

LARGE ALUMINUM ELECTROLYTIC CAPACITORS

I14097 (WJ)

Screw Terminal Type, Long Life Series

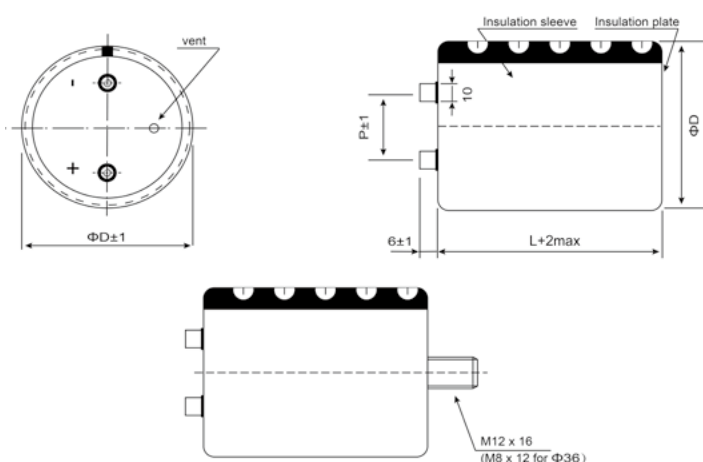
- Long Life
- High Reliability
- High Currents for High Professional
- Power Application and Inverters
- Complied to the RoHS directive

| Items | Performance characteristics | | | |
|---|--|------|------|------|
| Operating temperature range | -40 ~ +85°C | | | |
| Leakage current max. | I=0.01CV or 5mA whichever is smaller (after 5 minutes) | | | |
| Capacitance tolerance | ±20% at 120Hz, 20°C | | | |
| Dissipation factor max. (at 120Hz, 20°C) | WV | 350 | 400 | 450 |
| | Tanδ | 0.15 | 0.15 | 0.15 |
| Low temperature characteristics (capacitance ratio at 120Hz) | WV | 350 | 400 | 450 |
| | C-25°C /C+20°C | ≥0.7 | ≥0.7 | ≥0.7 |

| | Useful Life | | Load Life | Endurance Test | Shelf Life |
|---------------------|---------------------------------------|--------------------|---------------------------------------|---------------------------------------|---|
| Life Time | >10000h | >100000h | 5000h | 5000h | 1000h |
| Leakage Current | Not more than specified value | | Not more than specified value | Not more than specified value | Not more than specified value |
| Capacitance Change | Within ±30% of initial value | | Within ±20% of initial value | Within ±10% of initial value | Within ±20% of initial value |
| Dissipation Factor | Not more than 300% of specified value | | Not more than 200% of specified value | Not more than 130% of specified value | Not more than 200% of specified value |
| Condition: | | | | | |
| Applied Voltage | U _R | U _R | U _R | U _R | U _R =0 |
| Applied Current | I _R | 1.2×I _R | I _R | I _R =0 | I _R =0 |
| Applied Temperature | 85°C | 40°C | 85°C | 85°C | 85°C |
| | | | | | After test U _R to be applied for 60min>24h before measurement |

DRAWING

Unit: mm



| | | | | | |
|-------|------|------|------|------|------|
| ΦD/mm | 51 | 64 | 77 | 90 | 101 |
| P/mm | 22.0 | 28.2 | 31.4 | 31.4 | 41.5 |

Ripple Current Coefficient

| | | | | | |
|---------------|-------|------|------|------|------|
| Frequency(Hz) | 50/60 | 120 | 300 | 1k | >10k |
| Coefficient | 0.80 | 1.00 | 1.10 | 1.30 | 1.40 |

| | | | |
|------------------|------|------|------|
| Ambient Temp(°C) | 40 | 60 | 85 |
| Coefficient | 1.89 | 1.67 | 1.00 |

The useful life can be prolonged by operating capacitor at loads below the rated values (e.g.lower operating voltage, Rms ripple current or ambient temperature) and by appropriate cooling measures.

It is advisable not to apply a ripple current exceeding the rated ripple current without any cooling measures as this will shorten capacitor's life.

*Hex head screw M5×10 and M6×12 are standard screws.

Longer screws are available on request.

*Max tightening torque for screw terminal M5:3Nm,M6:4Nm.

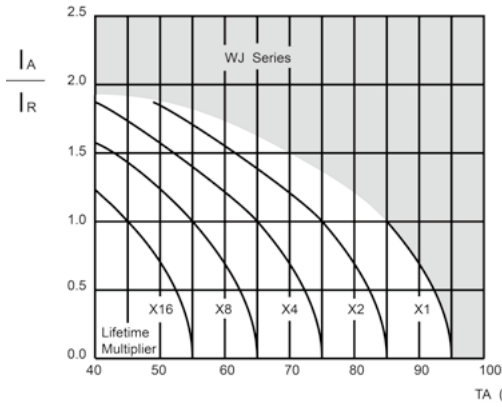
Max torque for bolt mounting M12:12.5Nm.

*Screws, Bracket and cap nut will be delivered separately if necessary.

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Lifetime Diagram

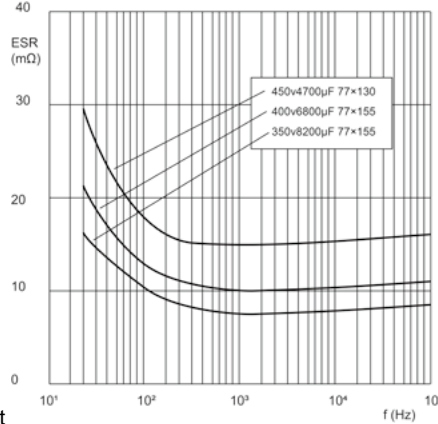


I_A =actual ripple current at 120Hz, I_R =rated ripple current at 120Hz, 85°C

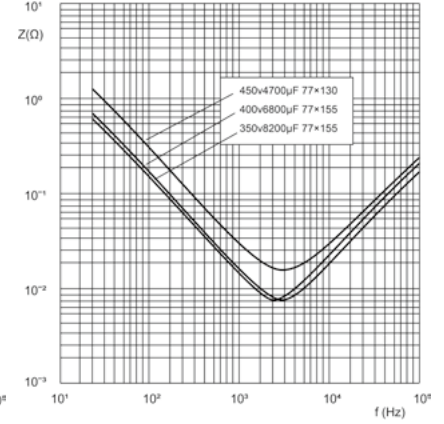
Multiplier of Useful Life as a function of ambient temperature and ripple current load.

Typical Curves

ESR ~ Frequency at 20°C



Impedance Z ~ Frequency at 20°C



● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

| WV(SV) µF | 350 (400) | | | | 400 (450) | | | | 450 (500) | | | |
|--------------|--------------|---------|---------|----------------|--------------|---------|---------|----------------|--------------|---------|---------|----------------|
| | Case size | Typ ESR | Max ESR | Ripple current | Case size | Typ ESR | Max ESR | Ripple current | Case size | Typ ESR | Max ESR | Ripple current |
| 1000 | | | | | 51×83 | 215 | 82 | 5.0 | 51×83 | 215 | 93 | 5.0 |
| 1200 | 51×83 | 215 | 67 | 5.5 | 51×83 | 179 | 70 | 5.5 | 51×96 | 179 | 69 | 6.0 |
| 1500 | 51×83 | 172 | 55 | 6.1 | 51×96 | 143 | 50 | 6.7 | 51×115 | 143 | 56 | 7.2 |
| 1800 | 51×96 | 143 | 43 | 7.4 | 51×96 | 119 | 40 | 7.4 | 51×130 | 119 | 45 | 8.3 |
| 2200 | 51×96 | 117 | 30 | 8.2 | 51×130 | 98 | 28 | 9.2 | 64×96 | 98 | 35 | 9.0 |
| 2700 | 51×130 | 96 | 27 | 10.2 | 64×96 | 80 | 23 | 9.9 | 64×115 | 80 | 30 | 10.7 |
| 3300 | 51×130 | 78 | 23 | 11.3 | 64×115 | 65 | 21 | 11.8 | 64×130 | 65 | 24 | 12.4 |
| 3900 | 64×115 | 66 | 19 | 12.8 | 64×130 | 55 | 19 | 13.5 | 77×115 | 55 | 20 | 13.6 |
| 4700 | 64×130 | 55 | 16 | 14.8 | 77×115 | 46 | 15 | 14.9 | 77×130 | 46 | 16 | 15.6 |
| 5600 | 77×115 | 46 | 14 | 16.3 | 77×130 | 39 | 14 | 17.0 | 77×155 | 38 | 13 | 18.3 |
| 6800 | 77×130 | 38 | 13 | 18.8 | 77×155 | 32 | 13 | 20.2 | 90×157 | 32 | 11 | 21.4 |
| 8200 | 77×155 | 31 | 11 | 22.1 | 90×157 | 26 | 12 | 23.5 | 90×157 | 26 | 10 | 23.5 |
| 10000 | 90×157 | 26 | 10 | 25.9 | 90×157 | 22 | 10 | 25.9 | 90×196 | 22 | 9 | 28.3 |
| 12000 | 90×157 | 22 | 8 | 28.4 | 90×196 | 18 | 8 | 31.0 | 90×236 | 18 | 8 | 33.6 |
| 15000 | 90×196 | 17 | 6 | 34.6 | 90×236 | 14 | 6 | 37.5 | | | | |
| 18000 | 90×236 | 14 | 4 | 41.4 | | | | | | | | |

↑ Ripple current (A rms) at 85°C, 120Hz
 ↑ Typ ESR (mΩ) at 20°C, 120Hz
 ↑ Max ESR (mΩ) at 20°C, 120Hz
 ↑ Case size Φ D×L (mm)