

## ■ Features

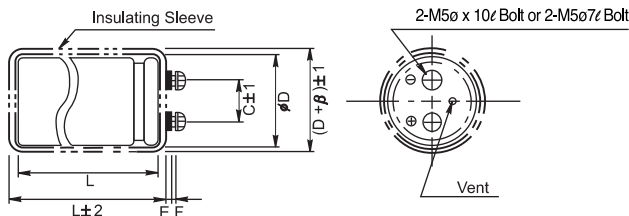
- Screw terminal type
- Ideal for inverter, computer
- Large allowable ripple current
- High reliability for continuous operation
- Computer grade, Large capacity.
- Load life of 2000 hours at 105°C



## ■ Specifications

| Item  | Performance Characteristics  |  |       |        |         |        |      |  |
|---|--|--|-------|--------|---------|--------|------|--|
| Operating temperature range   | -40°C ~ +105°C   |  |       |        |         |        |      |  |
| Rated working voltage range   | 10V ~ 250V   |  |       |        |         |        |      |  |
| Nominal capacitance range   | 220μF ~ 470000μF, -10 ~ +50%(at 20°C, 120Hz)   |  |       |        |         |        |      |  |
| D.C Leakage current(at 20°C)  | The following specifications shall be satisfied when the rated voltage is applied for the required time.<br>$I \leq 0.02CV$ or 5mA (5 min), whichever is less.<br>Where I=Leakage current(μA) C=Nominal capacitance(μF) V=Rated voltage(V) |  |       |        |         |        |      |  |
| Tan δ(max., at 20°C, 120Hz)   | W.V(V)   | 10~16                                  | 25    | 35     | 50      | 63~100 | 160~ |  |
|   | 220~10000  | —                                      | 0.35  | 0.30   | 0.25    | 0.15   | 0.15 |  |
|   | 15000~47000  | 0.50                                   | 0.40  | 0.40   | 0.35    | 0.30   | —    |  |
|   | 68000~100000   | 0.75                                   | 0.50  | 0.50   | 0.40    | —      | —    |  |
|   | 150000~220000  | 1.00                                   | 1.00  | —      | —       | —      | —    |  |
|   | 330000~  | 1.50                                   | —     | —      | —       | —      | —    |  |
| Characteristics at low temperature(max.) (impedance ratio at 120Hz) | W.V(V)   | 10~16                                  | 25~35 | 50~100 | 160~250 |        |      |  |
|   | Z-25°C/Z20°C   | 4                                      | 3     | 2      | 2       |        |      |  |
|   | Z-40°C/Z20°C   | 12                                     | 6     | 4      | 8       |        |      |  |
| Load life   | After applying rated working voltage for 2000 hours at +105°C and then being stabilized at +20°C, capacitors shall meet following limits.  |  |       |        |         |        |      |  |
|   | Capacitance change   | Within ± 20% of initial measured value |       |        |         |        |      |  |
|   | Tan δ  | ≤ 200% of initial specified value      |       |        |         |        |      |  |
|   | Leakage current  | ≤ Initial specified value              |       |        |         |        |      |  |
| Shelf life  | After storage for 1000 hours at +105°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet following limits.   |  |       |        |         |        |      |  |
|   | Capacitance change   | Within ± 20% of initial measured value |       |        |         |        |      |  |
|   | Tan δ  | ≤ 150% of initial specified value      |       |        |         |        |      |  |
|   | Leakage current  | ≤ Initial specified value              |       |        |         |        |      |  |

## ■ Case sizes and Dimensions



| øD   | C    | E   | F   | β   |
|------|------|-----|-----|-----|
| 35   | 12.8 | 3.0 | 5.0 | 1.0 |
| 51   | 21.7 | 3.0 | 4.0 | 1.5 |
| 63.5 | 28.3 | 3.0 | 4.0 | 1.5 |
| 76   | 31.6 | 3.0 | 4.0 | 1.5 |
| 89   | 32.0 | 3.0 | 4.0 | 1.5 |

## ■ Ripple current coefficient

### • Frequency

| Freq(Hz) | 50  | 120 | 400 | 1K  | 10K |
|----------|-----|-----|-----|-----|-----|
| Factor   | 0.8 | 1.0 | 1.2 | 1.3 | 1.4 |

### • Temperature

| Temperature | ≤45°C | 65°C | 85°C | 105°C |
|-------------|-------|------|------|-------|
| Factor      | 3.0   | 2.6  | 2.0  | 1.0   |

## STANDARD RATINGS OF PU SERIES

| W.V<br>Cap(μF) | 10(1A)    |                    | 16(1C)    |                    | 25(1E)    |                    | 35(1V)    |                    | 50(1H)    |                    | 63(1J)    |                    |
|----------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|
|                | Case Size | I <sub>R</sub> (A) | Case Size | I <sub>R</sub> (A) | Case Size | I <sub>R</sub> (A) | Case Size | I <sub>R</sub> (A) | Case Size | I <sub>R</sub> (A) | Case Size | I <sub>R</sub> (A) |
| 3300           |           |                    |           |                    |           |                    |           |                    |           |                    | 35X50     | 2.8                |
| 4700           |           |                    |           |                    |           |                    |           |                    | 35X50     | 3.0                | 35X60     | 3.6                |
| 6800           |           |                    |           |                    |           |                    | 35X50     | 3.7                | 35X70     | 4.1                | 35X80     | 4.8                |
| 10000          |           |                    |           |                    | 35X50     | 4.3                | 35X70     | 4.9                | 35X90     | 5.2                | 35X100    | 6.2                |
| 15000          |           |                    | 35X50     | 4.0                | 35X70     | 5.9                | 35X90     | 6.5                | 35X100    | 6.2                | 51X90     | 8.1                |
| 22000          | 35X50     | 4.3                | 35X70     | 6.0                | 35X90     | 6.9                | 35X120    | 7.9                | 51X90     | 8.1                | 63.5X100  | 10.4               |
| 33000          | 35X70     | 6.4                | 35X90     | 7.2                | 35X120    | 8.3                | 51X100    | 9.6                | 63.5X100  | 11.0               | 63.5X120  | 13.2               |
| 47000          | 35X90     | 7.2                | 35X120    | 8.0                | 51X90     | 9.8                | 51X120    | 11.9               | 63.5X120  | 13.8               | 76X120    | 16.8               |
| 68000          | 35X100    | 7.7                | 51X90     | 10.4               | 51X120    | 10.6               | 63.5X100  | 13.8               | 76X120    | 16.9               |           |                    |
| 100000         | 51X90     | 9.6                | 51X120    | 12.4               | 63.5X100  | 12.5               | 76X120    | 16.9               |           |                    |           |                    |
| 150000         | 51X120    | 12.0               | 63.5X100  | 13.4               | 76X120    | 16.9               |           |                    |           |                    |           |                    |
| 220000         | 63.5X100  | 14.2               | 76X100    | 16.2               |           |                    |           |                    |           |                    |           |                    |
| 330000         | 76X100    | 18.8               |           |                    |           |                    |           |                    |           |                    |           |                    |
| 470000         | 76X140    | 20.8               |           |                    |           |                    |           |                    |           |                    |           |                    |

| W.V<br>Cap(μF) | 80(1K)    |                    | 100(2A)   |                    | 160(2A)   |                    | 200(2D)   |                    | 250(2E)   |                    |
|----------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|
|                | Case Size | I <sub>R</sub> (A) | Case Size | I <sub>R</sub> (A) | Case Size | I <sub>R</sub> (A) | Case Size | I <sub>R</sub> (A) | Case Size | I <sub>R</sub> (A) |
| 220            |           |                    |           |                    |           |                    |           |                    | 35X50     | 1.1                |
| 330            |           |                    |           |                    |           |                    | 35X50     | 1.2                | 35X60     | 1.3                |
| 470            |           |                    |           |                    | 35X50     | 1.5                | 35X60     | 1.6                | 35X70     | 1.8                |
| 680            |           |                    |           |                    | 35X60     | 1.8                | 35X70     | 2.0                | 35X100    | 2.1                |
| 1000           |           |                    |           |                    | 35X80     | 2.3                | 35X100    | 2.5                | 35X120    | 2.7                |
| 1500           |           |                    | 35X50     | 2.2                | 35X100    | 2.8                | 35X120    | 3.2                | 51X100    | 3.3                |
| 2200           | 35X50     | 2.8                | 35X60     | 2.4                | 51X80     | 3.5                | 51X100    | 4.3                | 63.5X100  | 4.7                |
| 3300           | 35X60     | 3.6                | 35X80     | 3.6                | 51X100    | 4.7                | 63.5X100  | 5.2                | 63.5X120  | 5.6                |
| 4700           | 35X80     | 4.8                | 35X100    | 4.8                | 63.5X100  | 5.9                | 63.5X120  | 6.6                | 76X120    | 7.0                |
| 6800           | 35X100    | 5.2                | 51X80     | 5.9                | 63.5X120  | 7.0                | 76X120    | 7.4                |           |                    |
| 10000          | 51X80     | 6.9                | 51X100    | 7.2                | 76X120    | 8.3                |           |                    |           |                    |
| 15000          | 51X110    | 8.8                | 63.5X100  | 8.8                |           |                    |           |                    |           |                    |
| 22000          | 63.5X120  | 12.9               | 76X120    | 11.4               |           |                    |           |                    |           |                    |
| 33000          | 76X120    | 16.2               |           |                    |           |                    |           |                    |           |                    |

Max. permissible ripple current [A(rms) at 105°C, 120Hz]

Case size [øDxL(mm)]