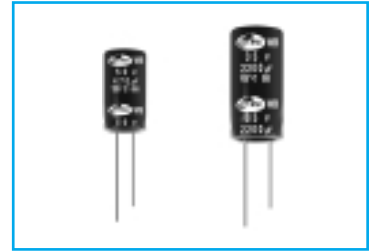


## WB Ultra Low Impedance Series

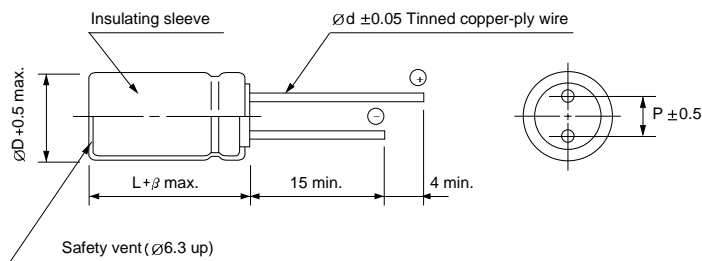
- Low impedance compared with WL series
- Enabled high ripple current by a reduction of impedance at high frequency
- High reliability withstanding 5000 hours load life at 105 °C (2000 ~ 4000 hours for smaller case sizes as specified below)
- For switching power supplies, noise filter, adaptor, charger



Item	Characteristics																	
Operating temperature range	-40 ~ +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 > 1000 μF : tanδ increases by 0.02 for each 1000 μF from below value.																	
	<table border="1"> <thead> <tr> <th>WV</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</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>	WV	6.3	10	16	25	35	50	63	100	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09
WV	6.3	10	16	25	35	50	63	100										
tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08										
Low temperature characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>Z-40 °C / Z+20 °C</th> <th>Z-25 °C / Z+20 °C</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>2</td> </tr> </tbody> </table>	Z-40 °C / Z+20 °C	Z-25 °C / Z+20 °C	3	2													
	Z-40 °C / Z+20 °C	Z-25 °C / Z+20 °C																
3	2																	
Load life (after application of the rated voltage for 5000 hours at 105 °C)	Leakage current	Less than specified value																
	Capacitance change	Within ±25% of initial value																
	tanδ	Less than 200% of specified value																
	∅5, 6.3 : 2000 hours, ∅8 : 3000 hours, ∅10 : 4000 hours																	
Shelf life (at 105 °C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life 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	1.0			2.0			

# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

**WB** series

## ● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Item μF	6.3			10			16			25		
	∅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	∅D × L (mm)	Impedance (Ω)max. 20 °C 100kHz	Ripple current (mA rms) 105 °C 100kHz
4.7										5 × 11	0.35	250
10							5 × 11	0.35	250	5 × 11	0.35	250
22	5 × 11	0.35	250	5 × 11	0.35	250	5 × 11	0.35	250	5 × 11	0.35	250
33	5 × 11	0.35	250	5 × 11	0.35	250	5 × 11	0.35	250	5 × 11	0.35	250
47	5 × 11	0.30	250	5 × 11	0.30	250	5 × 11	0.30	250	5 × 11	0.30	250
100	5 × 11	0.30	250	5 × 11	0.30	250	6.3 × 11	0.15	405	6.3 × 11	0.15	405
150	6.3 × 11	0.15	405	6.3 × 11	0.15	405	6.3 × 11	0.15	405	8 × 11.5	0.072	760
220	6.3 × 11	0.15	405	6.3 × 11	0.15	405	8 × 11.5	0.072	760	8 × 11.5	0.072	760
330	6.3 × 11	0.15	405	8 × 11.5	0.072	760	8 × 11.5	0.072	760	10 × 12.5	0.053	1030
470	8 × 11.5	0.072	760	8 × 11.5	0.072	760	10 × 12.5	0.053	1030	10 × 16	0.038	1430
680	10 × 12.5	0.053	1030	10 × 12.5	0.053	1030	10 × 16	0.038	1430	10 × 20	0.027	1820
1000	10 × 12.5	0.053	1030	10 × 16	0.038	1430	10 × 20	0.027	1820	12.5 × 20	0.025	2360
1500	10 × 20	0.027	1820	10 × 20	0.027	1820	12.5 × 20	0.025	2360	16 × 20	0.015	3460
2200	12.5 × 20	0.025	2360	12.5 × 20	0.025	2360	12.5 × 25	0.018	2770	16 × 25	0.015	3460
3300	12.5 × 20	0.025	2360	12.5 × 25	0.018	2770	16 × 25	0.015	3460	16 × 31.5	0.015	3680
4700	16 × 25	0.015	3460	16 × 25	0.015	3460	16 × 31.5	0.015	3680	18 × 35.5	0.014	3800
6800	16 × 25	0.015	3460	16 × 31.5	0.015	3680	18 × 35.5	0.014	3800			
10000	16 × 31.5	0.015	3680	18 × 35.5	0.014	3800						
15000	18 × 35.5	0.014	3800									

WV Item μF	35			50			63			100		
	∅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	∅D × L (mm)	Impedance (Ω)max. 20 °C 100kHz	Ripple current (mA rms) 105 °C 100kHz
0.47				5 × 11	2.0	250						
1.0				5 × 11	2.0	250						
2.2				5 × 11	2.0	250				5 × 11	2.0	125
3.3				5 × 11	1.0	250	5 × 11	2.0	165	5 × 11	2.0	125
4.7	5 × 11	0.35	250	5 × 11	1.0	250	5 × 11	2.0	165	5 × 11	2.0	125
10	5 × 11	0.35	250	5 × 11	0.50	250	5 × 11	0.45	165	6.3 × 11	0.50	205
22	5 × 11	0.35	250	5 × 11	0.26	250	6.3 × 11	0.30	265	8 × 11.5	0.30	355
33	5 × 11	0.30	250	6.3 × 11	0.17	405	6.3 × 11	0.30	265	10 × 12.5	0.25	450
47	6.3 × 11	0.15	405	6.3 × 11	0.14	405	8 × 11.5	0.20	500	10 × 16	0.20	580
100	8 × 11.5	0.072	760	8 × 11.5	0.072	760	10 × 16	0.10	945	12.5 × 20	0.10	1045
150	8 × 11.5	0.072	760	10 × 12.5	0.061	1030	10 × 20	0.08	1100	12.5 × 25	0.070	1195
220	10 × 12.5	0.053	1030	10 × 16	0.038	1430	10 × 25	0.07	1300	16 × 25	0.060	1600
330	10 × 16	0.038	1430	10 × 20	0.027	1820	12.5 × 20	0.04	1495	16 × 31.5	0.040	1750
470	10 × 20	0.027	1820	12.5 × 20	0.025	2360	16 × 20	0.035	1990	18 × 40	0.030	2060
680	12.5 × 20	0.025	2360	12.5 × 25	0.020	2770	16 × 25	0.030	2780			
1000	12.5 × 25	0.018	2770	16 × 25	0.018	3460	16 × 35.5	0.020	2835			
1500	16 × 25	0.015	3460	16 × 31.5	0.015	3680						
2200	16 × 31.5	0.015	3680	18 × 35.5	0.014	3800						
3300	18 × 35.5	0.014	3800									