

jb[®] Aluminum Electrolytic Capacitor – JML



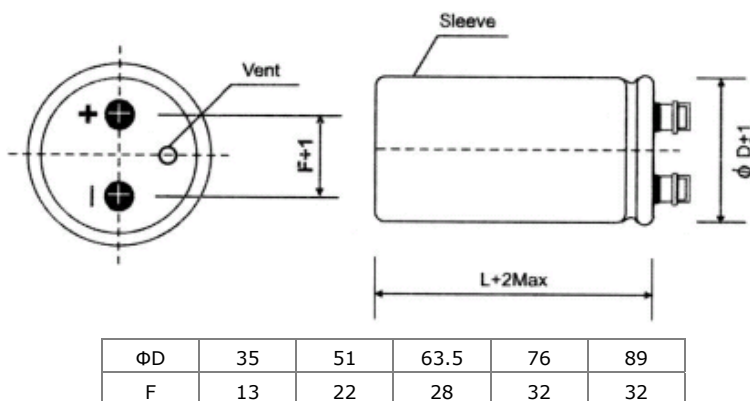
■ FEATURES

- Load life of 2000 hours at 105°C
- Size may be selected
- High ripple current
- Used for computers, communication powers Hi-ripple circuit of electric vehicle, electric train, general-purpose inverter

■ SPECIFICATIONS

| Items | Performance Characteristics | |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Rated Voltage Range (V) | 10V~100V | 160V~400V |
| Operating Temperature Range (°C) | -40°C~+105°C | -25°C~+105°C |
| Capacitance Tolerance (25°C, 120Hz) | ±20% | |
| Leakage Current (µA) | 0.02CV or 5mA, whichever is smaller. (at 25°C, after 5 minutes) Where, C: Nominal capacitance (µF) V: Rated voltage (V) | |
| Dissipation Factor (25°C, 120Hz) | Tanδ shall not exceed the values shown in the table of STANDARD RATINGS | |
| Temperature Stability (120Hz) | Capacitance change 10-100VDC:Capacitance at -40°C shall not be less than 60% of the 25°C value 160-400VDC:Capacitance at -25°C shall not be less than 70% of the 25°C value | |
| Load Life (+105°C) | Time | 2000hours |
| | Leakage Current | Less than the specified |
| | Capacitance Change | Within±20% of the initial value |
| | Dissipation Factor | Not more than 200% of the specified value. |
| Shelf Life (+105°C) | Time | 500hours |
| | Leakage Current | Less than the specified value. |
| | Capacitance Change | Within ±20% of the initial value |
| | Dissipation Factor | Not more than 200% of the specified value. |
| After Test: U _R to be applied for 60 minutes, 24 to 48 hours before measurement | | |

■ DIMENSIONS (mm)



■ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

| | | | | | |
|---------------|-------|-----|------|------|------|
| Frequency(Hz) | 50,60 | 120 | 300 | 1K | ≥10K |
| Factor | 0.8 | 1.0 | 1.10 | 1.20 | 1.50 |

Temperature coefficient

| | | | |
|-----------------|-----|-----|------|
| Temperature(°C) | +70 | +85 | +105 |
| Factor | 2.1 | 1.7 | 1.0 |

■ CASE SIZE (mm)

| | | | | | | | | |
|-----|------|------|-----|-----|-----|-----|-----|-----|
| ΦD: | A5 | A6 | A8 | A10 | A12 | C8 | C10 | C12 |
| L: | 35 | 35 | 35 | 35 | 35 | 50 | 50 | 50 |
| | 50 | 60 | 80 | 100 | 120 | 80 | 100 | 120 |
| ΦD: | D10 | D12 | E10 | E12 | E13 | E14 | F14 | |
| L: | 63.5 | 63.5 | 76 | 76 | 76 | 76 | 89 | |
| | 100 | 120 | 100 | 120 | 130 | 140 | 140 | |

Please visit our website to get more update data, those data & specification are subject to change without notice.



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■ STANDARD RATINGS

| WV(V) / Cap(uF) | 10 | | | 16 | | | 25 | | | 35 | | | 50 | | | 63 | | | 80 | | |
|-----------------------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|-------|
| 2200 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 2.4 | 0.15 | |
| 2700 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 2.3 | 0.20 | A5 | 2.7 | 0.15 |
| 3300 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 2.5 | 0.20 | A5 | 3.0 | 0.15 |
| 3900 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 2.8 | 0.20 | A5 | 2.8 | 0.20 | A6 | 3.4 | 0.15 |
| 4700 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 3.1 | 0.20 | A5 | 3.1 | 0.20 | A6 | 3.7 | 0.15 |
| 5600 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 3.3 | 0.20 | A6 | 3.5 | 0.20 | A8 | 4.5 | 0.15 |
| 6800 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 3.3 | 0.25 | A6 | 3.9 | 0.20 | A8 | 4.9 | 0.15 |
| 8200 | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 3.3 | 0.30 | A6 | 3.8 | 0.25 | A8 | 4.7 | 0.20 | A10 | 5.1 | 0..20 |
| 10000 | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 3.6 | 0.30 | A8 | 4.6 | 0.25 | A8 | 4.7 | 0.25 | A12 | 6.1 | 0..20 |
| 12000 | -- | -- | -- | -- | -- | -- | A5 | 3.7 | 0.35 | A6 | 4.2 | 0.30 | A8 | 5.1 | 0.25 | A10 | 5.5 | 0.25 | C8 | 6.7 | 0..20 |
| 15000 | -- | -- | -- | -- | -- | -- | A5 | 4.1 | 0.35 | A6 | 4.7 | 0.30 | A8 | 5.7 | 0.25 | A12 | 6.6 | 0.25 | C10 | 8.3 | 0..20 |
| 18000 | -- | -- | -- | A5 | 4.2 | 0.40 | A6 | 4.8 | 0.35 | A8 | 5.7 | 0.30 | A10 | 6.7 | 0.25 | C8 | 7.4 | 0.25 | C12 | 9.9 | 0..20 |
| 22000 | -- | -- | -- | A5 | 4.7 | 0.40 | A6 | 5.3 | 0.35 | A8 | 6.3 | 0.30 | A12 | 8.1 | 0.25 | C10 | 9.0 | 0.25 | C12 | 11.0 | 0..20 |
| 27000 | A5 | 4.9 | 0.45 | A6 | 5.5 | 0.40 | A8 | 6.4 | 0.35 | A10 | 7.5 | 0.30 | C8 | 9.1 | 0.25 | C12 | 10.9 | 0.25 | D10 | 11.4 | 0.25 |
| 33000 | A5 | 5.1 | 0.50 | A6 | 5.7 | 0.45 | A8 | 6.7 | 0.40 | A12 | 9.0 | 0.30 | C10 | 11.1 | 0.25 | C12 | 12.0 | 0.25 | E10 | 13.9 | 0.25 |
| 39000 | A6 | 5.9 | 0.50 | A8 | 6.8 | 0.45 | A10 | 7.8 | 0.40 | C8 | 9.2 | 0.35 | C12 | 13.1 | 0.25 | D10 | 12.5 | 0.30 | E10 | 13.9 | 0.30 |
| 47000 | A8 | 7.1 | 0.50 | A8 | 7.1 | 0.50 | A12 | 9.3 | 0.40 | C10 | 11.2 | 0.35 | C12 | 13.9 | 0.30 | D12 | 14.9 | 0.30 | E12 | 16.5 | 0.30 |
| 56000 | A8 | 7.1 | 0.60 | A10 | 8.4 | 0.50 | C8 | 9.7 | 0.45 | C10 | 11.4 | 0.40 | D10 | 13.9 | 0.35 | D12 | 16.3 | 0.30 | E12 | 18.1 | 0.30 |
| 68000 | A10 | 8.5 | 0.60 | A10 | 8.8 | 0.55 | C10 | 11.2 | 0.45 | C12 | 13.6 | 0.40 | D12 | 16.6 | 0.35 | E12 | 18.4 | 0.35 | E14 | 19.7 | 0.35 |
| 82000 | A10 | 8.9 | 0.65 | C8 | 10.7 | 0.55 | C10 | 11.2 | 0.50 | D10 | 14.8 | 0.45 | E12 | 18.9 | 0.40 | E14 | 10.0 | 0.40 | F14 | 22.1 | 0.40 |
| 100000 | A12 | 10.7 | 0.65 | C8 | 10.8 | 0.65 | C12 | 14.8 | 0.50 | D12 | 17.6 | 0.45 | E12 | 19.5 | 0.45 | E14 | 20.0 | 0.50 | | | |
| 120000 | C8 | 11.0 | 0.75 | C10 | 13.1 | 0.65 | D10 | 14.9 | 0.65 | D12 | 17.6 | 0.55 | E12 | 19.5 | 0.55 | F14 | 21.8 | 0.60 | | | |
| 150000 | C10 | 13.2 | 0.80 | C12 | 15.3 | 0.70 | D12 | 17.9 | 0.65 | E12 | 19.8 | 0.65 | F14 | 23.9 | 0.60 | | | | | | |
| 180000 | C12 | 15.7 | 0.80 | C12 | 15.7 | 0.80 | D12 | 17.9 | 0.80 | E12 | 19.8 | 0.80 | F14 | 23.9 | 0.75 | | | | | | |
| 220000 | C12 | 16.8 | 0.85 | D12 | 19.2 | 0.85 | E12 | 21.3 | 0.85 | E14 | 23.4 | 0.80 | | | | | | | | | |
| 270000 | D12 | 19.6 | 1.00 | D12 | 19.6 | 1.00 | E12 | 21.7 | 1.00 | F14 | 25.5 | 1.00 | | | | | | | | | |
| 330000 | D12 | 19.7 | 1.20 | E12 | 21.1 | 1.30 | E14 | 23.4 | 1.20 | -- | -- | -- | | | | | | | | | |
| 390000 | E12 | 21.3 | 1.50 | E12 | 21.3 | 1.50 | F14 | 24.9 | 1.50 | -- | -- | -- | | | | | | | | | |
| 470000 | E12 | 21.4 | 1.80 | E14 | 24.2 | 1.60 | -- | -- | -- | -- | -- | -- | | | | | | | | | |
| 560000 | E14 | 23.6 | 2.00 | F14 | 28.1 | 2.00 | -- | -- | -- | -- | -- | -- | | | | | | | | | |
| 680000 | F14 | 26.0 | 2.40 | F14 | 28.5 | 2.40 | -- | -- | -- | -- | -- | -- | | | | | | | | | |

Tan δ 25°C 120Hz

Ripple current (Arms) at 105°C 120Hz

Case code

Please visit our website to get more update data, those data & specification are subject to change without notice.



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■ STANDARD RATINGS

| WV(V) / Cap(uF) | 100 | | | 160 | | | 200 | | | 250 | | | 315 | | | 350 | | | 400 | | |
|-----------------------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|
| 180 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 0.8 | 0.10 | A5 | 0.8 | 0.10 | A5 | 0.8 | 0.10 |
| 220 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 0.9 | 0.10 | A5 | 0.9 | 0.10 | A5 | 0.9 | 0.10 |
| 270 | -- | -- | -- | -- | -- | -- | -- | -- | -- | A5 | 0.8 | 0.15 | A5 | 1.0 | 0.10 | A5 | 1.0 | 0.10 | A5 | 1.0 | 0.10 |
| 330 | -- | -- | -- | -- | -- | -- | A5 | 0.9 | 0.15 | A5 | 0.9 | 0.15 | A5 | 1.1 | 0.10 | A5 | 1.1 | 0.10 | A6 | 1.2 | 0.10 |
| 390 | -- | -- | -- | -- | -- | -- | A5 | 1.0 | 0.15 | A5 | 1.0 | 0.15 | A5 | 1.2 | 0.10 | A6 | 1.3 | 0.10 | A6 | 1.3 | 0.10 |
| 470 | -- | -- | -- | -- | -- | -- | A5 | 1.1 | 0.15 | A5 | 1.1 | 0.15 | A6 | 1.4 | 0.10 | A6 | 1.4 | 0.10 | A8 | 1.4 | 0.10 |
| 560 | -- | -- | -- | A5 | 1.2 | 0.15 | A5 | 1.2 | 0.15 | A5 | 1.2 | 0.15 | A6 | 1.5 | 0.10 | A8 | 1.6 | 0.10 | A8 | 1.4 | 0.15 |
| 680 | -- | -- | -- | A5 | 1.3 | 0.15 | A5 | 1.3 | 0.15 | A6 | 1.4 | 0.15 | A8 | 1.7 | 0.10 | A8 | 1.6 | 0.15 | A10 | 1.7 | 0.15 |
| 820 | -- | -- | -- | A5 | 1.4 | 0.15 | A5 | 1.4 | 0.15 | A8 | 1.6 | 0.15 | A8 | 1.7 | 0.15 | A10 | 1.8 | 0.15 | A12 | 2.0 | 0.15 |
| 1000 | -- | -- | -- | A5 | 1.6 | 0.15 | A6 | 1.7 | 0.15 | A8 | 1.6 | 0.20 | A10 | 2.0 | 0.15 | A12 | 2.2 | 0.15 | C8 | 2.2 | 0.15 |
| 1200 | -- | -- | -- | A6 | 1.9 | 0.15 | A6 | 1.9 | 0.15 | A8 | 1.8 | 0.20 | A12 | 2.4 | 0.15 | C8 | 2.4 | 0.15 | C10 | 2.7 | 0.15 |
| 1500 | -- | -- | -- | A6 | 2.1 | 0.15 | A8 | 2.3 | 0.15 | A10 | 2.1 | 0.20 | C8 | 2.7 | 0.15 | C10 | 3.0 | 0.15 | C12 | 3.3 | 0.15 |
| 1800 | A5 | 2.7 | 0.10 | A8 | 2.5 | 0.15 | A8 | 2.5 | 0.15 | A12 | 2.5 | 0.20 | C10 | 3.3 | 0.15 | C12 | 3.6 | 0.15 | -- | -- | -- |
| 2200 | A5 | 3.0 | 0.10 | A8 | 2.8 | 0.15 | A10 | 3.0 | 0.15 | C8 | 2.9 | 0.20 | C12 | 4.0 | 0.15 | C12 | 4.0 | 0.15 | D10 | 4.2 | 0.15 |
| 2700 | A6 | 3.5 | 0.10 | A10 | 3.3 | 0.15 | A12 | 3.6 | 0.15 | C10 | 3.5 | 0.20 | C12 | 4.4 | 0.15 | D10 | 4.6 | 0.15 | -- | -- | -- |
| 3300 | A8 | 4.2 | 0.10 | A12 | 3.8 | 0.15 | C8 | 4.1 | 0.15 | C12 | 4.2 | 0.20 | D10 | 5.1 | 0.15 | -- | -- | -- | D12 | 5.5 | 0.15 |
| 3900 | A8 | 4.2 | 0.12 | C8 | 3.8 | 0.20 | C10 | 4.9 | 0.15 | C12 | 4.6 | 0.20 | D12 | 6.0 | 0.15 | E12 | 6.7 | 0.15 | -- | -- | -- |
| 4700 | A10 | 5.0 | 0.12 | C10 | 4.6 | 0.20 | D10 | 5.3 | 0.20 | D12 | 5.7 | 0.20 | E10 | 6.8 | 0.15 | -- | -- | -- | E13 | 7.6 | 0.15 |
| 5600 | A10 | 5.4 | 0.12 | C10 | 5.1 | 0.20 | D10 | 5.8 | 0.20 | D12 | 6.3 | 0.20 | E12 | 8.0 | 0.15 | E13 | 8.3 | 0.15 | E14 | 9.4 | 0.15 |
| 6800 | A12 | 5.8 | 0.15 | C12 | 6.1 | 0.20 | D12 | 6.9 | 0.20 | E12 | 7.7 | 0.20 | F13 | 9.2 | 0.15 | E14 | 9.5 | 0.15 | F14 | 10.4 | 0.15 |
| 8200 | C8 | 6.4 | 0.15 | D10 | 7.0 | 0.20 | D12 | 7.6 | 0.20 | E12 | 8.4 | 0.20 | F14 | 11.4 | 0.15 | F14 | 11.4 | 0.15 | | | |
| 10000 | C10 | 7.8 | 0.15 | D12 | 8.4 | 0.20 | E12 | 9.3 | 0.20 | E14 | 10.0 | 0.20 | F14 | 12.6 | 0.15 | | | | | | |
| 12000 | C12 | 9.3 | 0.15 | E10 | 9.4 | 0.20 | E14 | 10.2 | 0.20 | F14 | 11.9 | 0.20 | | | | | | | | | |
| 15000 | C12 | 10.4 | 0.15 | E12 | 11.4 | 0.20 | E14 | 12.2 | 0.20 | -- | -- | -- | | | | | | | | | |
| 18000 | D10 | 10.4 | 0.20 | E14 | 13.4 | 0.20 | F14 | 13.1 | 0.25 | -- | -- | -- | | | | | | | | | |
| 22000 | D12 | 12.5 | 0.20 | F14 | 14.5 | 0.25 | -- | -- | -- | -- | -- | -- | | | | | | | | | |
| 27000 | E12 | 13.7 | 0.25 | F14 | 16.0 | 0.25 | -- | -- | -- | -- | -- | -- | | | | | | | | | |
| 33000 | E12 | 15.2 | 0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | | | | | | |
| 39000 | E14 | 16.1 | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | | | | | | |
| 47000 | F14 | 19.3 | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | | | | | | |
| 56000 | F14 | 21.1 | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | | | | | | |

Tan δ 25°C 120Hz

Ripple current (Arms) at 105°C 120Hz

Case code

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