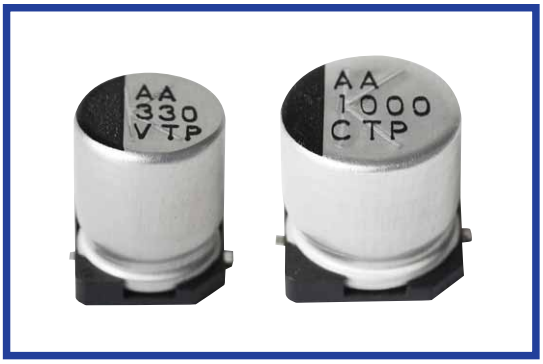
# TPV SERIES

## 105℃ Low ESR, Miniaturized, Lead Free Reflow Soldering




## ◆FEATURES

- Load Life 105℃ 2000 hours.
- Lead free reflow soldering is available.
- Available for high density mounting.
- Prescribe ESR value at 100 kHz.
- RoHS compliance.

## ◆SPECIFICATIONS

| Items | Characteristics |
|---|---|
| Category Temperature Range | −55～+105℃ |
| Rated Voltage Range | 6.3～35Vdc |
| Capacitance Tolerance | ±20%(20℃,120Hz) |
| Leakage Current(MAX) | I=0.01CV or 3μA whichever is greater. (After 2 minutes application of rated voltage)<br>I=Leakage Current (μA) C=Capacitance (μF) V=Rated Voltage (Vdc) |
| (tanδ) Dissipation Factor(MAX) | (20℃,120Hz)<br>When rated capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF. |
| Endurance | After applying rated voltage for 2000 hours at 105℃, the capacitor shall meet the following requirements. |
| Low Temperature Stability Impedance Ratio(MAX) | (120Hz) |

Dissipation Factor(MAX) — (20℃,120Hz)

| Rated Voltage (Vdc) | 6.3 | 10 | 16 | 25 | 35 |
|---|---|---|---|---|---|
| tanδ | 0.26 | 0.19 | 0.16 | 0.14 | 0.12 |

Endurance

| | |
|---|---|
| Capacitance Change | Within ±30% of the initially measured value. |
| Dissipation Factor | Not more than 200% of the specified value. |
| Leakage Current | Not more than the specified value. |

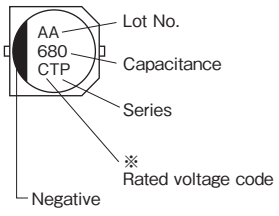
Low Temperature Stability Impedance Ratio(MAX) — (120Hz)

| Rated Voltage (Vdc) | 6.3 | 10 | 16 | 25 | 35 |
|---|---|---|---|---|---|
| Z(−25℃)/Z(20℃) | 2 | 2 | 2 | 2 | 2 |
| Z(−40℃)/Z(20℃) | 3 | 3 | 3 | 3 | 3 |
| Z(−55℃)/Z(20℃) | 4 | 4 | 4 | 3 | 3 |

## ◆MULTIPLIER FOR RIPPLE CURRENT

| Frequency(Hz) | 120 | 1k | 10k | 100k≦ |
|---|---|---|---|---|
| Coefficient | 0.60 | 0.80 | 0.95 | 1.00 |

## ◆MARKING




※Voltage code

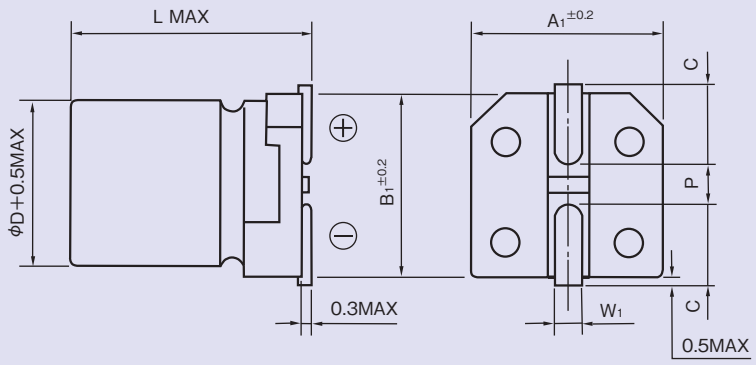
| Rated Voltage (Vdc) | 6.3 | 10 | 16 | 25 | 35 |
|---|---|---|---|---|---|
| Voltage code | j | A | C | E | V |

## ◆PART NUMBER

| □□□ | TPV | □□□□□ | M | □□□ | D×L |
|---|---|---|---|---|---|
| Rated Voltage | Series | Capacitance | Capacitance Tolerance | Option | Case Size |

## ◆DIMENSIONS

(mm)




| φD | L | A1 | B1 | C | W1 | P |
|---|---|---|---|---|---|---|
| 8 | 10.5 | 8.3 | 8.3 | 2.9 | 0.8～1.1 | 3.1 |
| 10 | 10.5 | 10.3 | 10.3 | 3.2 | 0.8～1.1 | 4.5 |

## ◆STANDARD SIZE

Size φDXL(mm), Rated Ripple Current(mA r.m.s./105℃,100kHz), ESR(Ω MAX/20℃, 100kHz)

| Vdc | Cap (μF) | Size (φDXL) | Ripple | ESR |
|---|---|---|---|---|
| 6.3 | 1200 | 8×10.5 | 850 | 0.080 |
| | 2200 | 10×10.5 | 1190 | 0.060 |
| 10 | 1000 | 8×10.5 | 850 | 0.080 |
| | 1500 | 10×10.5 | 1190 | 0.060 |
| 16 | 680 | 8×10.5 | 850 | 0.080 |
| | 1000 | 10×10.5 | 1190 | 0.060 |
| 25 | 470 | 8×10.5 | 850 | 0.080 |
| | 820 | 10×10.5 | 1190 | 0.060 |
| 35 | 330 | 8×10.5 | 850 | 0.080 |
| | 560 | 10×10.5 | 1190 | 0.060 |