

RXK Series

Features

- 105°C, 2,000 ~ 5,000 hours assured
- Low ESR, suitable for switching power supplies
- Smaller size with large permissible ripple current
- RoHS compliance

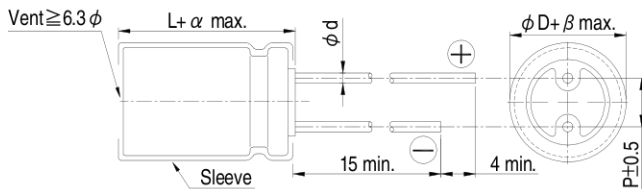


Sleeve & Marking Color: Black & Golden

Specifications

Items	Performance																																										
Category Temperature Range	-55°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> </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> </tr> </tbody> </table> <p>When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase.</p>	Rated Voltage	6.3	10	16	25	35	50	63	Tanδ (max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09																										
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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>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 Z(-55°C)/Z(+20°C)</td> <td>4</td> <td>4</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)	4	4	3	3	3	3	3																										
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Diagram of Dimensions

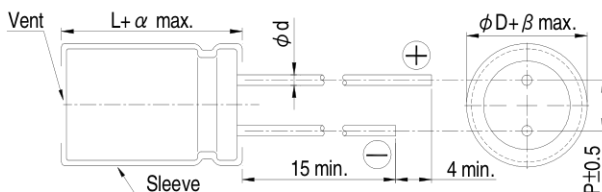


Lead Spacing and Diameter

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 is suitable for below diagram:





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

Dimension and Permissible Ripple Current

Rated Volt. (V _{DC})	Contents	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	0.72	1.8	116	165							
68											5×11	0.72	1.8	126	180							
82						5×11	0.72	1.8	116	165												
100						5×11	0.72	1.8	126	180												
120		5×11	0.72	1.8	116	165					6.3×11	0.38	0.95	179	255							
180							6.3×11	0.38	0.95	179	255	6.3×15	0.27	0.68	231	330						
220		6.3×11	0.38	0.95	179	255	6.3×11	0.38	0.95	196	280											
270		6.3×11	0.38	0.95	196	280	6.3×15	0.27	0.68	231	330	8×11.5	0.20	0.50	291	415						
330		6.3×15	0.27	0.68	231	330	8×11.5	0.20	0.50	291	415	8×11.5	0.20	0.50	315	450						
												8×15	0.16	0.40	347	495						
390		8×11.5	0.20	0.50	332	415	8×11.5	0.20	0.50	360	450											
							10×12.5	0.12	0.30	500	625											
470	8×11.5	0.20	0.50	360	450	500	625	8×15	0.16	0.40	396	495	8×15	0.16	0.40	472	590					
													10×12.5	0.12	0.30	540	675	8×20	0.11	0.28	512	640
													10×16	0.084	0.21	660	825	10×16	0.084	0.21	660	825
560	8×15	0.16	0.40	396	495	540	675	8×15	0.16	0.40	472	590	8×20	0.11	0.28	560	700					
													10×12.5	0.12	0.30	540	675	10×16	0.084	0.21	728	910
680	10×16	0.084	0.21	660	825	825	910	8×20	0.11	0.28	512	640	10×20	0.062	0.16	832	1,040					
								10×16	0.084	0.21	660	825	10×20	0.062	0.16	660	825					
820	8×15	0.16	0.40	472	590	512	640	8×20	0.11	0.28	560	700	10×20	0.062	0.16	904	1,130					
													8×20	0.11	0.28	512	640	10×25	0.052	0.13	1,008	1,260
													10×16	0.084	0.21	728	910	10×16	0.084	0.21	728	910
1,000	8×20	0.11	0.28	560	700	700	825	10×20	0.062	0.16	832	1,040	10×25	0.052	0.13	1,112	1,390					
													10×25	0.052	0.13	1,134	1,260	10×30	0.044	0.11	1,296	1,440
1,200	10×20	0.062	0.16	936	1,040	1,040	1,260	10×20	0.062	0.16	1,017	1,130	10×30	0.044	0.11	1,296	1,440					
								10×25	0.052	0.13	1,134	1,260	12.5×20	0.046	0.12	1,206	1,340					
1,500	10×20	0.062	0.16	1,017	1,130	1,130	1,260	10×25	0.052	0.13	1,251	1,390	10×30	0.044	0.11	1,413	1,570					
								10×30	0.044	0.11	1,296	1,440	12.5×20	0.046	0.12	1,305	1,450					
								10×25	0.052	0.13	1,134	1,260	10×30	0.044	0.11	1,296	1,440	12.5×25	0.034	0.085	1,521	1,690
								10×30	0.044	0.11	1,296	1,440	12.5×25	0.034	0.085	1,521	1,690	12.5×25	0.034	0.085	1,521	1,690
1,800	10×25	0.052	0.13	1,251	1,390	1,390	1,570	10×30	0.044	0.11	1,413	1,570	12.5×25	0.034	0.085	1,521	1,690					
								12.5×20	0.046	0.12	1,206	1,340	12.5×25	0.034	0.085	1,521	1,690	12.5×25	0.034	0.085	1,521	1,690
2,200	10×30	0.044	0.11	1,296	1,440	1,440	1,690	12.5×20	0.046	0.12	1,305	1,450	12.5×30	0.030	0.075	1,755	1,950					
								12.5×25	0.034	0.085	1,521	1,690	16×20	0.035	0.087	1,485	1,650					
2,700	10×30	0.044	0.11	1,413	1,570	1,570	1,950	12.5×25	0.034	0.085	1,629	1,810	12.5×30	0.030	0.075	1,917	2,130					
								12.5×30	0.030	0.075	1,755	1,950	12.5×35	0.027	0.068	1,980	2,200					
								12.5×25	0.034	0.085	1,521	1,690	12.5×30	0.030	0.075	1,755	1,950	16×25	0.028	0.070	1,863	2,070
3,300	12.5×25	0.034	0.085	1,629	1,810	1,810	2,070	12.5×30	0.030	0.075	1,917	2,130	12.5×35	0.027	0.068	2,151	2,390					
								12.5×35	0.027	0.068	1,980	2,200	12.5×40	0.024	0.060	2,196	2,440					
								12.5×30	0.030	0.075	1,755	1,950	16×20	0.035	0.087	1,692	1,880					
3,900	12.5×30	0.030	0.075	1,755	1,950	1,950	2,070	12.5×35	0.027	0.068	2,196	2,390	16×25	0.028	0.070	2,025	2,250					
								12.5×40	0.024	0.060	2,151	2,440	16×31.5	0.025	0.063	2,115	2,350					
								16×20	0.035	0.087	1,692	1,880										
								16×25	0.028	0.070	1,863	2,070										
4,700	12.5×30	0.030	0.075	1,917	2,130	2,130	2,250	12.5×40	0.024	0.060	2,358	2,620	16×31.5	0.025	0.063	2,295	2,550					
								12.5×35	0.027	0.068	2,151	2,390	16×35.5	0.022	0.055	2,295	2,550					
								16×20	0.035	0.087	1,440	1,600										
5,600	12.5×35	0.027	0.068	2,151	2,390	2,390	2,550	12.5×40	0.024	0.060	2,358	2,620	16×35.5	0.022	0.055	2,295	2,550					
								12.5×40	0.024	0.060	2,196	2,440	16×40	0.018	0.045	2,394	2,660					
								16×25	0.028	0.070	1,863	2,070										
6,800	12.5×40	0.024	0.060	2,358	2,620	2,620	2,720	16×25	0.028	0.070	2,025	2,250	16×40	0.018	0.045	2,844	3,160					
								16×31.5	0.025	0.063	2,115	2,350	18×35.5	0.021	0.053	2,448	2,720					
								16×25	0.028	0.070	2,025	2,250										
8,200	16×31.5	0.025	0.063	2,115	2,350	2,350	2,550	16×31.5	0.025	0.063	2,295	2,550	18×35.5	0.021	0.053	2,601	2,890					
								16×35.5	0.022	0.055	2,448	2,720										
10,000	16×35.5	0.022	0.055	2,691	2,990																	



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

Dimension and Permissible Ripple Current

Rated Volt. (V _{DC}) Contents Cap. (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
18											5x11	1.1	3.3	72	130
22											5x11	1.1	3.3	83	150
27						5x11	0.72	1.8	91	165					
33						5x11	0.72	1.8	99	180					
39	5x11	0.72	1.8	116	165						6.3x11	0.56	1.6	154	220
47	5x11	0.72	1.8	126	180						6.3x11	0.56	1.6	161	230
56						6.3x11	0.38	0.95	179	255	6.3x15	0.41	1.2	217	310
68						6.3x11	0.38	0.95	196	280	8x11.5	0.29	0.84	238	340
82	6.3x11	0.38	0.95	179	255	6.3x15	0.27	0.68	231	330	8x11.5	0.29	0.84	249	355
											8x15	0.25	0.75	329	470
											10x12.5	0.16	0.40	336	480
100	6.3x11	0.38	0.95	196	280						10x12.5	0.16	0.40	371	530
120	6.3x15	0.27	0.68	231	330	8x11.5	0.20	0.50	291	415	8x15	0.25	0.75	392	560
						10x12.5	0.12	0.30	438	625	8x20	0.18	0.52	427	610
											10x16	0.12	0.30	529	755
150	8x11.5	0.20	0.50	291	415	8x11.5	0.20	0.50	315	450	10x16	0.12	0.30	588	840
						10x12.5	0.12	0.30	473	675					
180	8x11.5	0.20	0.50	315	450	8x15	0.16	0.40	347	495	8x20	0.18	0.52	525	750
	10x12.5	0.12	0.30	438	625						10x20	0.088	0.22	662	945
220	8x15	0.16	0.40	347	495	8x15	0.16	0.40	413	590	10x20	0.088	0.22	728	1,040
	10x12.5	0.12	0.30	473	675	8x20	0.11	0.28	448	640	10x25	0.068	0.17	805	1,150
						10x16	0.084	0.21	578	825					
270						8x20	0.11	0.28	490	700	10x25	0.068	0.17	896	1,280
						10x16	0.084	0.21	637	910					
330	8x15	0.16	0.40	413	590	10x20	0.062	0.16	728	1,040	10x30	0.059	0.15	882	1,260
	8x20	0.11	0.28	448	640						12.5x20	0.059	0.15	833	1,190
	10x16	0.084	0.21	578	825										
390	8x20	0.11	0.28	560	700	10x20	0.062	0.16	904	1,130	12.5x20	0.059	0.15	952	1,190
	10x16	0.084	0.21	728	910	10x25	0.052	0.13	1,008	1,260					
470	10x20	0.062	0.16	832	1,040	10x25	0.052	0.13	1,112	1,390	10x30	0.059	0.15	1,176	1,470
											12.5x25	0.045	0.11	1,192	1,490
560	10x20	0.062	0.16	904	1,130	10x30	0.044	0.11	1,152	1,440	12.5x25	0.045	0.11	1,304	1,630
	10x25	0.052	0.13	1,008	1,260	12.5x20	0.046	0.12	1,072	1,340	12.5x30	0.039	0.098	1,376	1,720
680	10x25	0.052	0.13	1,112	1,390	10x30	0.044	0.11	1,256	1,570	12.5x30	0.039	0.098	1,520	1,800
						12.5x20	0.046	0.12	1,160	1,450	12.5x35	0.033	0.083	1,512	1,900
						12.5x25	0.034	0.085	1,352	1,690	16x20	0.048	0.120	1,248	1,560
820	10x30	0.044	0.11	1,152	1,440	12.5x25	0.034	0.085	1,448	1,810	12.5x35	0.033	0.083	1,624	2,030
	12.5x20	0.046	0.12	1,072	1,340						12.5x40	0.029	0.073	1,656	2,070
											16x25	0.033	0.083	1,504	1,880
1,000	10x30	0.044	0.11	1,256	1,570	12.5x30	0.030	0.075	1,560	1,950	12.5x40	0.029	0.073	1,800	2,250
	12.5x20	0.046	0.12	1,160	1,450	16x20	0.035	0.087	1,376	1,720	16x25	0.033	0.083	1,664	2,080
	12.5x25	0.034	0.085	1,352	1,690						16x31.5	0.029	0.073	1,720	2,150
1,200	12.5x25	0.034	0.085	1,629	1,810	12.5x30	0.030	0.075	1,917	2,130	16x31.5	0.029	0.073	2,088	2,320
						12.5x35	0.027	0.068	1,980	2,200	16x35.5	0.025	0.063	2,115	2,350
						16x25	0.028	0.070	1,863	2,070					
1,500	12.5x30	0.030	0.075	1,755	1,950	12.5x35	0.027	0.068	2,151	2,390	16x35.5	0.025	0.063	2,160	2,400
	16x20	0.035	0.087	1,539	1,710	12.5x40	0.024	0.060	2,196	2,440	16x40	0.021	0.063	2,336	2,595
						16x25	0.028	0.070	2,025	2,250					
1,800	12.5x30	0.030	0.075	1,917	2,130	12.5x40	0.024	0.060	2,358	2,620	16x40	0.021	0.063	2,466	2,740
	12.5x35	0.027	0.068	1,980	2,200	16x31.5	0.025	0.063	2,115	2,350	18x35.5	0.023	0.058	2,286	2,540
	16x25	0.028	0.070	1,863	2,070										
2,200	12.5x35	0.027	0.068	2,151	2,390	16x31.5	0.025	0.063	2,295	2,550	18x35.5	0.023	0.058	2,349	2,610
	12.5x40	0.024	0.060	2,196	2,440	16x35.5	0.022	0.055	2,295	2,550	18x40	0.020	0.050	2,385	2,650
	16x25	0.028	0.070	2,025	2,250										
2,700	16x31.5	0.025	0.063	2,115	2,350	16x35.5	0.022	0.055	2,394	2,660					
						16x40	0.018	0.045	2,610	2,900					
						18x35.5	0.021	0.053	2,448	2,720					
3,300	16x31.5	0.025	0.063	2,295	2,550	18x35.5	0.021	0.053	2,601	2,890					
	16x35.5	0.022	0.055	2,394	2,660	18x40	0.017	0.043	2,709	3,010					
3,900	16x40	0.018	0.045	2,610	2,900										
	18x35.5	0.021	0.053	2,448	2,720										
4,700	18x35.5	0.021	0.053	2,601	2,890										
	18x40	0.017	0.043	2,709	3,010										
5,600	18x40	0.017	0.043	2,934	3,260										



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

Dimension and Permissible Ripple Current

Rated Volt. (Vdc)	63V(1J)					
	Contents	$\phi D \times L$	Impedance (Ω , max./100k Hz)		Ripple Current (mA/rms, 105°C)	
			20°C	-10°C	120 Hz	100k Hz
12	5x11	1.90	4.78	55	100	
27	6.3x11	1.10	2.78	88	160	
33	6.3x11	1.10	2.75	96	175	
39	6.3x15	0.62	1.55	161	230	
47	8x11.5	0.49	1.23	193	275	
56	8x11.5	0.49	1.23	203	290	
	10x12.5	0.27	0.675	294	420	
68	8x15	0.34	0.850	252	360	
	10x12.5	0.27	0.675	354	505	
	10x16	0.21	0.525	366	523	
82	8x20	0.21	0.525	350	500	
100	8x15	0.34	0.850	308	440	
120	10x16	0.210	0.525	455	650	
	10x20	0.160	0.400	490	700	
150	8x20	0.210	0.525	476	680	
	10x25	0.130	0.325	546	780	
180	10x20	0.160	0.400	553	790	
	10x30	0.100	0.250	672	960	
220	10x25	0.130	0.325	648	925	
	12.5x20	0.110	0.275	609	870	
270	10x30	0.100	0.250	812	1,160	
	12.5x25	0.074	0.185	805	1,150	
330	12.5x20	0.110	0.275	746	1,065	
390	12.5x25	0.074	0.185	1,088	1,280	
	12.5x30	0.068	0.170	1,024	1,360	
470	12.5x30	0.068	0.170	1,120	1,360	
	12.5x35	0.063	0.158	1,112	1,400	
	16x20	0.059	0.148	1,080	1,350	
	16x25	0.055	0.138	1,184	1,480	
560	12.5x40	0.051	0.128	1,224	1,530	
	16x25	0.055	0.138	1,296	1,620	
680	12.5x40	0.051	0.128	1,336	1,670	
	16x31.5	0.046	0.115	1,376	1,720	
820	12.5x40	0.051	0.128	1,480	1,850	
	16x31.5	0.046	0.115	1,512	1,890	
	16x35.5	0.040	0.100	1,528	1,910	
1,000	16x35.5	0.040	0.100	1,576	1,970	
	18x35.5	0.040	0.100	1,688	2,110	
1,500	18x35.5	0.040	0.100	2,169	2,410	

Part Numbering System

RXK Series	470 μ F	\pm 20%	6.3V	Bulk Package	Gas Type	8 ϕ x 11.5L	Pb-free and PET sleeve
RXK	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.