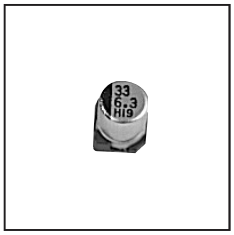


## Features

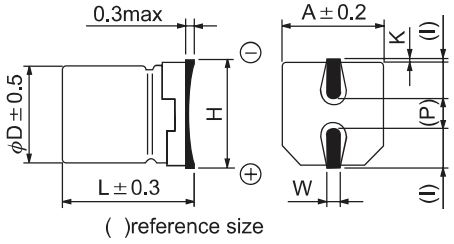
- Load life : 105°C 2000 hours.
- Corresponding product to RoHS

## SPECIFICATION

| Item | Characteristic | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Operation Temperature Range | -55 ~ +105°C | | | | | | | |
| Rated Working Voltage | 4 ~ 50VDC | | | | | | | |
| Capacitance Tolerance (120Hz 20°C) | ±20%(M) | | | | | | | |
| Leakage Current (20°C) | I ≦0.01CV or 3 ( μA )<br>*Whichever is greater after 2 minutes<br>I : Leakage Current (μA)<br>C : Rated Capacitance (μF)<br>V : Working Voltage (V) | | | | | | | |
| Surge Voltage (20°C) | W.V. | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | S.V. | 5 | 8 | 13 | 20 | 32 | 44 | 63 |
| Dissipation Factor (tan δ) (120Hz 20°C) | W.V. | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | tan δ φ4 ~ φ6.3 | 0.50 | 0.30 | 0.22 | 0.16 | 0.14 | 0.12 | 0.12 |
| | tan δ φ8 ~ φ10 | 0.50 | 0.35 | 0.26 | 0.20 | 0.16 | 0.14 | 0.12 |
| Low Temperature Stability | Impedance ratio at 120Hz | | | | | | | |
| | Rated Voltage (V) | 4 | 6.3 | 10 | 16 | 25 | 35 ~ 50 | |
| | -25°C / +20°C | 7 | 4 | 3 | 2 | 2 | 2 | |
| | -40°C / +20°C | 15 | 8 | 6 | 4 | 4 | 3 | |
| Load Life | After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≦ rate working voltage) | | | | | | | |
| | Capacitance Change | ≦±25% of initial value (4WV±35%) | | | | | | |
| | Dissipation Factor | ≦200% of initial specified value | | | | | | |
| | Leakage current | ≦initial specified value | | | | | | |
| Shelf Life | At +105°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment) | | | | | | | |
| Resistance to Soldering Heat | Capacitor placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the folowing conditions after being cooled to room temperature. | | | | | | | |
| | Capacitance Change | ≦±10% of initial value | | | | | | |
| | Dissipation Factor | ≦initial specified value | | | | | | |
| | Leakage current | ≦initial specified value | | | | | | |

## DIMENSIONS (mm)

| D | L | A | H | I | W | P | K |
|---|---|---|---|---|---|---|---|
| 4.0 | 5.8 | 4.3 | 5.5MAX | 1.8 | 0.65±0.1 | 1.0 | 0.35 +0.15 -0.20 |
| 5.0 | 5.8 | 5.3 | 6.5MAX | 2.2 | 0.65±0.1 | 1.5 | 0.35 +0.15 -0.20 |
| 6.3 | 5.8 | 6.6 | 7.8MAX | 2.6 | 0.65±0.1 | 2.1 | 0.35 +0.15 -0.20 |
| 8.0 | 6.2 | 8.3 | 9.5MAX | 3.4 | 0.65±0.1 | 2.2 | 0.35 +0.15 -0.20 |
| 8.0 | 10.2 | 8.3 | 10.0MAX | 3.4 | 0.90±0.2 | 3.1 | 0.70 ±0.20 |
| 10.0 | 10.2 | 10.3 | 12.0MAX | 3.5 | 0.90±0.2 | 4.6 | 0.70 ±0.20 |



## CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 105°C 120Hz

| V(DC) / Item / μF | 4 | | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DxL | R.C. | DxL | R.C. | DxL | R.C. | DxL | R.C. | DxL | R.C. | DxL | R.C. | DxL | R.C. |
| 0.10 | | | | | | | | | | | | | 4x5.8 | 3 |
| 0.22 | | | | | | | | | | | | | 4x5.8 | 4 |
| 0.33 | | | | | | | | | | | | | 4x5.8 | 5 |
| 0.47 | | | | | | | | | | | | | 4x5.8 | 6 |
| 1.0 | | | | | | | | | | | | | 4x5.8 | 8 |
| 2.2 | | | | | | | | | | | | | 4x5.8 | 12 |
| 3.3 | | | | | | | | | | | | | 4x5.8 | 15 |
| 4.7 | | | | | | | | | 4x5.8 | 15 | 4x5.8 | 18 | 5x5.8 | 20 |
| 6.8 | | | | | | | | | 4x5.8 | 18 | 5x5.8 | 22 | 5x5.8 | 24 |
| 10 | | | | | | | 4x5.8 | 20 | 5x5.8 | 25 | 5x5.8 | 26 | 6.3x5.8 | 33 |
| 22 | 4x5.8 | 20 | 4x5.8 | 24 | 5x5.8 | 30 | 5x5.8 | 34 | 6.3x5.8 | 42 | 6.3x5.8 | 45 | 8x10.2 | 75 |
| 33 | 4x5.8 | 25 | 4x5.8 | 30 | 5x5.8 | 37 | 6.3x5.8 | 48 | 6.3x5.8 | 50 | 8x6.2 | 70 | 8x10.2 | 90 |
| 47 | 4x5.8 | 30 | 5x5.8 | 41 | 6.3x5.8 | 50 | 6.3x5.8 | 55 | 8x6.2 | 75 | 8x10.2 | 100 | 10x10.2 | 120 |
| 100 | 5x5.8 | 49 | 6.3x5.8 | 70 | 6.3x5.8 | 75 | 8x10.2 | 120 | 8x10.2 | 140 | 10x10.2 | 170 | | |
| 150 | 6.3x5.8 | 70 | 8x6.2 | 95 | 8x6.2 | 110 | 8x10.2 | 150 | 8x10.2 | 170 | | | | |
| 220 | 6.3x5.8 | 85 | 8x10.2 | 140 | 8x10.2 | 160 | 10x10.2 | 210 | 10x10.2 | 230 | | | | |
| 330 | 8x10.2 | 140 | 8x10.2 | 170 | 8x10.2 | 200 | 10x10.2 | 260 | | | | | | |
| 470 | 8x10.2 | 170 | 8x10.2 | 200 | 10x10.2 | 270 | | | | | | | | |