

## RZW Series

### Features

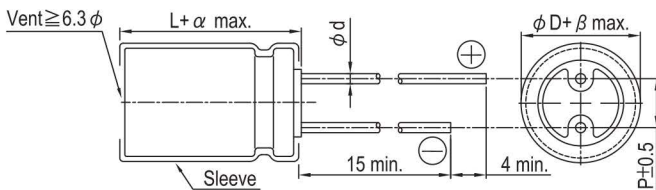
- 105°C, 4,000 ~ 10,000 hours assured
- Low ESR, suitable for switching power supplies
- Smaller size with large permissible ripple current
- RoHs compliance
- AEC-Q200 Parts Available: Replace “S” Suffix with “KS” or “LS” Suffix



### 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"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</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> <td>0.09</td> </tr> </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	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"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>Impedance Ratio 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> </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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Ripple Current and Frequency Multipliers	<table border="1"> <tr> <td rowspan="2">Cap.(μF)</td> <td>Freq.(Hz)</td> <td>120</td> <td>1k</td> <td>10k</td> <td>100k up</td> </tr> <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>0.50</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 ~ 18,000</td> <td>0.7</td> <td>0.85</td> <td>0.98</td> <td>1.0</td> </tr> </table>	Cap.(μF)	Freq.(Hz)	120	1k	10k	100k up	≤ ~ 33	0.42	0.70	0.90	1.0	39 ~ 270	0.50	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 ~ 18,000	0.7	0.85	0.98	1.0
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### Diagram of Dimensions

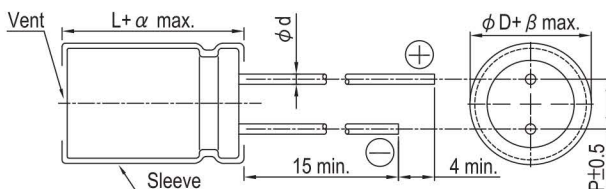


### Lead Spacing and Diameter

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 12.5×16, 16×16, 16×20, 18×16, 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	
47													5×11	0.58	1.16	210
56									5×11	0.58	1.16	210				
100					5×11	0.58	1.16	210					6.3×11	0.22	0.44	340
120									6.3×11	0.22	0.44	340				
150	5×11	0.58	1.16	210												
220					6.3×11	0.22	0.44	340	8×11.5	0.11	0.22	640	8×11.5	0.11	0.22	640
330	6.3×11	0.22	0.44	340					8×11.5	0.11	0.22	640	8×15	0.083	0.166	840
470					8×11.5	0.11	0.22	640	10×12.5	0.080	0.160	865	10×12.5	0.080	0.160	865
680	8×11.5	0.11	0.22	640	8×15	0.083	0.166	840	8×20	0.064	0.128	1,050	8×20	0.064	0.128	1,050
820	10×12.5	0.080	0.16	865	10×12.5	0.080	0.160	865	10×16	0.060	0.120	1,210	10×16	0.060	0.120	1,210
1,000	8×15	0.087	0.174	840	8×20	0.064	0.128	1,050	10×20	0.046	0.092	1,400	10×20	0.031	0.062	1,910
1,200	8×20	0.069	0.128	1,050	10×16	0.060	0.120	1,210	12.5×16	0.049	0.098	1,450	12.5×20	0.035	0.070	1,900
1,500	10×20	0.046	0.092	1,400	10×20	0.046	0.092	1,400	16×16	0.042	0.084	1,650	16×16	0.042	0.084	1,650
1,800	12.5×16	0.045	0.090	1,450	10×25	0.042	0.084	1,650	12.5×20	0.035	0.070	1,900	12.5×20	0.035	0.070	1,900
2,200	10×25	0.042	0.084	1,650	12.5×16	0.042	0.084	1,650	16×16	0.042	0.084	1,650	16×16	0.042	0.084	1,650
2,700	10×30	0.031	0.062	1,910	12.5×20	0.035	0.070	1,900	18×16	0.043	0.086	2,210	18×16	0.043	0.086	2,210
3,300	16×16	0.042	0.084	1,650	18×16	0.043	0.086	2,210	12.5×30	0.024	0.048	2,650	12.5×30	0.024	0.048	2,650
3,900	12.5×25	0.027	0.054	2,230	16×16	0.042	0.084	1,650	16×20	0.027	0.054	2,530	16×20	0.027	0.054	2,530
4,700	18×16	0.043	0.086	2,210	12.5×30	0.024	0.048	2,650	16×25	0.021	0.042	2,930	16×25	0.021	0.042	2,930
5,600	12.5×35	0.020	0.040	2,880	12.5×35	0.020	0.040	2,880	18×20	0.026	0.052	2,860	18×20	0.026	0.052	2,860
6,800	16×25	0.021	0.042	2,930	16×25	0.021	0.042	2,930	12.5×40	0.017	0.034	3,350	12.5×40	0.017	0.034	3,350
8,200	18×20	0.026	0.052	2,860	16×31.5	0.019	0.038	3,140	16×31.5	0.019	0.038	3,140	16×31.5	0.019	0.038	3,140
10,000	16×35.5	0.015	0.030	3,610	18×25	0.021	0.042	2,930	18×25	0.019	0.038	3,140	18×25	0.019	0.038	3,140
12,000	18×31.5	0.015	0.030	3,610	16×40	0.013	0.026	4,080	16×40	0.013	0.026	4,080	16×40	0.013	0.026	4,080
15,000	18×35.5	0.014	0.028	4,220	18×31.5	0.015	0.030	3,610	18×35.5	0.014	0.028	4,220	18×35.5	0.014	0.028	4,220
18,000	18×40	0.012	0.024	4,280	18×35.5	0.014	0.028	4,220	18×40	0.012	0.024	4,280	18×40	0.012	0.024	4,280

Radial

