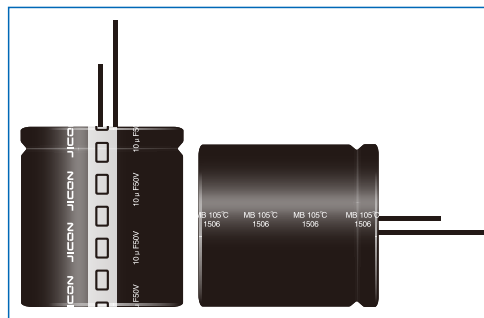


# MB 系列 SERIES

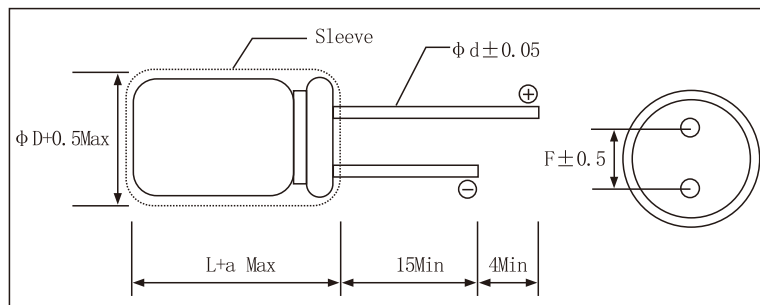
- Miniature series 7mm height
- Endurance: 105°C 2,000 hours
- Wide temperature range of -40°C+ 105°C
- RoHS Compliant



## ◆ SPECIFICATION

Items	Characteristics							
Operating Temperature Range(°C)	-40 ~ +105°C							
Voltage range (V)	6.3~63V							
Capacitance Range (µF)	1~220 µF							
Capacitance Tolerance	±20% (at 20°C, 120Hz)							
leakage current (µA)	I ≤ 0.01C <sub>R</sub> U <sub>R</sub> or 3 µA whichever is greater. (After 2 minutes at 20°C application of rated voltage)							
Dissipation Factor(Tan δ)	WV (V)	6.3	10	16	25	35	50	63
	Tan δ (max)	0.24	0.21	0.18	0.15	0.13	0.12	0.10
(at 20°C, 120Hz)								
Low Temperature Characteristics	Rated Voltage (V)	6.3	10	16	25	35	50	63
	Z <sub>-25°C</sub> /Z <sub>+20°C</sub>	4	3	2				
	Z <sub>-40°C</sub> /Z <sub>+20°C</sub>	8	6	4	3			
(at 120Hz)								
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated rippled current is applied for 2000 hours at 105°C .							
	Capacitance change	≤ ±25% of the initial value						
	D. F. (Tan δ)	≤ 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°C after exposing them for 1,000 hours at 105°C without voltage applied . Before the measurement , the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C							
	Capacitance change	≤ ±20% of the initial value						
	D. F. (Tan δ)	≤ 200% of the initial specified value						
Leakage current		≤ 200% The initial specified value						

## ◆ DIMENSIONS(mm)



## ◆ Frequency Coefficient

Frequency	50Hz	120Hz	300Hz	1KHz	10KHz ~
Coefficient	0.70	1.00	1.17	1.36	1.50

ΦD	4	5	6.3	8.0
F	1.5	2.0	2.5	3.5
Φd	0.45	0.45	0.45	0.5
a	1.0	1.0	1.0	1.0

**MB** 系列  
SERIES

◆ SPECIFICATION

Ur (Surge Voltage) Code	Rated Capacitance	Dissipation Factor 20°C120Hz	Rated Ripple Current 105°C120Hz	Size ΦD×L
(V)	(μF)	tan δ	(mA rms)	(mm)
6.3 (8) 0J	22	0.22	28	4×7
	33	0.22	32	4×7
		0.22	35	5×7
	47	0.22	47	5×7
	68	0.22	50	5×7
	100	0.22	75	6.3×7
	220	0.22	92	8×7
10 (13) 1A	22	0.19	32	4×7
	33	0.19	48	5×7
	47	0.19	51	5×7
	68	0.19	68	6.3×7
	100	0.19	80	6.3×7
		0.19	95	8×7
	220	0.19	130	8×7
16 (20) 2C	10	0.16	28	4×7
	22	0.16	35	4×7
		0.16	42	5×7
	33	0.16	50	5×7
	47	0.16	67	6.3×7
	68	0.16	70	6.3×7
		0.16	78	8×7
	100	0.16	110	8×7
25 (32) 1E	4.7	0.14	17	4×7
	6.8	0.14	19	4×7
	10	0.14	28	4×7
		0.14	33	5×7
	22	0.14	43	5×7
		0.14	45	6.3×7
	33	0.14	62	6.3×7
	47	0.14	75	8×7
	68	0.14	80	8×7
	100	0.14	115	8×7
35 (44) 1V	4.7	0.12	22	4×7
	6.8	0.12	24	4×7
		0.12	28	5×7
	10	0.12	35	5×7
	22	0.12	60	6.3×7
	33	0.12	50	6.3×7
		0.12	68	8×7
	47	0.12	80	8×7
68	0.12	85	8×7	

**MB** 系列  
SERIES

◆ SPECIFICATION

Ur (Surge Voltage) Code	Rated Capacitance	Dissipation Factor 20°C120Hz	Rated Ripple Current 105°C120Hz	Size φD×L
(V)	(μF)	tan δ	(mA rms)	(mm)
50 (63) 1H	0.1	0.10	1.5	4×7
	0.22	0.10	2.5	4×7
	0.33	0.10	3.5	4×7
	0.47	0.10	5	4×7
	0.68	0.10	7	4×7
	1	0.10	10	4×7
	2.2	0.10	20	4×7
	3.3	0.10	26	4×7
	4.7	0.10	27	4×7
			29	5×7
	10	0.10	38	6.3×7
	22	0.10	63	8×7
	33	0.10	78	8×7
63 (79) 1J	0.1	0.09	1.5	4×7
	0.22	0.09	2.5	4×7
	0.33	0.09	3.5	4×7
	0.47	0.09	6	4×7
	1	0.09	12	4×7
	2.2	0.09	20	4×7
	3.3	0.09	28	5×7
	4.7	0.09	33	6.3×7
	10	0.09	40	6.3×7
	22	0.09	65	8×7

Customer products are available on request