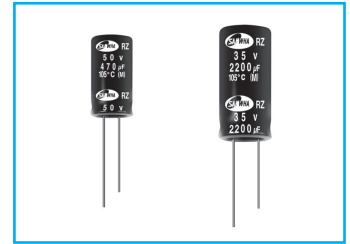


## RZ Low Impedance Series

Long Life   
 Solvent Proof   
 Low Impedance



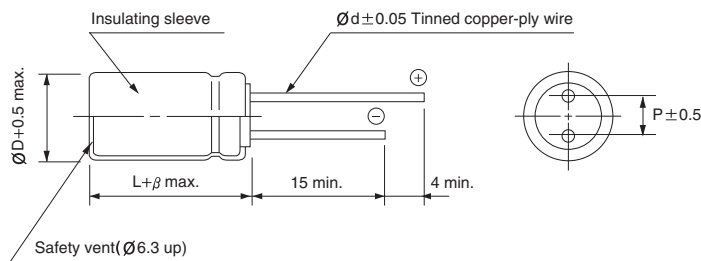
- Low impedance at high frequency
- High reliability withstanding 5000 hours load life at 105°C (2000/3000 hours for smaller case sizes as specified below)
- Ideally suited for use in switching power supplies
- Complied to the RoHS directive

$\Rightarrow$  Long life

Item	Characteristics															
Operating temperature range	-55 ~ +105°C															
Leakage current max.	I = 0.01CV or 3µA whichever is greater (after 2 minutes) I = 0.03CV or 4µA whichever is greater (after 1 minute)															
Capacitance tolerance	±20% at 120Hz, 20°C															
Dissipation factor max. (at 120Hz, 20°C)	Capacitance > 1000µF : tanδ increases by 0.02 for each 1000µF from below value															
	<table border="1"> <tr> <td>WV</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</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>0.08</td> </tr> </table>	WV	6.3	10	16	25	35	50	63	tanδ	0.22	0.19	0.16	0.14	0.12	0.10
WV	6.3	10	16	25	35	50	63									
tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.08									
Low temperature characteristics (Impedance ratio at 120Hz)	<table border="1"> <tr> <td>WV</td> <td>6.3, 10</td> <td>16 ~ 35</td> <td>50, 63</td> </tr> <tr> <td>Z-55°C/Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> </tr> </table>	WV	6.3, 10	16 ~ 35	50, 63	Z-55°C/Z+20°C	4	3	2							
	WV	6.3, 10	16 ~ 35	50, 63												
Z-55°C/Z+20°C	4	3	2													
Load life	After an application of DC bias voltage plus the rated AC ripple current for 5000 hours at 105°C. The measurement shall meet the following limits. The DC voltage plus the peak AC voltage combined must not exceed the rated voltage.															
	<table border="1"> <tr> <td>Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>tanδ</td> <td>Less than 200% of specified value</td> </tr> </table>	Leakage current	Less than specified value	Capacitance change	Within ±20% of initial value	tanδ	Less than 200% of specified value									
	Leakage current	Less than specified value														
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<table border="1"> <tr> <td>∅D</td> <td>∅D ≤ 6.3</td> <td>∅D = 8</td> <td>∅D ≥ 10</td> </tr> <tr> <td>Life time</td> <td>2000 hours</td> <td>3000 hours</td> <td>5000 hours</td> </tr> </table>	∅D	∅D ≤ 6.3	∅D = 8	∅D ≥ 10	Life time	2000 hours	3000 hours	5000 hours								
∅D	∅D ≤ 6.3	∅D = 8	∅D ≥ 10													
Life time	2000 hours	3000 hours	5000 hours													
After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4																
Shelf life (at 105°C)	<table border="1"> <tr> <td>Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>tanδ</td> <td>Less than 150% of specified value</td> </tr> </table>	Leakage current	Less than specified value	Capacitance change	Within ±20% of initial value	tanδ	Less than 150% of specified value									
	Leakage current	Less than specified value														
	Capacitance change	Within ±20% of initial value														
tanδ	Less than 150% of specified value															

### ● DRAWING

Unit : mm



∅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
∅d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
β	1.5			2.0			

### ● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

µF \ Frequency	120Hz	1kHz	10kHz	50kHz	100kHz ≤
~ 33	0.40	0.65	0.82	0.91	1.00
47 ~ 270	0.50	0.70	0.84	0.92	1.00
330 ~ 680	0.55	0.75	0.86	0.93	1.00
1000 ~ 1500	0.60	0.80	0.88	0.94	1.00
2200 ~	0.70	0.85	0.90	0.95	1.00

# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

**RZ** series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Item μF	6.3			10			16			25		
	ØD×L (mm)	Impedance (Ω)max. 20°C	Ripple current (mA rms) 105°C	ØD×L (mm)	Impedance (Ω)max. 20°C	Ripple current (mA rms) 105°C	ØD×L (mm)	Impedance (Ω)max. 20°C	Ripple current (mA rms) 105°C	ØD×L (mm)	Impedance (Ω)max. 20°C	Ripple current (mA rms) 105°C
		100kHz	100kHz		100kHz	100kHz		100kHz	100kHz		100kHz	100kHz
33										5×11	0.80	155
47							5×11	0.80	155	6.3×11	0.55	210
68				5×11	0.80	155	6.3×11	0.50	220	6.3×11	0.36	260
100	5×11	0.85	150	6.3×11	0.55	210	6.3×11	0.35	265	8×11.5	0.24	383
150	6.3×11	0.49	225	6.3×11	0.35	265	8×11.5	0.23	388	8×11.5	0.16	460
220	6.3×11	0.30	285	8×11.5	0.24	387	8×11.5	0.16	460	10×12.5	0.13	600
330	8×11.5	0.20	292	8×11.5	0.16	460	10×12.5	0.12	625	10×16	0.095	750
470	10×12.5	0.14	575	10×12.5	0.13	600	10×16	0.09	770	10×20	0.065	1020
680	10×16	0.11	700	10×16	0.09	770	10×20	0.065	1020	12.5×20	0.046	1392
1000	10×20	0.075	950	10×20	0.060	1060	12.5×20	0.047	1411	12.5×25	0.036	1660
1500	10×25	0.055	1220	12.5×20	0.045	1417	12.5×25	0.036	1660	16×20	0.034	1770
2200	12.5×20	0.043	1438	12.5×25	0.034	1710	16×20	0.033	1800	16×25	0.028	2051
3300	12.5×25	0.034	1710	16×20	0.031	1850	16×25	0.027	2095	16×35.5	0.020	2680
4700	16×25	0.032	1935	16×31.5	0.023	2420	16×35.5	0.020	2680	18×40	0.018	2960
6800	16×31.5	0.024	2370	16×35.5	0.020	2680	18×35.5	0.018	2900			
10000	16×40	0.020	2750	18×40	0.017	3040						
15000	18×40	0.018	2960									

WV Item μF	35			50			63		
	ØD×L (mm)	Impedance (Ω)max. 20°C	Ripple current (mA rms) 105°C	ØD×L (mm)	Impedance (Ω)max. 20°C	Ripple current (mA rms) 105°C	ØD×L (mm)	Impedance (Ω)max. 20°C	Ripple current (mA rms) 105°C
		100kHz	100kHz		100kHz	100kHz		100kHz	100kHz
1.0				5×11	4.00	36			
1.5				5×11	3.80	45			
2.2				5×11	3.50	54			
3.3				5×11	3.00	66			
4.7				5×11	2.20	81			
6.8				5×11	1.80	91			
10				5×11	1.80	115	5×11	1.80	135
15				5×11	1.60	145	6.3×11	1.00	185
22	5×11	0.75	160	6.3×11	1.40	195	6.3×11	1.00	215
33	6.3×11	0.49	225	6.3×11	1.20	240	8×11.5	0.80	320
47	6.3×11	0.34	270	8×11.5	0.80	344	8×11.5	0.80	365
68	8×11.5	0.24	384	8×11.5	0.65	410	10×12.5	0.23	495
100	8×11.5	0.16	460	10×16	0.40	581	10×20	0.16	750
150	10×12.5	0.12	625	10×20	0.30	820	10×25	0.12	950
220	10×16	0.09	770	10×25	0.20	1040	12.5×20	0.085	1140
330	10×20	0.060	1060	12.5×20	0.12	1281	12.5×25	0.060	1420
470	12.5×20	0.046	1401	12.5×25	0.085	1500	16×25	0.055	1700
680	12.5×25	0.036	1660	16×20	0.060	1630	16×31.5	0.032	2050
1000	16×20	0.034	1770	16×31.5	0.040	2120	18×35.5	0.029	2280
1500	16×31.5	0.028	2385	16×40	0.035	2410			
2200	16×35.5	0.020	2680	18×40	0.030	2560			
3300	18×40	0.017	3040						