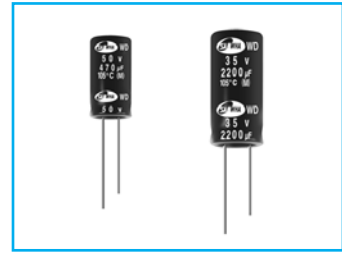


# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

## WD Miniaturized, Extremely Low Impedance Series

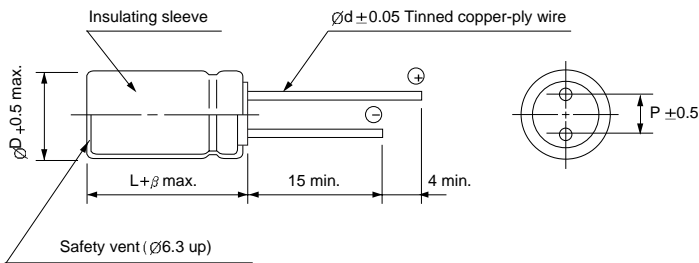
- Smaller case sizes than RZ series
- Extremely low impedance at high frequency
- High reliability withstanding 5000 hours load life at 105°C (2000/3000 hours for smaller case sizes as specified below)



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> </tr> <tr> <td>tanδ</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </table>	WV	6.3	10	16	25	35	50	tanδ	0.24	0.20	0.16	0.14	0.12
WV	6.3	10	16	25	35	50								
tanδ	0.24	0.20	0.16	0.14	0.12	0.10								
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</td> </tr> <tr> <td>Z-55°C/Z+20°C</td> <td>5</td> <td>4</td> <td>3</td> </tr> </table>	WV	6.3,10	16~35	50	Z-55°C/Z+20°C	5	4	3					
	WV	6.3,10	16~35	50										
Z-55°C/Z+20°C	5	4	3											
Load life (after application of the rated voltage for 5000 hours at 105°C)	Leakage current	Less than specified value												
	Capacitance change	Within ±20% of initial value												
	tanδ	Less than 200% of specified value												
	Ø5, 6.3, 8 products are for 2000 hours, Ø10 products are for 3000 hours													
Shelf life (after leaving capacitors under no load at 105°C for 1000 hours)	Leakage current	Less than specified value												
	Capacitance change	Within ±20% of initial value												
	tanδ	Less than 150% of specified value												

### ● DRAWING

Unit : mm



ØD	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Ød	0.5	0.5	0.6	0.6	0.6	0.8	0.8
β	1.0			2.0			

### ● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Item μF	6.3			10			16		
	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
10							5 × 11	0.70	180
22	5 × 11	0.70	180	5 × 11	0.70	180	5 × 11	0.70	180
33	5 × 11	0.70	180	5 × 11	0.70	180	5 × 11	0.70	180
47	5 × 11	0.65	180	5 × 11	0.65	180	5 × 11	0.65	180
100	5 × 11	0.65	180	5 × 11	0.65	180	6.3 × 11	0.30	280
150	6.3 × 11	0.30	280	6.3 × 11	0.30	280	6.3 × 11	0.30	280
220	6.3 × 11	0.30	280	6.3 × 11	0.30	280	8 × 11.5	0.14	450
330	6.3 × 11	0.30	280	8 × 11.5	0.14	450	8 × 11.5	0.14	450
470	8 × 11.5	0.14	450	8 × 11.5	0.14	450	10 × 12.5	0.10	660
680	10 × 12.5	0.10	660	10 × 12.5	0.10	660	10 × 16	0.080	850
1000	10 × 12.5	0.10	660	10 × 16	0.08	850	10 × 20	0.054	1100
1500	10 × 20	0.054	1100	10 × 20	0.054	1100	12.5 × 20	0.050	1400
2200	12.5 × 20	0.050	1400	12.5 × 20	0.050	1400	12.5 × 25	0.038	1700
3300	12.5 × 20	0.050	1400	12.5 × 25	0.038	1700	16 × 25	0.030	2100
4700	16 × 25	0.030	2100	16 × 25	0.030	2100	16 × 31.5	0.025	2600
6800	16 × 25	0.030	2100	16 × 31.5	0.025	2600	18 × 35.5	0.022	3000
10000	16 × 31.5	0.025	2600	18 × 35.5	0.022	3000			
15000	18 × 35.5	0.022	3000						

WV Item μF	25			35			50		
	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
0.47							5 × 11	5.0	25
1.0							5 × 11	3.5	40
2.2							5 × 11	3.0	55
3.3							5 × 11	2.6	65
4.7	5 × 11	0.70	180	5 × 11	0.70	180	5 × 11	2.3	90
10	5 × 11	0.70	180	5 × 11	0.70	180	5 × 11	1.4	120
22	5 × 11	0.70	180	5 × 11	0.70	180	5 × 11	1.2	150
33	5 × 11	0.70	180	5 × 11	0.65	180	6.3 × 11	0.60	200
47	5 × 11	0.65	180	6.3 × 11	0.30	280	6.3 × 11	0.43	250
100	6.3 × 11	0.30	280	8 × 11.5	0.14	450	8 × 11.5	0.24	340
150	8 × 11.5	0.14	450	8 × 11.5	0.14	450	10 × 12.5	0.17	490
220	8 × 11.5	0.14	450	10 × 12.5	0.10	660	10 × 16	0.12	650
330	10 × 12.5	0.10	660	10 × 16	0.080	850	10 × 20	0.10	810
470	10 × 16	0.080	850	10 × 20	0.054	1100	12.5 × 20	0.085	1100
680	10 × 20	0.054	1100	12.5 × 20	0.050	1400	12.5 × 25	0.065	1200
1000	12.5 × 20	0.050	1400	12.5 × 25	0.038	1700	16 × 25	0.043	1600
1500	16 × 20	0.030	2100	16 × 25	0.030	2100	16 × 31.5	0.038	2000
2200	16 × 25	0.030	2100	16 × 31.5	0.025	2600	18 × 35.5	0.034	2300
3300	16 × 31.5	0.025	2600	18 × 35.5	0.022	3000			
4700	18 × 35.5	0.022	3000						