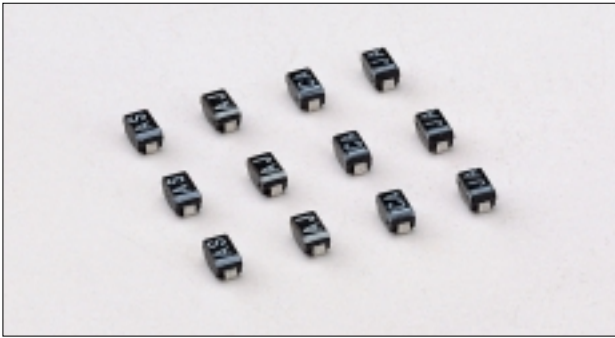


TP SERIES

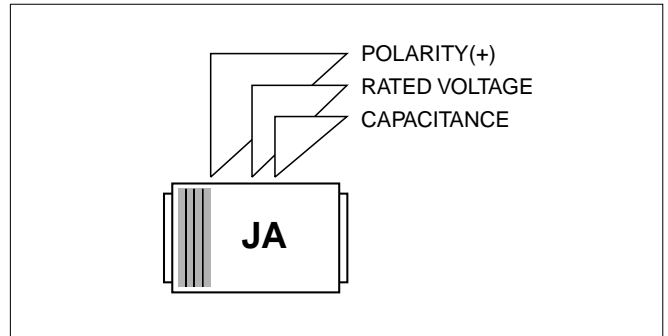
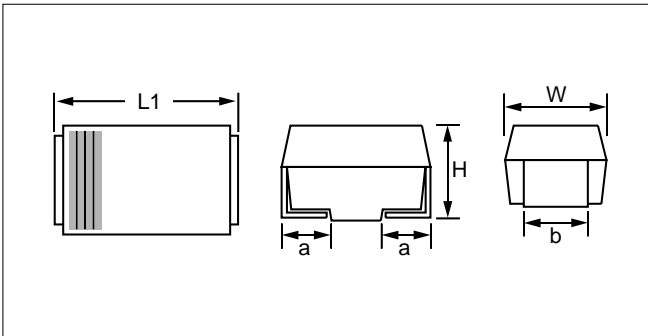
TANTALUM CAPACITOR



FEATURES

- Capacitance : 0.1 μ F to 22 μ F
- 100% Surge current test on each size
- Capacitance tolerance : $\pm 10\%$ (K), $\pm 20\%$ (M)
- Standard Range Values
- Voltage : 2.5VDC to 25VDC

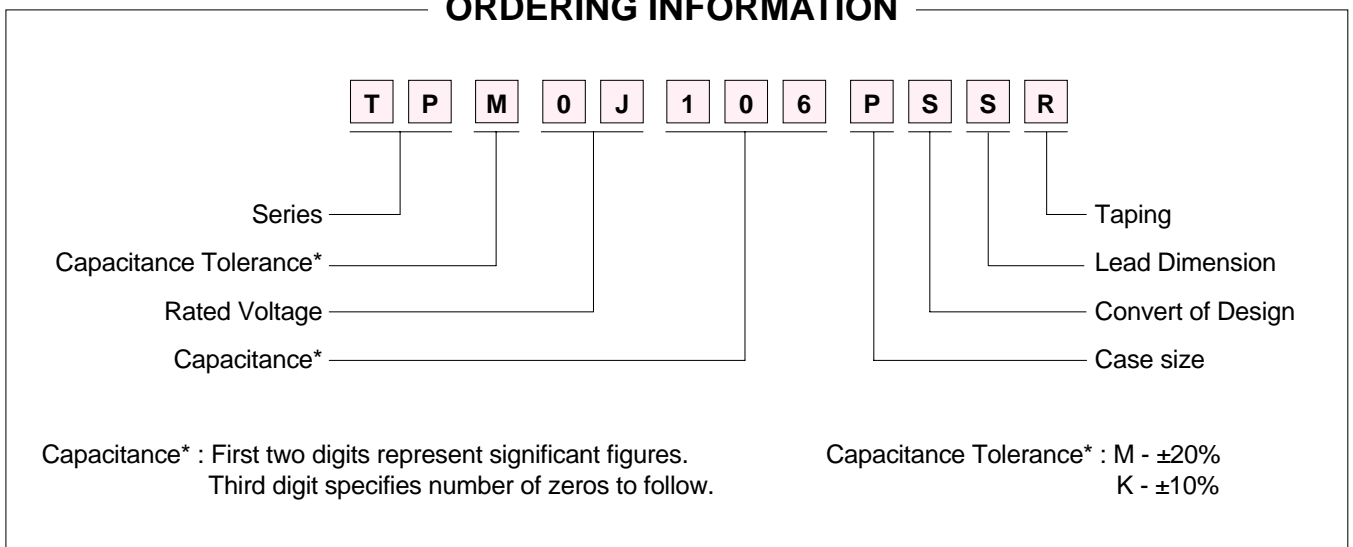
CASE DIMENSIONS AND MARKINGS



(unit : mm)

| Size | Code | L1 | W | H | e | a | b |
|------|------|---------------|----------------|---------|---------|---------------|---------------|
| P | P | 2.0 \pm 0.2 | 1.25 \pm 0.2 | 1.2 max | 0.8 min | 0.5 \pm 0.2 | 0.9 \pm 0.1 |

ORDERING INFORMATION



SPECIFICATIONS

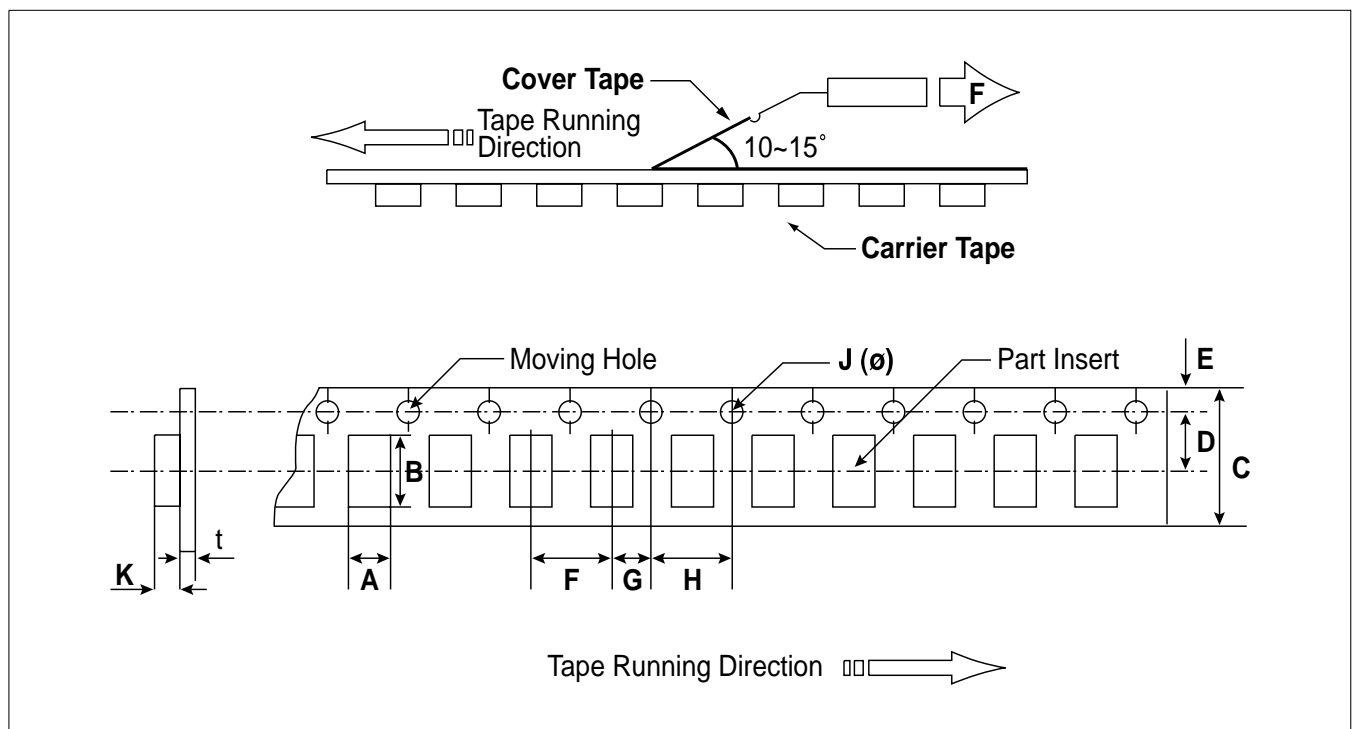
| | | | | | | | | | |
|--|---|---|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Capacitance | Range | 0.1 μ F to 22 μ F | | | | | | | |
| | Tolerance | \pm 20%(M), \pm 10%(K) | | | | | | | |
| Dissipation Factor (tan δ) | $C \leq 1.0\mu\text{F}$ | D.F \leq 6.0% | | | | | | | |
| | $1.5\mu\text{F} \leq C \leq 6.8\mu\text{F}$ | D.F \leq 8.0% | | | | | | | |
| | $C \geq 10\mu\text{F}$ | D.F \leq 10.0% | | | | | | | |
| Leakage Current | | between 0.01CV and 0.5 μ A, whichever is higher | | | | | | | |
| Rated Voltage (V _R) | | 4.0 | 6.3 | 10.0 | 16.0 | 20.0 | 25.0 | 35.0 | 50.0 |
| Operating Voltage (V _O) | $T \leq 85^{\circ}\text{C}$ | 4.0 | 6.3 | 10.0 | 16.0 | 20.0 | 25.0 | 35.0 | 50.0 |
| | $85 < T \leq 125^{\circ}\text{C}$ | 2.5 | 4.0 | 6.3 | 10.0 | 13.0 | 16.0 | 22.0 | 32.0 |
| Surge Voltage (V _S) | $T \leq 85^{\circ}\text{C}$ | 5.2 | 8.0 | 13.0 | 20.0 | 25.0 | 32.0 | 44.0 | 63.0 |
| | $85 < T \leq 125^{\circ}\text{C}$ | 3.2 | 5.0 | 8.0 | 13.0 | 16.0 | 20.0 | 28.0 | 40.0 |
| Operating Temperature | | -55 $^{\circ}$ C to 125 $^{\circ}$ C | | | | | | | |

CAPACITANCE AND VOLTAGE RANGE

| Cap(μ F) | | W.V | | 2.5 | 4 | 6.3 | 10 | 16 | 20 | 25 |
|---------------|-----|------|-----|-----|---|-----|-----|----|----|-------------------------|
| | | 0.10 | 104 | | | | | | | |
| 0.15 | 154 | | | | | | | P | | P |
| 0.22 | 224 | | | | | | | P | | P |
| 0.33 | 334 | | | | | | | P | P | P |
| 0.47 | 474 | | | | | | | P | P | P |
| 0.68 | 684 | | | | | | P | P | P | |
| 1.0 | 105 | | | | | P | P | P | P | |
| 1.5 | 155 | | | | P | P | P | P | | |
| 2.2 | 225 | | | P | P | P | P | P | | |
| 3.3 | 335 | | | P | P | P | P | | | |
| 4.7 | 475 | | | P | P | P | P | | | |
| 6.8 | 685 | | | P | P | P | P | | | |
| 10 | 106 | | | P | P | P | (P) | | | |
| 15 | 156 | | | P | P | P | | | | |
| 22 | 226 | | | P | P | (P) | | | | () : Under Development |

TAPE AND REEL DIMENSIONS

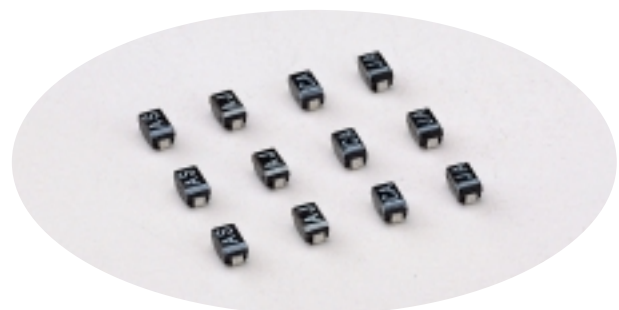
- Tape : Semitransparent emboss tape
- Cover tape : Attached for heating press polyester or adhesive cover tape
- The tension of removing cover tape
 - Heating press : $F = 50 \pm 20g$
 - Adhesive : $F = 30 \pm 15g$



- TP series Carrier tape dimensions and Packing quantity

(unit : mm)

| Classification | TP Series | |
|------------------|------------------------|-----------------------|
| | Standard | Standard |
| A | 1.50 ± 0.1 | 1.50 ± 0.1 |
| B | 2.2 ± 0.1 | 2.2 ± 0.1 |
| C | 8.0 ± 0.3 | 8.0 ± 0.3 |
| D | 3.5 ± 0.1 | 3.5 ± 0.1 |
| E | 1.75 ± 0.1 | 1.75 ± 0.1 |
| F | 4.0 ± 0.1 | 4.0 ± 0.1 |
| G | 2.0 ± 0.1 | 2.0 ± 0.1 |
| H | 4.0 ± 0.1 | 4.0 ± 0.1 |
| J | $1.5 +0.1, -0.0$ | $1.5 +0.1, -0.0$ |
| t | 0.2 ± 0.02 | 0.2 ± 0.02 |
| K | 1.6 MAX | 1.6 MAX |
| Packing Quantity | 3,000 pcs/Reel | 6,000 pcs/Reel |
| Inner Box | 5 Reels (15Kpcs) | 4 Reels (24Kpcs) |
| Outer Box | 10 Inner boxes (150Kp) | 6 Inner boxes (144Kp) |



Tantalum Chip Capacitor TP Series

TP SERIES RATINGS & PART NUMBER REFERENCE

| Rated Voltage(V) | Cap (μF) | tan δ (%) | D.C.L (μA) | ESR (Ω, at 100KHz) | Part No. |
|------------------|----------|-----------|------------|--------------------|--------------|
| 2.5 | 2.2 | 8.0 | 0.50 | 15 | TPM0E225PSSR |
| 2.5 | 3.3 | 8.0 | 0.50 | 12 | TPM0E335PSSR |
| 2.5 | 4.7 | 8.0 | 0.50 | 9 | TPM0E475PSSR |
| 2.5 | 6.8 | 8.0 | 0.50 | 8 | TPM0E685PSSR |
| 2.5 | 10 | 10.0 | 0.50 | 6 | TPM0E106PSSR |
| 2.5 | 15 | 10.0 | 0.50 | 6 | TPM0E156PSSR |
| 2.5 | 22 | 10.0 | 0.50 | 6 | TPM0E226PSSR |
| 4 | 1.5 | 8.0 | 0.50 | 20 | TPM0G155PSSR |
| 4 | 2.2 | 8.0 | 0.50 | 15 | TPM0G225PSSR |
| 4 | 3.3 | 8.0 | 0.50 | 12 | TPM0G335PSSR |
| 4 | 4.7 | 8.0 | 0.50 | 9 | TPM0G475PSSR |
| 4 | 6.8 | 8.0 | 0.50 | 8 | TPM0G685PSSR |
| 4 | 10 | 10.0 | 0.50 | 6 | TPM0G106PSSR |
| 4 | 15 | 10.0 | 0.60 | 6 | TPM0G156PSSR |
| 4 | 22 | 10.0 | 0.88 | 6 | TPM0G226PSSR |
| 6.3 | 1.0 | 6.0 | 0.50 | 20 | TPM0J105PSSR |
| 6.3 | 1.5 | 8.0 | 0.50 | 20 | TPM0J155PSSR |
| 6.3 | 2.2 | 8.0 | 0.50 | 15 | TPM0J225PSSR |
| 6.3 | 3.3 | 8.0 | 0.50 | 12 | TPM0J335PSSR |
| 6.3 | 4.7 | 8.0 | 0.50 | 9 | TPM0J475PSSR |
| 6.3 | 6.8 | 8.0 | 0.50 | 8 | TPM0J685PSSR |
| 6.3 | 10 | 10.0 | 0.63 | 6 | TPM0J106PSSR |
| 6.3 | 15 | 10.0 | 0.95 | 6 | TPM0J156PSSR |
| 6.3 | 22 | 10.0 | 1.39 | 6 | TPM0J226PSSR |
| 10 | 0.68 | 6.0 | 0.50 | 25 | TPM1A684PSSR |
| 10 | 1.0 | 6.0 | 0.50 | 20 | TPM1A105PSSR |
| 10 | 1.5 | 8.0 | 0.50 | 20 | TPM1A155PSSR |
| 10 | 2.2 | 8.0 | 0.50 | 15 | TPM1A225PSSR |
| 10 | 3.3 | 8.0 | 0.50 | 12 | TPM1A335PSSR |
| 10 | 4.7 | 8.0 | 0.50 | 9 | TPM1A475PSSR |
| 10 | 6.8 | 8.0 | 0.68 | 9 | TPM1A685PSSR |
| 10 | 10 | 10.0 | 1.00 | 6 | TPM1A106PSSR |
| 16 | 0.47 | 6.0 | 0.50 | 25 | TPM1C474PSSR |
| 16 | 0.68 | 6.0 | 0.50 | 25 | TPM1C684PSSR |
| 16 | 1.0 | 6.0 | 0.50 | 20 | TPM1C105PSSR |
| 16 | 1.5 | 8.0 | 0.50 | 15 | TPM1C155PSSR |
| 20 | 0.33 | 6.0 | 0.50 | 30 | TPM1D334PSSR |
| 20 | 0.47 | 6.0 | 0.50 | 25 | TPM1D474PSSR |
| 20 | 0.68 | 6.0 | 0.50 | 25 | TPM1D684PSSR |
| 25 | 0.10 | 6.0 | 0.50 | 40 | TPM1E104PSSR |
| 25 | 0.15 | 6.0 | 0.50 | 40 | TPM1E154PSSR |
| 25 | 0.22 | 6.0 | 0.50 | 30 | TPM1E224PSSR |
| 25 | 0.33 | 6.0 | 0.50 | 30 | TPM1E334PSSR |
| 25 | 0.47 | 6.0 | 0.50 | 25 | TPM1E474PSSR |