330	8×15 10×12.5	0.087 0.080	0.35 0.32	420 432.5	840 865	10×16	0.060	0.24	605	1,210	10×25	0.055	0.22	441	882
470	8×20 10×16	0.069 0.060	0.27 0.24	525 605	1,050 1,210	10×20 12.5×16	0.046 0.049	0.18 0.16	700 725	1,400 1,450	10×30 12.5×20 16×16	0.043 0.045 0.055	0.17 0.15 0.17	588 596 596	1,176 1,192 1,192
560						10×25	0.042	0.17	825	1,650	12.5×25 18×16	0.034 0.054	0.11 0.15	652 688	1,304 1,376
680	10×20 12.5×16	0.045 0.049	0.18 0.16	840 870	1,400 1,450	10×30 12.5×20 16×16	0.031 0.035 0.042	0.12 0.12 0.12	1,146 1,140 1,164	1,910 1,900 1,940	12.5×30	0.030	0.10	912	1,520
820	10×25	0.042	0.17	990	1,650						12.5×35 16×20	0.025 0.034	0.083 0.10	993 974	1,656 1,624
1,000	10×30 12.5×20 16×16	0.031 0.035 0.042	0.12 0.12 0.12	1,146 1,140 1,164	1,910 1,900 1,940	12.5×25 18×16	0.027 0.043	0.089 0.11	1,338 1,326	2,230 2,210	12.5×40 16×25 18×20	0.021 0.025 0.036	0.069 0.075 0.097	1,080 998 1,032	1,800 1,664 1,720
1,200	18×16	0.043	0.11	1,326	2,210	12.5×30 16×20	0.024 0.027	0.078 0.078	1,590 1,518	2,650 2,530	16×31.5 18×25	0.022 0.026	0.066 0.070	1,252 1,269	2,088 2,115
1,500	12.5×25	0.027	0.089	1,338	2,230	12.5×35	0.020	0.065	1,728	2,880	16×35.5	0.019	0.057	1,371	2,286
1,800	12.5×30 16×20	0.024 0.027	0.078 0.078	1,590 1,518	2,650 2,530	12.5×40 16×25 18×20	0.017 0.021 0.026	0.056 0.060 0.067	2,010 1,758 1,716	3,350 2,930 2,860	16×40 18×31.5	0.016 0.021	0.048 0.057	1,479 1,479	2,466 2,466
2,200	12.5×35 18×20	0.020 0.026	0.065 0.067	2,160 2,145	2,880 2,860	16×31.5 18×25	0.017 0.019	0.050 0.049	2,587 2,355	3,450 3,140	18×35.5	0.017	0.046	2,070	2,760
2,700	12.5×40 16×25	0.017 0.021	0.056 0.060	2,513 2,198	3,350 2,930	16×35.5 18×31.5	0.015 0.015	0.044 0.040	2,707 3,127	3,610 4,170	18×40	0.014	0.038	2,137	2,850
3,300	16×31.5 18×25	0.017 0.019	0.050 0.049	2,588 2,355	3,450 3,140	16×40 18×35.5	0.013 0.014	0.038 0.038	3,060 3,165	4,080 4,220					
3,900	16×35.5 18×31.5	0.015 0.015	0.044 0.040	2,708 3,128	3,610 4,170	18×40	0.012	0.032	3,210	4,280					
4,700	16×40 18×35.5	0.013 0.014	0.038 0.038	3,468 3,587	4,080 4,220										
5,600	18×40	0.012	0.032	3,638	4,280										