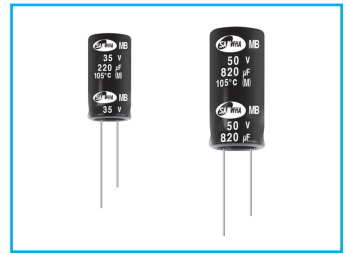


MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS



MB Ultra Low Imp., High Ripple Current Series

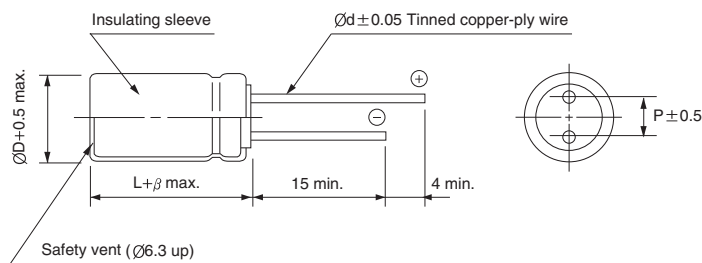


- Ultra low impedance
- High reliability withstanding 5000 hours load life at 105°C
- For SMPS, IP-Board, Adaptor, Noise Filter, Charger
- Complied to the RoHS directive, Halogen-Free

Item	Characteristics																		
Operating temperature range	-40 ~ +105°C																		
Leakage current max.	$I = 0.01CV$ or $3\mu A$ whichever is greater (after 2 minutes)																		
Capacitance tolerance	$\pm 20\%$ at 120Hz, 20°C																		
Dissipation factor max. (at 120Hz, 20°C)	<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> <td>100</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>0.09</td> <td>0.08</td> </tr> </table>	WV	6.3	10	16	25	35	50	63	100	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08
	WV	6.3	10	16	25	35	50	63	100										
tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08											
When rated Capacitance is over 1000 μF , tan δ shall be added 0.02 to the listed value with increase of every 1000 μF .																			
Low temperature characteristics (Impedance ratio at 120Hz)	Z-40°C/Z+20°C																		
	Z-25°C/Z+20°C																		
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.																		
	Leakage current	Less than specified value																	
	Capacitance change	Within $\pm 25\%$ of the initial value																	
	tan δ	Less than 200% of the specified value																	
	<table border="1"> <tr> <td>$\varnothing D$</td> <td>$\varnothing D = 5, 6.3$</td> <td>$\varnothing D = 8$</td> <td>$\varnothing D = 10$</td> <td>$\varnothing D \geq 12$</td> </tr> <tr> <td>Life time</td> <td>2000 hours</td> <td>3000 hours</td> <td>4000 hours</td> <td>5000 hours</td> </tr> </table>	$\varnothing D$	$\varnothing D = 5, 6.3$	$\varnothing D = 8$	$\varnothing D = 10$	$\varnothing D \geq 12$	Life time	2000 hours	3000 hours	4000 hours	5000 hours								
$\varnothing D$	$\varnothing D = 5, 6.3$	$\varnothing D = 8$	$\varnothing D = 10$	$\varnothing D \geq 12$															
Life time	2000 hours	3000 hours	4000 hours	5000 hours															
Shelf life (at 105°C)	After 1000 hours no load test, leakage current, capacitance and tan δ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4																		

DRAWING

Unit : mm



$\varnothing D$	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
$\varnothing d$	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 \leq
1 ~ 180	0.40	0.75	0.90	0.95	1.00
220 ~ 560	0.50	0.85	0.94	0.96	1.00
680 ~ 1800	0.60	0.87	0.95	0.97	1.00
2200 ~ 3900	0.75	0.90	0.95	0.97	1.00
4700 ~	0.85	0.95	0.98	0.99	1.00

MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

MB series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Item μF	6.3			10			16			25		
	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
68										5×11	0.300	250
100							5×11	0.300	250			
							6.3×11	0.150	385			
150				5×11	0.300	250				6.3×11	0.130	405
220	5×11	0.300	250				6.3×11	0.130	405	8×11.5	0.072	760
330				6.3×11	0.150	405				10×12.5	0.053	1030
				8×11.5	0.094	600						
390										8×15	0.060	818
470	6.3×11	0.130	405				8×11.5	0.072	760	10×12.5	0.053	1030
										10×16	0.038	1430
560				8×11.5	0.075	700				8×20	0.050	1260
680				8×11.5	0.072	760	8×15	0.060	818	10×16	0.038	1430
										10×20	0.023	1820
										10×12.5	0.053	1030
820	8×11.5	0.072	760	10×12.5	0.053	1030				10×20	0.023	2000
1000				8×15	0.060	818	8×20	0.050	1260	10×20	0.025	1900
				10×12.5	0.053	1030						
				10×16	0.038	1430						
1200	8×15	0.060	818	8×20	0.050	1260						
	10×12.5	0.053	1030									
1500	8×20	0.050	1260	10×16	0.038	1430	10×20	0.023	1820	12.5×20	0.021	2360
				10×20	0.023	1820						
				12.5×16	0.031	1452						
1800	10×16	0.038	1430				10×25	0.022	2150	12.5×25	0.020	2770
	12.5×16	0.031	1452									
2200	10×20	0.023	1820	10×25	0.022	2150	12.5×20	0.021	2360	12.5×25	0.020	3000
										16×20	0.021	3140
										18×20	0.023	2860
2700							12.5×25	0.020	2770	18×25	0.018	3611
3300	10×25	0.022	2150	12.5×20	0.021	2360	16×20	0.021	3140	16×25	0.019	3460
							18×20	0.023	2826			
3900	12.5×20	0.021	2360	12.5×25	0.020	2770	12.5×34.5	0.017	3400			
							18×25	0.018	3611			
4700	12.5×25	0.020	2770	16×20	0.021	3140	16×25	0.019	3460			
				18×20	0.023	2826						
5600	12.5×30	0.018	3290	16×25	0.019	3460	16×31.5	0.013	3680			
	16×20	0.021	3140									
	18×20	0.023	2826							18×25	0.018	3611
6800	16×25	0.019	3460	16×31.5	0.013	3680						
8200	16×31.5	0.013	3680									
	18×25	0.018	3611									

MB series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

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
1.0				5×11	2.500	53						
2.2				5×11	2.500	56						
3.3				5×11	2.300	60				5×11	2.000	125
4.7				5×11	1.500	82				5×11	2.000	125
10				5×11	1.000	250	5×11	0.45	165	6.3×11	0.500	205
22				5×11	0.300	250				8×11.5	0.030	355
27				5×11	0.300	250						
33							6.3×11	0.300	265	10×12.5	0.250	450
47	5×11	0.300	250	6.3×11	0.140	350	8×11.5	0.200	500	10×16	0.200	580
56				6.3×11	0.140	385						
68							10×12.5	0.160	600			
100	6.3×11	0.130	405	8×11.5	0.072	724	10×16	0.100	945	12.5×20	0.100	1045
120				8×15	0.060	818						
150	8×11.5	0.072	760	10×12.5	0.061	979	10×20	0.080	1100	12.5×25	0.070	1195
180				8×20	0.050	1260						
220	10×12.5	0.053	1030	10×16	0.042	1370	10×25	0.070	1300	16×25	0.060	1600
270	8×15	0.060	818	12.5×16	0.042	1071						
330	10×12.5	0.053	1030	10×20	0.030	1580	10×25	0.070	1300	16×31.5	0.040	1750
390	8×20	0.050	1260									
470	10×16	0.038	1430	12.5×20	0.027	2050	16×20	0.035	1990	16×31.5	0.040	1750
	12.5×16	0.031	1452							18×40	0.030	2060
560	10×20	0.023	1820	12.5×25	0.020	2410	16×25	0.030	2780			
	10×25	0.022	2150									
820				16×20	0.023	2730						
1000	12.5×20	0.021	2360	16×25	0.021	3010	16×35.5	0.020	2835			
	12.5×25	0.020	2770	18×20	0.022	2850						
1200	12.5×25	0.020	2770	18×25	0.020	3140						
1500	16×20	0.021	3140									
	18×20	0.023	2860									
1800	16×25	0.019	3460									
	18×25	0.018	3611									
2200	16×25	0.019	3460									
	16×31.5	0.013	3680									