



RXW Series

Features

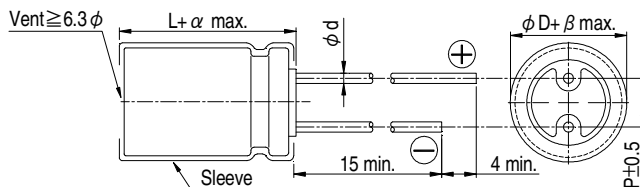
- 105°C, 4,000 ~ 7,000 hours assured
- Low ESR, suitable for switching power supplies
- Smaller size with large permissible ripple current
- RoHS compliance



Specifications

Items	Performance																																			
	Category Temperature Range	6.3 ~ 63V -55°C ~ +105°C	100V -40°C ~ +105°C																																	
Capacitance Tolerance	± 20 % (at 120 Hz, 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																																			
Tanδ (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> <th>100</th> </tr> </thead> <tbody> <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> <td>0.09</td> <td>0.08</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	100	Tanδ (max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08																
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Low Temperature Characteristics (at 120 Hz)	<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> <th>100</th> </tr> </thead> <tbody> <tr> <td>Impedance Ratio</td> <td>Z(-55°C/-40°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> <td>3</td> </tr> </tbody> </table>		Rated Voltage		6.3	10	16	25	35	50	63	100	Impedance Ratio	Z(-55°C/-40°C) / Z(+20°C)	3	3	3	3	3	3	3	3														
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Ripple Current and Frequency Multipliers	<table border="1"> <thead> <tr> <th rowspan="2">Cap. (µF)</th> <th colspan="4">Freq. (Hz)</th> </tr> <tr> <th>120</th> <th>1k</th> <th>10k</th> <th>100k up</th> </tr> </thead> <tbody> <tr> <td>≤ ~ 33</td> <td>0.42</td> <td>0.70</td> <td>0.90</td> <td>1.0</td> </tr> <tr> <td>39 ~ 270</td> <td>0.5</td> <td>0.73</td> <td>0.92</td> <td>1.0</td> </tr> <tr> <td>330 ~ 680</td> <td>0.55</td> <td>0.77</td> <td>0.94</td> <td>1.0</td> </tr> <tr> <td>820 ~ 1,800</td> <td>0.6</td> <td>0.80</td> <td>0.96</td> <td>1.0</td> </tr> <tr> <td>2,200 ~ 15,000</td> <td>0.7</td> <td>0.85</td> <td>0.98</td> <td>1.0</td> </tr> </tbody> </table>		Cap. (µF)	Freq. (Hz)				120	1k	10k	100k up	≤ ~ 33	0.42	0.70	0.90	1.0	39 ~ 270	0.5	0.73	0.92	1.0	330 ~ 680	0.55	0.77	0.94	1.0	820 ~ 1,800	0.6	0.80	0.96	1.0	2,200 ~ 15,000	0.7	0.85	0.98	1.0
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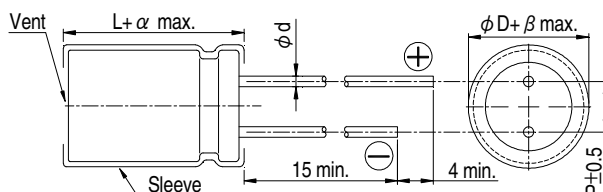
Diagram of Dimensions



Lead Spacing and Diameter Unit: mm

φ D	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φ d	0.5		0.6		0.8		
α	L < 20: 1.5, L ≥ 20: 2.0						
β	0.5						

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



Dimension:  $\phi D \times L$  (mm)  
 Impedance:  $\Omega$  / at 100k Hz  
 Ripple Current: mA/rms at 105°C

### Dimension and Permissible Ripple Current

Rated Volt. (V <sub>DC</sub> ) Contents Cap. (μF)	6.3V (0J)				10V (1A)				16V (1C)				25V (1E)			
	$\phi D \times L$	Impedance ( $\Omega$ , max./100kHz)		Ripple Current (mA/rms, 105°C) 100k Hz	$\phi D \times L$	Impedance ( $\Omega$ , max./100kHz)		Ripple Current (mA/rms, 105°C) 100k Hz	$\phi D \times L$	Impedance ( $\Omega$ , max./100kHz)		Ripple Current (mA/rms, 105°C) 100k Hz	$\phi D \times L$	Impedance ( $\Omega$ , max./100kHz)		Ripple Current (mA/rms, 105°C) 100k Hz
		20°C	-10°C			20°C	-10°C			20°C	-10°C			20°C	-10°C	
4.7																
10									5×11	0.6	1.2	180	5×11	0.6	1.2	180
22	5×11	0.6	1.2	180	5×11	0.6	1.2	180	5×11	0.6	1.2	180	5×11	0.6	1.2	180
33	5×11	0.6	1.2	180	5×11	0.6	1.2	180	5×11	0.6	1.2	180	5×11	0.6	1.2	180
39													5×11	0.6	1.2	180
47	5×11	0.6	1.2	180	5×11	0.6	1.2	180	5×11	0.6	1.2	180	5×11	0.6	1.2	180
56									5×11	0.6	1.2	180				
82					5×11	0.6	1.2	180					6.3×11	0.25	0.50	290
100	5×11	0.6	1.2	180	5×11	0.6	1.2	180	6.3×11	0.25	0.5	290	6.3×11	0.25	0.50	290
120									6.3×11	0.25	0.5	290	6.3×15	0.23	0.46	430
150	6.3×11	0.25	0.5	290	6.3×11	0.25	0.5	290	6.3×11	0.25	0.5	290	8×11.5	0.117	0.234	555
180					6.3×11	0.25	0.5	290	6.3×15	0.23	0.46	430				
220	6.3×11	0.25	0.5	290	6.3×11	0.25	0.5	290	8×11.5	0.117	0.234	555	8×11.5	0.117	0.234	555
330	6.3×11 6.3×15	0.25 0.23	0.50 0.46	290 430	8×11.5	0.117	0.234	555	8×11.5	0.117	0.234	555	8×15 10×12.5	0.085 0.090	0.17 0.18	730 755
470	8×11.5	0.117	0.234	555	8×11.5	0.117	0.234	555	8×15 10×12.5	0.085 0.090	0.17 0.18	730 755	8×20 10×16	0.065 0.068	0.130 0.136	995 1,050
560	8×11.5	0.117	0.234	555									10×20	0.052	0.104	1,220
680	10×12.5	0.090	0.180	755	8×15 10×12.5	0.085 0.090	0.170 0.180	730 755	8×20 10×16	0.065 0.068	0.130 0.136	995 1,050	10×20	0.052	0.104	1,220
820	8×15 10×12.5	0.085 0.090	0.170 0.180	730 755					10×20	0.052	0.104	1,220	10×25	0.045	0.090	1,440
1,000	10×12.5	0.090	0.180	755	8×20 10×16	0.065 0.068	0.130 0.136	995 1,050	10×20	0.052	0.104	1,220	10×30 12.5×20	0.035 0.038	0.070 0.076	1,815 1,655
1,200	8×20 10×16	0.065 0.068	0.130 0.136	955 1,050	10×20	0.052	0.104	1,220	10×25	0.045	0.090	1,440				
1,500	10×20	0.052	0.104	1,220	10×20	0.052	0.104	1,220	12.5×20 10×30	0.038 0.035	0.076 0.070	1,655 1,815	12.5×25 16×25	0.030 0.022	0.060 0.044	1,945 2,555
1,800													12.5×30 16×20	0.025 0.029	0.050 0.058	2,310 2,205
2,200	10×25 12.5×20	0.045 0.038	0.090 0.076	1,440 1,615	10×30 12.5×20	0.035 0.038	0.070 0.076	1,815 1,655	12.5×25	0.030	0.06	1,945	12.5×35 16×25 18×20	0.022 0.022 0.028	0.044 0.044 0.056	2,510 2,555 2,490
2,700	10×30	0.035	0.070	1,815	12.5×25	0.030	0.060	1,945	12.5×30 16×20	0.025 0.029	0.05 0.058	2,310 2,205	16×25	0.022	0.044	2,555
3,300	12.5×20	0.038	0.076	1,655	12.5×25 12.5×30	0.030 0.025	0.060 0.050	1,945 2,310	16×25 12.5×35	0.022 0.022	0.044 0.044	2,555 2,510	16×31.5 18×25	0.018 0.020	0.036 0.040	3,010 2,740
3,900	12.5×25	0.030	0.060	1,945	12.5×35 16×20	0.022 0.029	0.044 0.058	2,510 2,205	16×25 18×20	0.022 0.028	0.044 0.056	2,555 2,490	16×35.5 18×31.5	0.016 0.016	0.032 0.032	3,150 3,635
4,700	12.5×30 16×25	0.025 0.022	0.050 0.044	2,310 2,555	16×25	0.022	0.044	2,555	16×31.5 18×25	0.018 0.020	0.036 0.040	3,010 2,740	18×35.5	0.015	0.030	3,680
5,600	12.5×35 16×20	0.022 0.029	0.044 0.058	2,510 2,205	16×25 18×20	0.022 0.028	0.044 0.056	2,555 2,490	16×35.5 18×31.5	0.016 0.016	0.032 0.032	3,150 3,635				
6,800	16×25 18×20	0.022 0.028	0.044 0.056	2,555 2,490	16×31.5 18×25	0.018 0.020	0.036 0.040	3,010 2,740	18×35.5	0.015	0.030	3,680	18×40	0.014	0.028	3,800
8,200	16×31.5	0.018	0.036	3,010	16×35.5 18×31.5	0.016 0.016	0.032 0.032	3,150 3,635	18×35.5	0.015	0.030	3,680				
10,000	16×31.5 18×25	0.016 0.020	0.032 0.040	3,150 2,740	18×35.5	0.015	0.030	3,680	18×40	0.014	0.028	3,800				
12,000	18×31.5	0.016	0.032	3,635												
15,000	18×35.5	0.015	0.030	3,680	18×40	0.014	0.028	3,800								



Dimension:  $\phi$  D×L(mm)  
 Impedance:  $\Omega$ / at 100k Hz  
 Ripple Current: mA/rms at 105°C

### Dimension and Permissible Ripple Current

Rated Volt. (V <sub>DC</sub> ) Contents Cap. (μF)	35V (1V)				50V (1H)				63V (1J)				100V (2A)			
	$\phi$ D×L	Impedance ( $\Omega$ , max./100kHz)		Ripple Current (mA/rms, 105°C) 100k Hz	$\phi$ D×L	Impedance ( $\Omega$ , max./100kHz)		Ripple Current (mA/rms, 105°C) 100k Hz	$\phi$ D×L	Impedance ( $\Omega$ , max./100kHz)		Ripple Current (mA/rms, 105°C) 100k Hz	$\phi$ D×L	Impedance ( $\Omega$ , max./100kHz)		Ripple Current (mA/rms, 105°C) 100k Hz
		20°C	-10°C			20°C	-10°C			20°C	-10°C			20°C	-10°C	
2.2													5×11	9.8	19.6	44
3.3													5×11	6.6	13.2	58
4.7	5×11	0.6	1.2	180	5×11	2.3	4.6	90	5×11	4.7	9.4	68	5×11	4.6	9.2	74
6.8									5×11	2.5	5.0	95	5×11	3.5	7.0	95
10	5×11	0.6	1.2	180	5×11	1.4	2.8	120	5×11	2.1	4.2	110	6.3×11	1.8	3.6	130
12									5×11	2.0	4.0	145				
15									6.3×11	1.2	2.4	160	8×11.5	0.83	1.66	180
18					5×11	1.3	2.6	155					6.3×15	0.80	1.60	200
22	5×11	0.6	1.2	180	5×11	1.2	2.4	170	6.3×11	0.71	1.42	250	8×11.5	0.68	1.36	230
27	5×11	0.6	1.2	180												
33	5×11	0.6	1.2	180	6.3×11	0.43	0.86	300	6.3×11	0.71	1.42	250	8×15 10×12.5	0.45 0.46	0.90 0.92	360 320
39									6.3×15	0.70	1.40	330				
47	6.3×11	0.25	0.5	290	6.3×11	0.43	0.86	300	8×11.5	0.342	0.684	405	10×16 8×20	0.37 0.37	0.74 0.74	420 420
56	6.3×11	0.25	0.5	290	6.3×15	0.40	0.80	360								
68									8×11.5	0.342	0.684	405	10×20	0.30	0.60	490
82	6.3×15	0.23	0.46	430	8×11.5	0.234	0.468	485					10×25	0.25	0.50	540
100	8×11.5	0.117	0.234	555	8×11.5	0.234	0.468	485	10×12.5 8×15	0.256 0.230	0.512 0.460	535 535	12.5×20	0.18	0.36	580
120					8×15 10×12.5	0.155 0.162	0.310 0.324	635 615	10×16	0.194	0.388	600				
150	8×11.5	0.117	0.234	555	10×12.5	0.162	0.324	615	10×16	0.194	0.388	660	12.5×25	0.13	0.26	710
180					8×20 10×16	0.120 0.119	0.240 0.238	860 850	10×20 12.5×16	0.147 0.150	0.294 0.300	885 1,020	12.5×30 16×20	0.12 0.13	0.24 0.26	790 750
220	8×15 10×12.5	0.085 0.090	0.17 0.18	730 755	10×16 10×20	0.119 0.090	0.238 0.180	850 1,030	10×20 10×25	0.147 0.130	0.294 0.260	885 1,050	16×25 18×20	0.10 0.11	0.20 0.22	890 850
270					10×25	0.082	0.164	1,200	16×16	0.090	0.180	1,410				
330	8×20 10×16	0.065 0.068	0.130 0.136	995 1,050	10×20 10×30	0.090 0.060	0.180 0.120	1,030 1,610	12.5×20	0.085	0.170	1,285	16×25	0.090	0.180	1,080
390	10×20	0.052	0.104	1,220	12.5×20	0.063	0.126	1,480	12.5×25 18×16	0.070 0.086	0.140 0.172	1,720 1,690	18×25	0.083	0.166	1,260
470	10×20	0.052	0.104	1,220	12.5×20	0.060	0.120	1,500	12.5×25 12.5×30 16×20	0.070 0.055 0.059	0.140 0.110 0.118	1,720 2,090 1,765	16×31.5	0.076	0.152	1,310
560	10×25	0.045	0.090	1,440	12.5×25	0.050	0.100	1,832	16×25	0.050	0.100	2,160	18×31.5 18×35.5	0.068 0.064	0.136 0.128	1,370 1,410
680	10×30 12.5×20	0.035 0.038	0.070 0.076	1,815 1,655	12.5×25 16×20	0.050 0.048	0.100 0.096	1,832 1,835	12.5×35 18×20	0.047 0.055	0.094 0.110	2,265 2,290				
820					12.5×35 18×20	0.034 0.042	0.068 0.084	2,285 2,200	16×31.5 18×25	0.043 0.043	0.086 0.086	2,670 2,585	18×40	0.047	0.094	1,520
1,000	12.5×25	0.030	0.060	1,945	16×25	0.034	0.068	2,235	16×31.5 16×35.5	0.043 0.036	0.086 0.072	2,670 2,770				
1,200	12.5×30 16×20	0.025 0.029	0.050 0.058	2,310 2,205	16×31.5 18×25	0.028 0.029	0.056 0.058	2,700 2,610	18×31.5	0.032	0.064	2,950				
1,500	12.5×35 16×25	0.022 0.022	0.044 0.044	2,510 2,555	16×31.5 16×35.5	0.028 0.025	0.056 0.050	2,700 2,790	18×35.5	0.030	0.060	3,095				
1,800	16×25 18×20	0.022 0.028	0.044 0.056	2,555 2,490	18×31.5	0.025	0.05	3,000								
2,200	16×31.5 18×25	0.018 0.020	0.036 0.040	3,010 2,740	18×35.5	0.023	0.046	3,100	18×40	0.028	0.056	3,200				
2,700	16×35.5 18×31.5	0.016 0.016	0.032 0.032	3,150 3,635												
3,300	18×35.5	0.015	0.030	3,680												
4,700	18×40	0.014	0.028	3,800												

### Part Numbering System

RXW Series    470μF    ±20%    6.3V    Bulk Package    Gas Type    8  $\phi$  × 11.5L    Pb-free and PET sleeve

**RXW**    **471**    **M**    **0J**    **BK**    -    **0811**

Series Name    Capacitance    Capacitance Tolerance    Rated Voltage    Lead Configuration and Package    Rubber Type    Case Size    Lead Wire and Sleeve type

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 13.

# Mouser Electronics

Authorized Distributor

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[RXW221M1V-1012](#) [RXW221M1VSA0815](#) [RXW470M1JSA0811](#) [RXW471M1HBK-1320](#) [RXW681M1V-1320](#)  
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[RXW101M1HSA0811](#) [RXW102M1E-1320](#) [RXW102M1H-1625](#) [RXW102M1J-1635](#) [RXW102M1V-1325](#)  
[RXW102M1VSA1325](#) [RXW121M1H-1012](#) [RXW101M1HTA0811](#) [RXW101M1J-1012](#) [RXW221M1ESA0811](#)  
[RXW101M1V-0811](#) [RXW221M1ASA0611](#) [RXW102M0J-1012](#) [RXW471M1C-0815](#) [RXW471M1C-1012](#)  
[RXW101M1VSA0811](#) [RXW471M1E-1016](#) [RXW101M1ESA0611](#) [RXW221M1A-0611](#) [RXW331M1E-1012](#)  
[RXW331M1V-0820](#) [RXW331M1V-1016](#) [RXW470M1J-0811](#) [RXW471M0JSA0811P](#) [RXW221M1VSA1012](#)  
[RXW222M1C-1325](#) [RXW222M1H-1835](#) [RXW222M1V-1631](#) [RXW330M2ASA1012](#) [RXW820M1VBK-0615](#)  
[RXW220M2ABK-0611](#) [RXW101M2ABK-1320](#) [RXW331M0JBK-0611](#) [RXW471M1VBK-1016](#) [RXW681M1VBK-1320](#)  
[RXW221M1VBK-1012](#) [RXW101M1JBK-1012](#) [RXW221M1HBK-1016](#) [RXW102M1HBK-1625](#) [RXW470M1JBK-0811](#)  
[RXW102M0JBK-1012](#) [RXW102M1VBK-1325](#) [RXW151M1VBK-0811](#) [RXW471M1EBK-0820](#) [RXW101M1VBK-0811](#)  
[RXW222M1CBK-1325](#) [RXW471M1CBK-1012](#) [RXW331M1VBK-0820](#) [RXW221M1VBK-0815](#) [RXW102M1EBK-1320](#)  
[RXW471M1VBK-1020](#) [RXW331M1CBK-0811](#) [RXW331M1VBK-1016](#) [RXW121M1HBK-1012](#) [RXW102M1JBK-1635](#)  
[RXW821M1HBK-1820](#)