

IP

- High ripple current ,Smaller size ,Load life of 5000 hours at 85°C.
- Best for switching power supplies , Inverter.
- Adapted to the ROHS directive

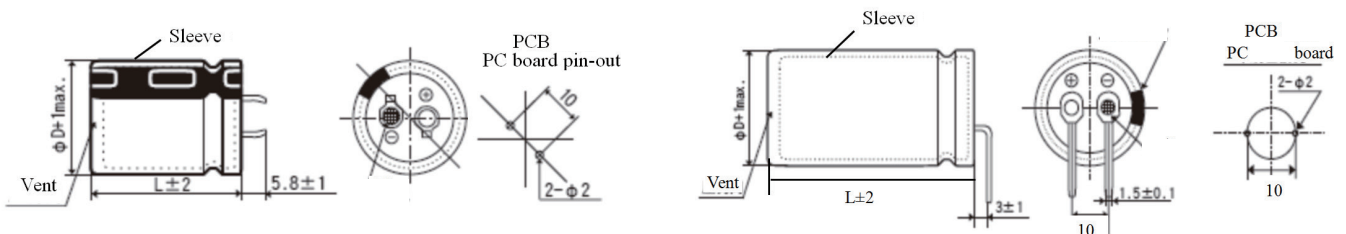


Specifications

| Items | Characteristics | |
|---|---|--|
| | -40°C ~ +85°C | -25°C ~ +85°C |
| Operating Temperature Range | -40°C ~ +85°C | -25°C ~ +85°C |
| Rated Voltage Range | 10 ~ 100 V | 160 ~ 450V |
| Capacitance Tolerance | ±20% (+20°C , 120Hz) | |
| Leakage Current | I ≤0.01CV(µA) 1.5mA (Whichever is smaller) (at 20°C,after 5 minutes) | |
| (tgδ) Dissipation Factor (+20°C, 120Hz) | U _R (V) | 10 16 25 35 50 63~100 160~250 350~450 |
| | tgδ | 0.80 0.60 0.50 0.40 0.30 0.20 0.15 0.20 |
| Temperature Characteristics (Impedance ratio at 120Hz) | U _R (V) | 10 16~35 50~100 160~250 350~400 450 |
| | Z-25°C / Z+20°C | 5 4 3 4 8 8 |
| | Z-40°C / Z+20°C | 18 15 10 - - - |
| Load Life | After applying rated voltage with specified ripple current for 5000 hours at +85°C and then resumed for 16 hours: Capacitance change : ±20% of the initial measured value Leakage current : ≤Initial specified value Dissipation factor : ≤2times initial specified value | |
| Shelf Life | After storage for 1000 hours at +85°C , U _R to be applied for 30 minutes and then resumed for 16 hours: Capacitance change : ±20% of the initial measured value Leakage current : ≤Initial specified value Dissipation factor : ≤2 times of the initial specified value | |

Case Table

Unit: mm



Frequency Coefficient

| Freq.(Hz) | 50 | 120 | 1K | 10K | ≥50K |
|-----------|------|------|------|------|------|
| U(V) | | | | | |
| 10~100 | 0.90 | 1.00 | 1.15 | 1.25 | 1.35 |
| 160~450 | 0.80 | 1.00 | 1.30 | 1.41 | 1.43 |

Dimensions

| WV Size CAP(μF) | | 10V(1A) | | | | | | 16V(1C) | | | | | | | | |
|-----------------------|-----|---------|--------|-------|--------|-------|--------|---------|--------|-------|--------|-------|--------|-------|--------|--|
| | | Φ22 | | Φ25 | | Φ30 | | Φ22 | | Φ25 | | Φ30 | | Φ35 | | |
| | | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | |
| 8200 | 822 | | | | | | | 22×25 | 2.20 | | | | | | | |
| 10000 | 103 | 22×25 | 2.50 | | | | | 22×30 | 2.60 | 25×25 | 2.60 | | | | | |
| 12000 | 123 | 22×25 | 2.90 | | | | | 22×35 | 2.90 | 25×25 | 2.80 | | | | | |
| 15000 | 153 | 22×30 | 3.20 | 25×25 | 3.10 | | | 22×40 | 3.30 | 25×30 | 3.30 | 30×25 | 3.40 | | | |
| 18000 | 183 | 22×35 | 3.60 | 25×30 | 3.60 | | | 22×45 | 3.80 | 25×35 | 3.70 | 30×30 | 3.60 | | | |
| 22000 | 223 | 22×40 | 4.00 | 25×35 | 4.10 | 30×25 | 4.10 | 22×50 | 4.20 | 25×40 | 4.20 | 30×30 | 4.20 | 35×25 | 4.40 | |

| WV Size CAP(μF) | | 25(1E) | | | | | | | | 35(1V) | | | | | | | |
|-----------------------|-----|--------|--------|-------|--------|-------|--------|-------|--------|--------|--------|-------|--------|-------|--------|-------|--------|
| | | Φ22 | | Φ25 | | Φ30 | | Φ35 | | Φ22 | | Φ25 | | Φ30 | | Φ35 | |
| | | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 3300 | 332 | | | | | | | | | 22×25 | 1.80 | | | | | | |
| 3900 | 392 | | | | | | | | | 22×30 | 2.10 | | | | | | |
| 4700 | 472 | | | | | | | | | 22×30 | 2.20 | 25×25 | 2.20 | | | | |
| 5600 | 562 | 22×25 | 2.00 | | | | | | | 22×35 | 2.30 | 25×30 | 2.30 | | | | |
| 6800 | 682 | 22×30 | 2.30 | 25×25 | 2.30 | | | | | 22×40 | 2.90 | 25×35 | 2.60 | | | | |
| 8200 | 822 | 22×35 | 2.60 | 25×30 | 2.50 | | | | | 22×50 | 3.00 | 25×40 | 2.80 | 30×30 | 2.80 | 35×25 | 2.90 |
| 10000 | 103 | 22×40 | 2.90 | 25×30 | 2.80 | 30×25 | 3.00 | | | | | 25×45 | 3.10 | 30×35 | 3.20 | 35×30 | 3.20 |
| 12000 | 123 | 22×45 | 3.30 | 25×35 | 3.20 | 30×30 | 3.40 | | | | | 25×50 | 3.50 | 30×40 | 3.50 | 35×30 | 3.60 |
| 15000 | 153 | | | 25×40 | 3.70 | 30×35 | 3.60 | 35×25 | 3.90 | | | | | 30×45 | 4.10 | 35×35 | 4.10 |
| 18000 | 183 | | | | | 30×35 | 4.30 | 35×30 | 4.40 | | | | | 30×50 | 4.60 | 35×40 | 4.70 |
| 22000 | 223 | | | | | 30×40 | 4.80 | 35×35 | 5.00 | | | | | | | 35×50 | 5.30 |

| WV Size CAP(μF) | | 50(1H) | | | | | | | | 63(1J) | | | | | | | |
|-----------------------|-----|--------|--------|-------|--------|-------|--------|-------|--------|--------|--------|-------|--------|-------|--------|-------|--------|
| | | Φ22 | | Φ25 | | Φ30 | | Φ35 | | Φ22 | | Φ25 | | Φ30 | | Φ35 | |
| | | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 2200 | 222 | 22×25 | 1.70 | | | | | | | 22×30 | 2.00 | 25×25 | 2.00 | | | | |
| 2700 | 272 | 22×30 | 1.90 | 25×25 | 1.90 | | | | | 22×35 | 2.20 | 25×30 | 2.30 | | | | |
| 3300 | 332 | 22×30 | 2.00 | 25×25 | 1.90 | | | | | 22×40 | 2.30 | 25×35 | 2.30 | 30×25 | 2.30 | | |
| 3900 | 392 | 22×35 | 2.10 | 25×30 | 2.10 | 30×25 | 2.40 | | | 22×45 | 2.50 | 25×40 | 2.60 | 30×30 | 2.60 | 35×25 | 2.70 |
| 4700 | 472 | 22×40 | 2.40 | 25×35 | 2.40 | 30×30 | 2.30 | | | | | 25×40 | 2.80 | 30×35 | 2.70 | 35×25 | 2.60 |
| 5600 | 562 | 22×50 | 2.50 | 25×40 | 2.50 | 30×30 | 2.50 | 35×25 | 2.60 | | | 25×45 | 3.10 | 30×35 | 3.20 | 35×30 | 3.30 |
| 6800 | 682 | | | 25×45 | 2.80 | 30×35 | 2.80 | 35×25 | 2.70 | | | | | 30×40 | 3.60 | 35×35 | 3.70 |
| 8200 | 822 | | | 25×50 | 3.20 | 30×40 | 3.00 | 35×30 | 3.00 | | | | | 30×50 | 3.70 | 35×40 | 3.80 |
| 10000 | 103 | | | | | 30×45 | 3.40 | 35×35 | 3.40 | | | | | | | 35×45 | 4.30 |
| 12000 | 123 | | | | | 30×50 | 3.80 | 35×40 | 3.80 | | | | | | | 35×50 | 4.80 |
| 15000 | 153 | | | | | | | 35×50 | 4.50 | | | | | | | | |

| WV Size CAP(μF) | | 80(1K) | | | | | | | | 100(2A) | | | | | | | |
|-----------------------|-----|--------|--------|-------|--------|-------|--------|-------|--------|---------|--------|-------|--------|-------|--------|-------|--------|
| | | Φ22 | | Φ25 | | Φ30 | | Φ35 | | Φ22 | | Φ25 | | Φ30 | | Φ35 | |
| | | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 680 | 681 | | | | | | | | | 22×25 | 1.10 | | | | | | |
| 820 | 821 | | | | | | | | | 22×30 | 1.20 | | | | | | |
| 1000 | 102 | 22×25 | 1.30 | | | | | | | 22×30 | 1.40 | 25×25 | 1.40 | | | | |
| 1200 | 122 | 22×30 | 1.50 | | | | | | | 22×35 | 1.60 | 25×30 | 1.60 | | | | |
| 1500 | 152 | 22×30 | 1.80 | 25×25 | 1.70 | | | | | 22×40 | 1.80 | 25×35 | 1.70 | 30×25 | 1.80 | | |
| 1800 | 182 | 22×35 | 1.90 | 25×30 | 1.90 | | | | | 22×50 | 2.10 | 25×40 | 2.00 | 30×30 | 2.10 | 35×25 | 2.20 |
| 2200 | 222 | 22×40 | 2.10 | 25×35 | 2.20 | 30×25 | 2.20 | | | | | 25×45 | 2.20 | 30×35 | 2.30 | 35×30 | 2.50 |
| 2700 | 272 | 22×50 | 2.50 | 25×40 | 2.50 | 30×30 | 2.50 | 35×25 | 2.50 | | | 25×50 | 2.60 | 30×40 | 2.70 | 35×30 | 2.60 |
| 3300 | 332 | | | 25×45 | 2.80 | 30×35 | 2.80 | 35×25 | 2.70 | | | | | 30×45 | 3.00 | 35×35 | 3.10 |
| 3900 | 392 | | | 25×50 | 3.10 | 30×40 | 3.20 | 35×30 | 3.20 | | | | | 30×50 | 3.40 | 35×40 | 3.40 |
| 5600 | 562 | | | | | 30×50 | 3.50 | 35×40 | 3.50 | | | | | | | | |
| 6800 | 682 | | | | | | | 35×50 | 4.10 | | | | | | | | |

Size φD×L(mm)

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz

Dimensions

| WV Size CAP(μF) | | 160V(2C) | | | | | | | | 200V(2D) | | | | | | | |
|-----------------------|-----|----------|--------|-------|--------|-------|--------|-------|--------|----------|--------|-------|--------|-------|--------|-------|--------|
| | | Φ22 | | Φ25 | | Φ30 | | Φ35 | | Φ22 | | Φ25 | | Φ30 | | Φ35 | |
| | | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 220 | 221 | 22×25 | 1.10 | | | | | | | 22×25 | 1.10 | | | | | | |
| 330 | 331 | 22×30 | 1.30 | | | | | | | 22×30 | 1.40 | 25×25 | 1.50 | | | | |
| 390 | 391 | 22×30 | 1.50 | 25×25 | 1.50 | | | | | 22×35 | 1.60 | 25×30 | 1.60 | | | | |
| 470 | 471 | 22×35 | 1.80 | 25×30 | 1.81 | | | | | 22×40 | 1.80 | 25×30 | 1.90 | | | | |
| 560 | 561 | 22×35 | 1.90 | 25×30 | 1.90 | 30×25 | 2.00 | | | 22×45 | 2.00 | 25×35 | 2.00 | 30×30 | 2.10 | 35×25 | 2.00 |
| 680 | 681 | 22×40 | 2.40 | 25×35 | 2.40 | 30×30 | 2.50 | | | | | 25×40 | 2.50 | 30×30 | 2.50 | 35×25 | 2.55 |
| 820 | 821 | 22×50 | 2.85 | 25×40 | 2.75 | 30×30 | 2.75 | 35×25 | 2.75 | | | 25×40 | 2.80 | 30×35 | 2.80 | 35×30 | 2.80 |
| 1000 | 102 | | | 25×45 | 3.10 | 30×35 | 3.10 | 35×30 | 3.10 | | | | | 30×40 | 3.30 | 35×35 | 3.50 |
| 1200 | 122 | | | 25×50 | 3.50 | 30×40 | 3.60 | 35×35 | 3.50 | | | | | 30×50 | 3.65 | 35×40 | 3.65 |
| 1500 | 152 | | | | | 30×45 | 4.20 | 35×40 | 4.40 | | | | | | | 35×45 | 4.60 |
| 1800 | 182 | | | | | | | 35×45 | 5.00 | | | | | | | | |
| 2200 | 222 | | | | | | | 35×50 | 5.80 | | | | | | | | |

| WV Size CAP(μF) | | 250V(2E) | | | | | | | | 400V(2G) | | | | | | | |
|-----------------------|-----|----------|--------|-------|--------|-------|--------|-------|--------|----------|--------|-------|--------|-------|--------|-------|--------|
| | | Φ22 | | Φ25 | | Φ30 | | Φ35 | | Φ22 | | Φ25 | | Φ30 | | Φ35 | |
| | | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 68 | 680 | | | | | | | | | 22×25 | 0.61 | | | | | | |
| 100 | 101 | | | | | | | | | 22×30 | 0.79 | 25×25 | 0.80 | | | | |
| 120 | 121 | | | | | | | | | 22×35 | 0.92 | 25×30 | 0.92 | | | | |
| 150 | 151 | 22×25 | 0.91 | | | | | | | 22×40 | 1.10 | 25×30 | 1.11 | 30×25 | 1.15 | | |
| 180 | 181 | 22×25 | 0.94 | | | | | | | 22×45 | 1.20 | 25×35 | 1.20 | 30×25 | 1.20 | | |
| 220 | 221 | 22×30 | 1.20 | 25×25 | 1.20 | | | | | 22×50 | 1.40 | 25×40 | 1.40 | 30×35 | 1.40 | | |
| 270 | 271 | 22×35 | 1.35 | 25×30 | 1.35 | | | | | | | 25×45 | 1.60 | 30×35 | 1.60 | 35×30 | 1.60 |
| 330 | 331 | 22×45 | 1.60 | 25×30 | 1.60 | 30×25 | 1.60 | | | | | | | 30×45 | 2.00 | 35×35 | 2.00 |
| 390 | 391 | 22×45 | 1.75 | 25×35 | 1.75 | 30×30 | 1.75 | | | | | | | 30×50 | 2.20 | 35×40 | 2.20 |
| 470 | 471 | 22×50 | 2.10 | 25×40 | 2.10 | 30×30 | 2.00 | 35×25 | 2.10 | | | | | | | 35×45 | 2.60 |
| 560 | 561 | | | 25×45 | 2.35 | 30×35 | 2.35 | 35×30 | 2.35 | | | | | | | 35×50 | 2.90 |
| 680 | 681 | | | | | 30×40 | 2.70 | 35×30 | 2.70 | | | | | | | | |
| 820 | 851 | | | | | 30×45 | 3.00 | 35×35 | 3.00 | | | | | | | | |
| 1000 | 102 | | | | | | | 35×40 | 3.60 | | | | | | | | |
| 1200 | 122 | | | | | | | 35×45 | 3.91 | | | | | | | | |

| WV Size CAP(μF) | | 450V(2W) | | | | | | | |
|-----------------------|-----|----------|--------|-------|--------|-------|--------|-------|--------|
| | | Φ22 | | Φ25 | | Φ30 | | Φ35 | |
| | | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 47 | 470 | 22×25 | 0.51 | | | | | | |
| 68 | 680 | 22×30 | 0.65 | | | | | | |
| 100 | 101 | 22×35 | 0.88 | 25×30 | 0.86 | 30×25 | 0.90 | | |
| 120 | 121 | 22×40 | 0.97 | 25×35 | 0.99 | 30×30 | 0.99 | | |
| 150 | 151 | 22×40 | 1.09 | 25×40 | 1.10 | 30×30 | 1.10 | | |
| 180 | 181 | | | 25×45 | 1.25 | 30×35 | 1.20 | | |
| 220 | 221 | | | 25×50 | 1.50 | 30×40 | 1.50 | 35×30 | 1.50 |
| 270 | 271 | | | | | 30×45 | 1.80 | 35×35 | 1.80 |
| 330 | 331 | | | | | | | 35×40 | 2.10 |
| 390 | 391 | | | | | | | 35×45 | 2.30 |
| 470 | 471 | | | | | | | 35×50 | 2.70 |

Size φD×L(mm)
Maximum Allowable Ripple Current (A rms) at 85°C 120Hz