



MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

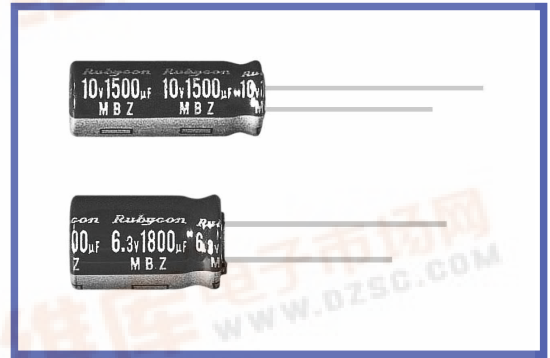
MBZ

**MBZ SERIES**

105°C Ultra Low ESR.

**◆ FEATURES**

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



**◆ 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 3 minutes application of rated voltage) I=Leakage Current(µA)    C=Rated Capacitance(µF)    V=Rated Voltage(V)															
Dissipation Factor(MAX)	<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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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> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td></td> </tr> </table>	Rated Voltage (V)	6.3	10	16	(120Hz)	Z(-25°C)/Z(20°C)	2	2	2		Z(-40°C)/Z(20°C)	3	3	3	
Rated Voltage (V)	6.3	10	16	(120Hz)												
Z(-25°C)/Z(20°C)	2	2	2													
Z(-40°C)/Z(20°C)	3	3	3													

**◆ MULTIPLIER FOR RIPPLE CURRENT**

Frequency coefficient

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

**◆ PART NUMBER**

MBZ

Series

Rated Capacitance

Capacitance Tolerance

Option

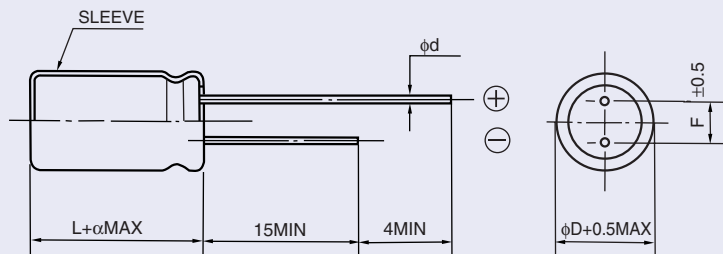
Lead Forming

DxL 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	8X11.5	1140	36
1200	8X16	1490	28
1800	8X20	1870	19
1500	10X12.5	1540	26
1800	10X16	2000	19
2200	10X20	2550	13
3300	10X23	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	8X11.5	1140	36
1000	8X16	1490	28
1500	8X20	1870	19
1000	10X12.5	1540	26
1500	10X16	2000	19
1800	10X20	2550	13
2200	10X23	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	8X11.5	1140	36
680	8X16	1490	28
1000	8X20	1870	19
680	10X12.5	1540	26
1000	10X16	2000	19
1500	10X20	2550	13
1800	10X23	2800	12