

CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

HMB Series

CHIP TYPE, HIGHER CAPACITANCE

Operating with wide temperature range -55~+105°C
 Higher capacitance, ultra-low ESR, high ripple current
 Load life of 2000 hours
 RoHS & REACH compliant, Halogen-free



SPECIFICATIONS

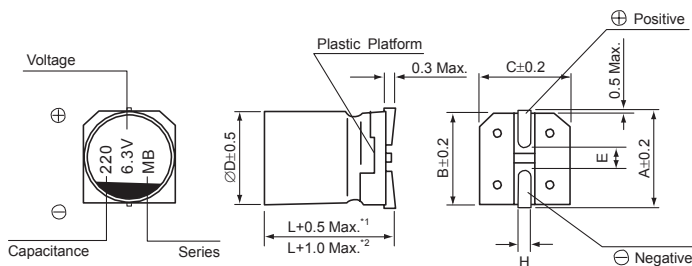
Items	Characteristics		
Operation Temperature Range	-55 ~ +105°C		
Voltage Range	2.5 ~ 16V		
Capacitance Range	100 ~ 1000μF		
Capacitance Tolerance	±20% at 120Hz, 20°C		
Leakage Current	≤Specified value (after 2 minutes application of rated voltage at 20°C).		
Dissipation Factor (tan δ)	≤Specified value at 120Hz, 20°C.		
ESR	≤Specified value at 100KHz, 20°C.		
Stability at Low Temperature	Measurement frequency : 100KHz		
	Impedance Ratio ZT/Z20 (max.)	Z(+105°C)/Z(20°C) Z(-55°C)/Z(20°C)	≤1.25 ≤1.25
Damp Heat (Steady State)	When the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 60°C, 90% RH, they meet the characteristics listed below.		
	Capacitance Change	Within ±20% of initial value	
	Dissipation Factor	150% or less of initial specified value	
	ESR (*2)	150% or less of initial specified value	
	Leakage Current	Initial specified value or less	
Endurance	After 2000 hours application of the rated voltage at 105°C, they meet the characteristics listed below.		
	Capacitance Change	Within ±20% of initial value	
	Dissipation Factor	150% or less of initial specified value	
	ESR (*2)	150% or less of initial specified value	
	Leakage Current	Initial specified value or less	
Resistance to Soldering Heat	After reflow soldering and restored at room temperature, they meet the characteristics listed below.		
	Capacitance Change	Within ±10% of initial value	
	Dissipation Factor	130% or less of initial specified value	
	ESR (*2)	130% or less of initial specified value	
	Leakage Current	Initial specified value or less	
Marking	Red print on the case top.		

(*1) If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

(*2) Should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.

(*3) The value before test of examination of resistance to soldering.

DRAWING (Unit: mm)



*1. Applicable to $\varnothing 5 \sim \varnothing 8$

*2. Applicable to $\varnothing 10$ and above

DIMENSIONS (Unit: mm)

$\varnothing D \times L$	5 × 5.5/5.8	5 × 8/9	6.3 × 5/6	6.3 × 5.8/6.5	6.3 × 7/7.7	6.3 × 9	8 × 6.7/7.7	10 × 12
A	6.0	6.0	7.3	7.3	7.3	7.3	9.0	11.0
B	5.3	5.3	6.6	6.6	6.6	6.6	8.3	10.3
C	5.3	5.3	6.6	6.6	6.6	6.6	8.3	10.3
E	1.6	1.6	2.1	2.1	2.1	2.1	3.2	4.6
L	5.5/5.8	8.0/9.0	5.0/6.0	5.8/6.5	7.0/7.7	9.0	6.7/7.7	12.0
H	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.8~1.1	0.8~1.1

DIMENSIONS & STANDARD RATINGS

WV (V) Parameter Cap. (μF)		2.5 (0E)					4 (0G)				
		Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
150	151						5 × 5.8	0.12	120	12	3500
220	221						5 × 5.8 (6.3 × 5.8)	0.12 (0.12)	176 (176)	12 (10)	3500 (3900)
270	271						6.3 × 7.7	0.12	216	9	4200
330	331	5 × 5.8	0.12	165	10	3900	6.3 × 7.7 (6.3 × 7)	0.12 (0.12)	264 (264)	9 (10)	4200 (4500)
390	391	5 × 5.8 (6.3 × 5.8)	0.12 (0.12)	195 (195)	10 (10)	3900 (3900)	6.3 × 7	0.12	312	10	4500
470	471	6.3 × 7.7	0.12	332.5	9	4200	8 × 7.7	0.12	376	9	4500
560	561	6.3 × 7.7 (6.3 × 7) (6.3 × 5.8)	0.12 (0.12) (0.12)	280 (280) (280)	9 (10) (10)	4200 (4500) (3900)	8 × 7.7	0.12	448	9	4500
680	681	6.3 × 7	0.12	340	10	4500					
1000	102	8 × 7.7	0.12	500	9	4500					

WV (V) Parameter Cap. (μF)		6.3 (0J)					10 (1A)				
		Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
100	101	5 × 5.5	0.12	126	25	2200	6.3 × 5.5	0.12	200	25	2600
120	121						5 × 5.8	0.12	240	22	2600
150	151						6.3 × 6.5	0.12	300	20	2800
220	221	6.3 × 5 6.3 × 5.7 (6.3 × 6)	0.12 0.12 (0.12)	277 277 (277)	16 16 (16)	3400 3400 (3400)	6.3 × 6.5	0.12	440	20	2900
270	271	5 × 8 (5 × 9)	0.12 (0.12)	340 (340)	16 (16)	3000 (3000)	6.3 × 5.8	0.12	540	20	2800
330	331	6.3 × 6.5	0.12	416	12	3950					
470	471	6.3 × 7.7	0.12	592	12	3950					
560	561	6.3 × 9	0.12	706	10	4500					

WV (V) Parameter Cap. (μF)		16 (1C)				
		Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
100	101	6.3 × 6 (6.3 × 6.5)	0.12 (0.12)	320 (320)	24 (24)	2500 (2500)
180	181	6.3 × 5.8	0.12	576	22	3300
220	221	6.3 × 7.7 (6.3 × 9)	0.12 (0.12)	704 (704)	22 (20)	3300 (3300)
270	271	8 × 6.7	0.12	864	22	3300
330	331	8 × 7.7	0.12	1050	21	3400
470	471	10 × 12	0.12	1504	11	5200

◆ How to order

HMB	101	M	0035	0607	R	-
↓	↓	↓	↓	↓	↓	↓
<u>Type</u>	<u>Capacitance code</u>	<u>Tolerance</u>	<u>Rated Voltage</u>	<u>Size Code</u>	<u>Package</u>	<u>Additional characters may be added for special requirements</u>
HMB	pF Code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow) 101 = 100uF 102 = 1000uF	M: +/-20%	Code 0035: 35VDC For DC Voltage 0006: 6.3VDC 0035: 35VDC 0450: 450VDC	Code 0607: Size 6.3x7.7mm Size for V-chip E-cap 0607: Size 6.3x7.7mm 1012: Size 10x12mm	R: Tape & Reel	