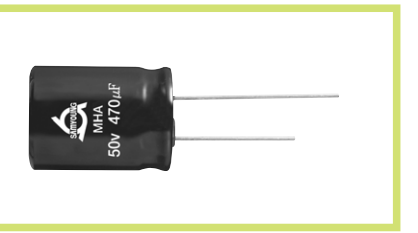
MHA-BP Series

• 85℃ 2,000Hrs assured

- Non-solvent proof.
- Bi-polarized
- Downsized of SHL-BP series.
- For Digital Household Appliances
- **RoHS compliant.**
- **Halogen-free capacitors are also available.**

SHL-BP → MHA-BP
Downsized

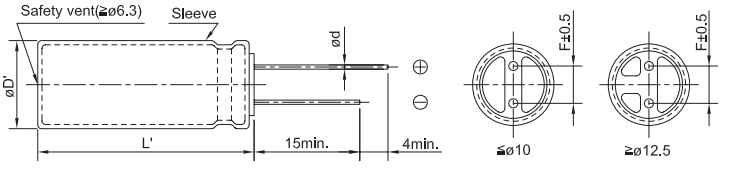


SPECIFICATIONS

Item	Characteristics	
Rated Voltage Range	6.3 ~ 100 VDC	160 ~ 250 VDC
Operating Temperature Range	-40 ~ +85℃	-25 ~ +85℃
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)	
Leakage Current (In both directions)	I=0.03CV(μA) or 3μA, whichever is greater. Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(VDC) (at 20℃, 5 minutes)	
Dissipation Factor (Tanδ)	Rated Voltage(VDC): 6.3 / 10 / 16~25 / 35 / 50 / 63~100 / 160 / 200~250 Tanδ(Max.): 0.25 / 0.24 / 0.20 / 0.16 / 0.14 / 0.12 / 0.15 / 0.20 When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase. (at 20℃, 120Hz)	
Temperature Characteristics (Max. Impedance ratio)	Rated Voltage(VDC): 6.3 / 10 / 16 / 25~100 / 160 / 160~250 Z(-25℃)/Z(20℃): 4 / 3 / 2 / 2 / 4 / 6 Z(-40℃)/Z(20℃): 10 / 8 / 6 / 4 / - / - (at 120Hz)	
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 2,000 hours at 85℃. During this test, the rated voltage shall be reversed on the capacitor every 250 hours. Capacitance change ≦ ±20% of the initial value (where, ±25% for ≦ 16 VDC) Tanδ ≦ 200% of the initial specified value Leakage current ≦ The initial specified value	
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 85℃ without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. Capacitance change ≦ ±20% of the initial value (where, ±25% for ≦ 16 VDC) Tanδ ≦ 200% of the initial specified value Leakage current ≦ 200% of the initial specified value	
Others	Satisfied characteristics KS C IEC 60384-4	

DIMENSIONS OF MHA-BP Series

Unit(mm)



Marking : BLACK SLEEVE, WHITE INK

øD	5	6.3	8	10	12.5	16	18	22
ød	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0
øD'	øD+0.5 max.							
L'	L+1.5 max.			L+2.0 max.				

RATINGS OF MHA-BP Series

μF \ VDC	6.3		10		16		25		35		50	
10									5×11	50	5×11	52
22							5×11	66	6.3×11	71	6.3×11	89
33							6.3×11	90	6.3×11	104	8×11.5	124
47			5×11	86	5×11	89	6.3×11	107	8×11.5	142	10×12.5	174
100	5×11	126	6.3×11	144	6.3×11	148	8×11.5	179	10×12.5	244	10×16	284
220	6.3×11	213	8×11.5	244	10×12.5	295	10×16	345	10×20	432	12.5×20	500
330	8×11.5	298	10×12.5	352	10×16	399	10×20	458	12.5×20	543	16×20	666
470	10×12.5	420	10×16	463	10×20	515	12.5×20	606	12.5×25	704	16×25	877
1,000	10×20	732	12.5×20	791	12.5×25	882	16×20	961	16×31.5	1,223	18×35.5	1,409
2,200	12.5×25	1,291	16×20	1,275	16×31.5	1,557	18×31.5	1,699	18×40	1,838		
3,300	16×20	1,581	16×31.5	1,859	18×35.5	2,034	18×40	2,122				
4,700	16×31.5	2,219	18×31.5	2,290								
6,800	18×31.5	2,754	18×40	2,890								

μF \ VDC	63		100		160		200		250	
3.3			5×11	35					10×12.5	48
4.7	5×11	40	6.3×11	48			10×12.5	58	10×16	65
10	6.3×11	63	8×11.5	80	10×16	104	10×20	96	12.5×20	107
22	8×11.5	106	10×12.5	140	12.5×20	185	12.5×25	180	16×20	190
33	8×11.5	137	10×16	189	12.5×25	247	16×20	239	16×25	257
47	10×12.5	183	10×20	244	16×25	325	16×25	325	18×31.5	324
100	10×20	327	12.5×25	430	18×31.5	450	18×40	496		
220	12.5×25	585	16×31.5	759						
330	16×25	791	18×35.5	934						
470	16×31.5	992								
1,000	18×40	1,431								

Rated Ripple Current(mArms/ 85℃, 120Hz)
Case Size ØD×L(mm)