

Rubycon MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS **MCZ**

MCZ 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.
- 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) (tan δ)	<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>tan δ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td></td> </tr> </table> <p>When rated capacitance is over 1000 μF, tan δ shall be added 0.02 to the listed value with increase of every 1000 μF.</p>	Rated Voltage (V)	6.3	10	16	(20°C, 120Hz)	tan δ	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

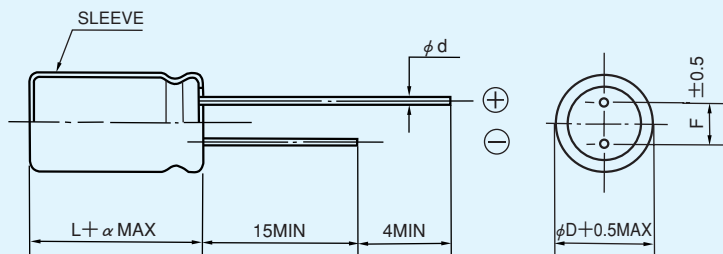
◆ **PART NUMBER**

MCZ Series Rated Capacitance Capacitance Tolerance Option Lead Forming DXL Case Size



◆ DIMENSIONS

(mm)



ϕD	8	10
ϕd	0.6	
F	3.5	5.0
α	$L \leq 16 : \alpha = 1.5$ $L \geq 20 : \alpha = 2.0$	

◆ STANDARD SIZE

Rated voltage 6.3V(0J)			
Rated capacitance (μF)	Size $\phi D \times L$ (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR (m Ω MAX/20°C, 100kHz)
820	8X11.5	1340	21
1200	8X16	1850	18
1800	8X20	2350	12
1500	10X12.5	1960	16
1800	10X16	2460	12.5
2200	10X20	2770	11
3300	10X25	3230	9

Rated voltage 10V(1A)			
Rated capacitance (μF)	Size $\phi D \times L$ (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR (m Ω MAX/20°C, 100kHz)
680	8X11.5	1340	21
1000	8X16	1850	18
1500	8X20	2350	12
1000	10X12.5	1960	16
1500	10X16	2460	12.5
1800	10X20	2770	11
2200	10X25	3230	9

Rated voltage 16V(1C)			
Rated capacitance (μF)	Size $\phi D \times L$ (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	ESR (m Ω MAX/20°C, 100kHz)
470	8X11.5	1340	21
680	8X16	1850	18
1000	8X20	2350	12
680	10X12.5	1960	16
1000	10X16	2460	12.5
1500	10X20	2770	11
1800	10X25	3230	9