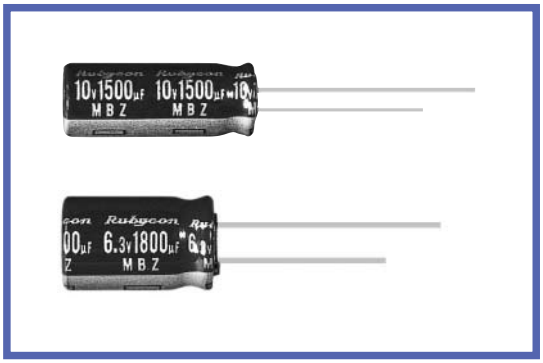
MBZ SERIES

105°C Ultra Low ESR for PC mother board.



◆FEATURES

- Ultra Low ESR for VRM.
- Enabled high ripple current by a reduction of ESR at high frequency range.
- RoHS compliance

◆SPECIFICATIONS

Items	Characteristics
Category Temperature Range	−40~+105°C
Rated Voltage Range	6.3~16V.DC
Capacitance Tolerance	±20%(20°C, 120Hz)
Leakage Current(MAX)	I=0.03CV (After 2 minutes application of rated voltage) I=Leakage Current(μA) C=Rated Capacitance(μF) V=Rated Voltage(V)
Dissipation Factor(MAX) (tanδ)	Rated Voltage (V): 6.3 / 10 / 16 — tanδ: 0.22 / 0.19 / 0.16 (20°C,120Hz) When rated capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.
Endurance	After applying rated voltage with rated ripple current for 2000hrs at 105°C, the capacitors shall meet the following requirements. Capacitance Change: Within ±25% of the initial value. Dissipation Factor: Not more than 200% of the specified value. Leakage Current: Not more than the specified value.
Low Temperature Stability Impedance Ratio(MAX)	Rated Voltage(V): 6.3 / 10 / 16 Z(−25°C)/Z(20°C): 2 / 2 / 2 (120Hz)

◆MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

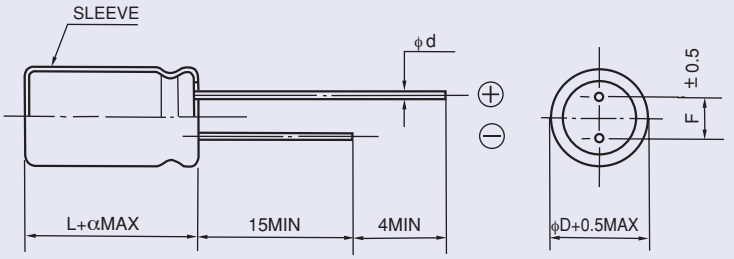
Frequency(Hz)	120	1k	10k	100k≦
Coefficient	0.50	0.80	0.90	1.00

◆PART NUMBER

□□□ Rated Voltage | MBZ Series | □□□□□ Rated Capacitance | □ Capacitance Tolerance | □□□ Option | □□ Lead Forming | D×L Case Size

◆DIMENSIONS

(mm)



φD	8	10
φd	0.6	
F	3.5	5.0
α	L≦16 : α=1.5 L≧20 : α=2.0	

◆STANDARD SIZE

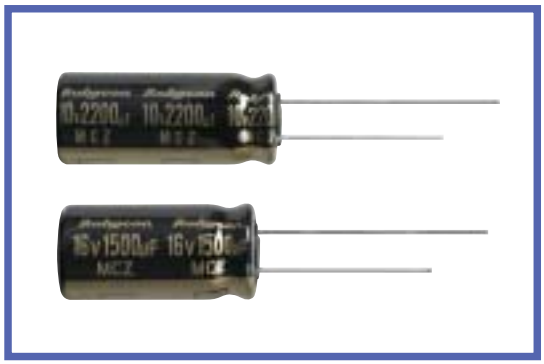
Rated voltage 6.3V(0J)			
Rated capacitance (μF)	Size φD×L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR (mΩMAX/20°C, 100kHz)
820	8×11.5	1140	36
1200	8×16	1490	28
1800	8×20	1870	19
1500	10×12.5	1540	26
1800	10×16	2000	19
2200	10×20	2550	13
3300	10×23	2800	12

Rated voltage 10V(1A)			
Rated capacitance (μF)	Size φD×L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR (mΩMAX/20°C, 100kHz)
680	8×11.5	1140	36
1000	8×16	1490	28
1500	8×20	1870	19
1000	10×12.5	1540	26
1500	10×16	2000	19
1800	10×20	2550	13
2200	10×23	2800	12

Rated voltage 16V(1C)			
Rated capacitance (μF)	Size φD×L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR (mΩMAX/20°C, 100kHz)
470	8×11.5	1140	36
680	8×16	1490	28
1000	8×20	1870	19
680	10×12.5	1540	26
1000	10×16	2000	19
1500	10×20	2550	13
1800	10×23	2800	12

MCZ SERIES

105°C Ultra Low ESR for PC mother board.



◆FEATURES

- Ultra Low ESR for VRM.
- Enabled high ripple current by a reduction of ESR at high frequency range.
- RoHS compliance.

◆SPECIFICATIONS

Items	Characteristics
Category Temperature Range	−40~+105°C
Rated Voltage Range	6.3~16V.DC
Capacitance Tolerance	± 20% (20°C, 120Hz)
Leakage Current(MAX)	I=0.03CV (After 2 minutes application of rated voltage) I=Leakage Current(μA) C=Rated Capacitance(μF) V=Rated Voltage(V)
DissipationFactor(MAX) (tanδ)	Rated Voltage(V) 6.3 / 10 / 16 tanδ 0.22 / 0.19 / 0.16 (20°C, 120Hz) When rated capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.
Endurance	After applying rated voltage with rated ripple current for 2000hrs at 105°C, the capacitors shall meet the following requirements. Capacitance Change: Within ±25% of the initial value. Dissipation Factor: Not more than 200% of the specified value. Leakage Current: Not more than the specified value.
Low Temperature Stability Impedance Ratio(MAX)	Rated Voltage(V) 6.3 / 10 / 16 Z(−25°C)/Z(20°C) 2 / 2 / 2 (120Hz)

◆MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

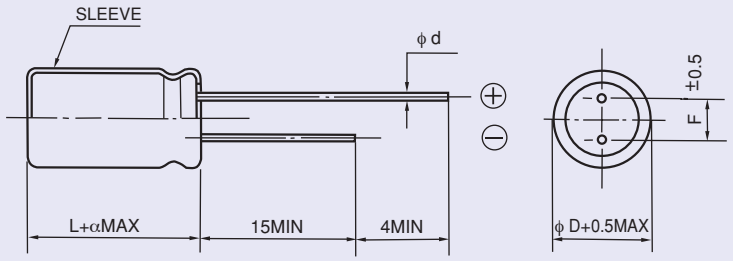
Frequency(Hz)	120	1k	10k	100k≦
Coefficient	0.50	0.80	0.90	1.00

◆PART NUMBER

□□□ Rated Voltage | MCZ Series | □□□□□ Rated Capacitance | □ Capacitance Tolerance | □□□ Option | □□ Lead Forming | D×L Case Size

◆DIMENSIONS

(mm)



φD	8	10
φd	0.6	
F	3.5	5.0
α	L≦16 :α=1.5 L≦20 :α=2.0	

◆STANDARD SIZE

Rated voltage 6.3V(0J)			
Rated capacitance (μF)	Size φD×L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR (mΩMAX/20°C, 100kHz)
820	8×11.5	1340	21
1200	8×16	1850	18
1800	8×20	2350	12
1500	10×12.5	1960	16
1800	10×16	2460	12.5
2200	10×20	2770	11
3300	10×25	3230	9

Rated voltage 10V(1A)			
Rated capacitance (μF)	Size φD×L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR (mΩMAX/20°C, 100kHz)
680	8×11.5	1340	21
1000	8×16	1850	18
1500	8×20	2350	12
1000	10×12.5	1960	16
1500	10×16	2460	12.5
1800	10×20	2770	11
2200	10×25	3230	9

Rated voltage 16V(1C)			
Rated capacitance (μF)	Size φD×L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR (mΩMAX/20°C, 100kHz)
470	8×11.5	1340	21
680	8×16	1850	18
1000	8×20	2350	12
680	10×12.5	1960	16
1000	10×16	2460	12.5
1500	10×20	2770	11
1800	10×25	3230	9