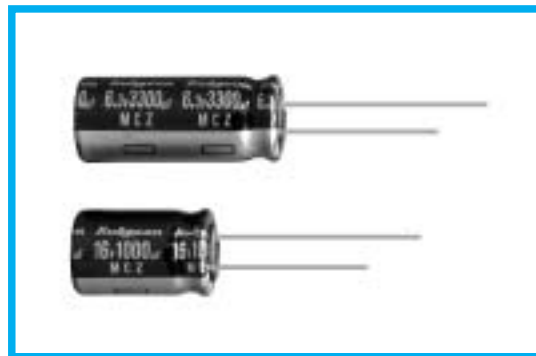


MCZ SERIES
105°C Ultra Low ESR.
◆FEATURES

- 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> </tr> <tr> <td>tan δ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> </tr> </table> (20°C, 120Hz) When rated capacitance is over 1000 μF , tan δ shall be added 0.02 to the listed value with increase of every 1000 μF . | Rated Voltage (V) | 6.3 | 10 | 16 | tan δ | 0.22 | 0.19 | 0.16 | | | | |
| Rated Voltage (V) | 6.3 | 10 | 16 | | | | | | | | | | |
| tan δ | 0.22 | 0.19 | 0.16 | | | | | | | | | | |
| Endurance | After applying rated voltage with rated ripple current for 2000hrs at 105°C, the capacitors shall meet the following requirements. <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. | | | | | | |
| 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) | <table border="1"> <tr> <td>Rated Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table> (120Hz) | Rated Voltage (V) | 6.3 | 10 | 16 | 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 | | | | | | | | | | |
| Z(-25°C)/Z(20°C) | 2 | 2 | 2 | | | | | | | | | | |
| Z(-40°C)/Z(20°C) | 3 | 3 | 3 | | | | | | | | | | |

◆MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

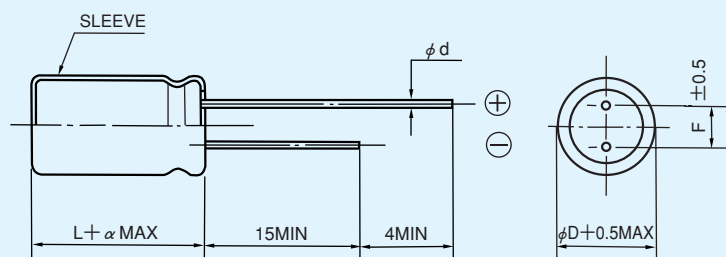
| Frequency (Hz) | 120 | 1k | 10k | 100k \leq |
|----------------|------|------|------|-------------|
| Coefficient | 0.50 | 0.80 | 0.90 | 1.00 |

◆PART NUMBER

| | | | | | | | |
|----------------------|----------------------|----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Rated Voltage | MCZ Series | Rated Capacitance | Capacitance Tolerance | Option | Lead Forming | 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 |