

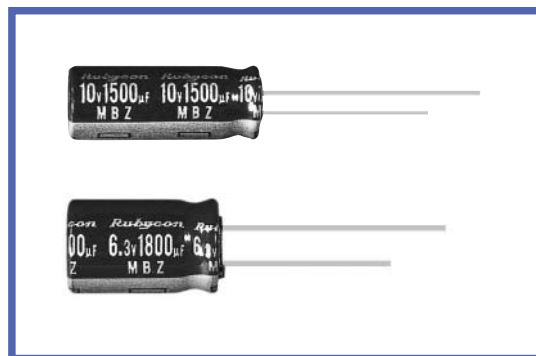


**MBZ SERIES**

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)	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td></td> </tr> </table> <p>When rated capacitance is over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF.</p>	Rated Voltage (V)	6.3	10	16	(20°C, 120Hz)	tanδ	0.22	0.19	0.16	
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tanδ	0.22	0.19	0.16								
Endurance	<p>After applying rated voltage with rated ripple current for 2000hrs at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±25% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table>	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.				
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Low Temperature Stability Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated Voltage(V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>(120Hz)</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td></td> </tr> </table>	Rated Voltage(V)	6.3	10	16	(120Hz)	Z(-25°C)/Z(20°C)	2	2	2	
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◆ **MULTIPLIER FOR RIPPLE CURRENT**

Frequency coefficient

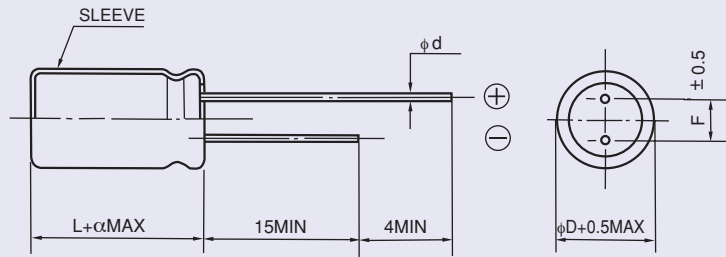
Frequency(Hz)	120	1k	10k	100k≤
Coefficient	0.50	0.80	0.90	1.00

◆ **PART NUMBER**

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

◆ DIMENSIONS

(mm)



$\phi D$	8	10
$\phi d$	0.6	
F	3.5	5.0
$\alpha$	$L \leq 16 : \alpha = 1.5$ $L \geq 20 : \alpha = 2.0$	

◆ STANDARD SIZE

Rated voltage 6.3V(0J)			
Rated capacitance ( $\mu F$ )	Size $\phi D \times L$ (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR ( $m\Omega$ MAX/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 ( $\mu F$ )	Size $\phi D \times L$ (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR ( $m\Omega$ MAX/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

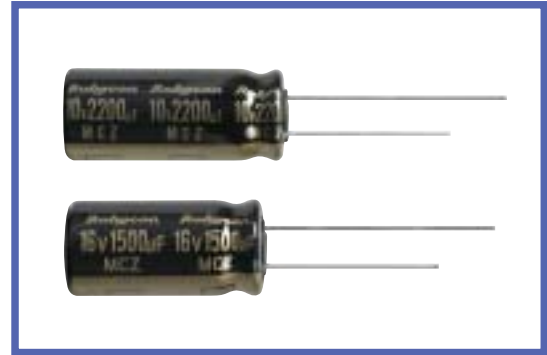
Rated voltage 16V(1C)			
Rated capacitance ( $\mu F$ )	Size $\phi D \times L$ (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR ( $m\Omega$ MAX/20°C, 100kHz)
470	8×11.5	1140	36
680	8×16	1490	28
1000	8×20	1870	19
680	10×12.5	1540	26
1000	10×16	2000	19
1500	10×20	2550	13
1800	10×23	2800	12

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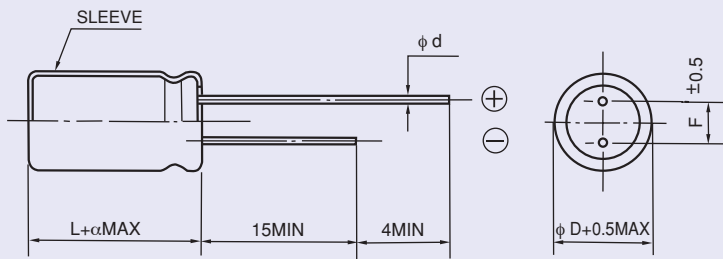
Frequency(Hz)	120	1k	10k	100k ≤
Coefficient	0.50	0.80	0.90	1.00

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□□□ / **MCZ** / □□□□□ / □ / □□□ / □□ / **DxL**  
 Rated Voltage / Series / Rated Capacitance / Capacitance Tolerance / Option / Lead Forming / Case Size

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(mm)



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◆ STANDARD SIZE

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Rated capacitance (μF)	Size φ D×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 φ D×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 φ D×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
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