

CHIP TANTALUM CAPACITOR - SMD

Suntan®

SOLID ELECTROLYTE, HIGH VOLUMETRIC EFFICIENCY, STABLEELECTRIC PERFORMANCES

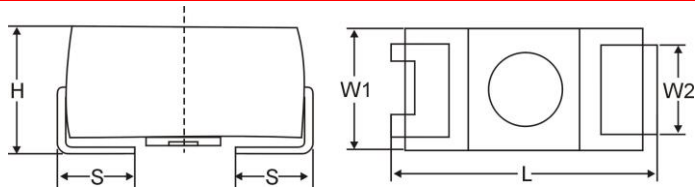
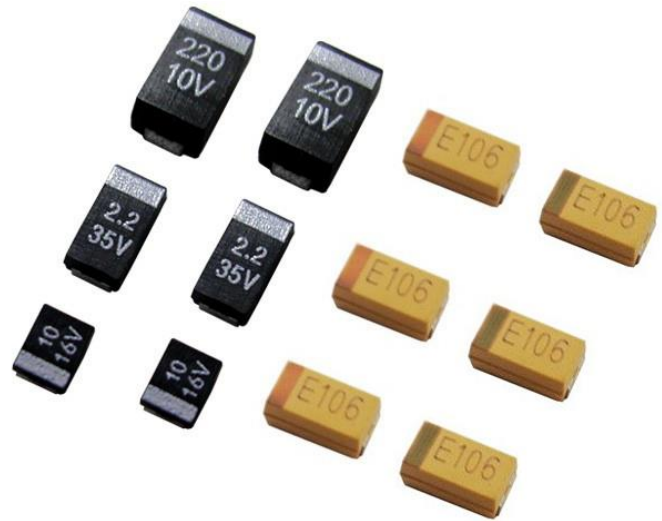
TS20

FEATURES

- Molded case available in six case codes
- Compatible with all popular "High Volume" automatic pick and equipment
- Optical character recognition qualified
- RoHS Compliance & Lead Free Terminations.

SPECIFICATIONS

| | |
|-----------------------------|---|
| Rated Voltage | D.C. 4V ~ 50V |
| Operating Temperature Range | -55 °C to +125 °C (>85 °C with rated voltage derating.) |
| Capacitance Range | 0.1µF to 470µF |
| Capacitance Tolerance | ±20%(M), ±10%(K), ±5%(J) (For special order) |
| DC Leakage Current | $I_o \leq 0.01 C_R V_R$ or 0.5µA (whichever is greater) |
| Load Life | 85°C, After applying rated voltage for 2000 hours at 85 °C, Capacitance change: within ±10% of the initial value Dissipation factor: Not more than 150% of the specified value |
| Case Sizes and Dimensions | Please see Table 2 |
| Dissipation Factor at 20 °C | Please see Table 1 |
| Temperature Characteristics | Please see Table 1 |



TEMPERATURE CHARACTERISTICS

Table 1

| Capacitance (µF) | Capacitance Change (%) | | | DF Max. (%) | | | | DCL Max. (µA) | |
|------------------|------------------------|-------|--------|-------------|-------|-------|--------|--------------------|--------------------|
| | -55°C | +85°C | +125°C | -55°C | +25°C | +85°C | +125°C | +85°C | +125°C |
| ≤1.0 | | | | 6 | 4 | 6 | 6 | +10 I _o | +12 I _o |
| 1.5 ~ 68 | ±10 | ±10 | ±12 | 10 | 6 | 10 | 10 | | |
| 100 ~ 470 | | | | 14 | 12 | 14 | 14 | | |

DIMENSIONS - MILLIMETERS

Unit:mm Table 2

| Case Size | L ±0.4 | W1 ±0.4 | H ±0.4 | S ±0.3 | W2 | |
|-----------|--------|---------|--------|--------|-----|---------|
| P | 2012 | 2.0 | 1.2 | 1.2 | 0.5 | 1.0±0.2 |
| A | 3216 | 3.2 | 1.6 | 1.6 | 0.8 | 1.2±0.2 |
| B | 3528 | 3.5 | 2.8 | 1.9 | 0.8 | 2.2±0.2 |
| C | 6032 | 6.0 | 3.2 | 2.5 | 1.3 | 2.2±0.2 |
| D | 7343 | 7.3 | 4.3 | 2.8 | 1.3 | 2.4±0.2 |
| E | 7343 | 7.3 | 4.3 | 4.1 | 1.3 | 2.4±0.5 |

Rated Voltage, Nominal Capacitance and Case Sizes

Table 3

| U _R | V | 4 | 6.3 | 10 | 16 | 20 | 25 | 35 | 50 |
|----------------------------|---------|--|-------|-------|-------|-------|-------|-------|-----|
| Rated Voltage Marking | | G | J | A | C | D | E | V | T |
| Voltage Derating (V) | | 2.5 | 4 | 6.3 | 10 | 13 | 16 | 23 | 33 |
| Surge Voltage ≤ +85°C (V) | | 5 | 8 | 13 | 20 | 26 | 32 | 46 | 65 |
| Surge Voltage ≤ +125°C (V) | | 3.4 | 5.0 | 9 | 12 | 16 | 20 | 26 | 38 |
| Capacitance (µF) | Marking | Case Size (standard / miniature / Super miniature) | | | | | | | |
| 0.1 | 104 | | | | | | | A | A/B |
| 0.15 | 154 | | | | | | | A | A/B |
| 0.22 | 224 | | | | | | | A | A/B |
| 0.33 | 334 | | | | | | A | A | A/B |
| 0.47 | 474 | | | | P | P | A | A/B | A/C |
| 0.68 | 684 | | | P | A/P | A/P | A | A/B | A/C |
| 1.0 | 105 | A | A | A/P | A/P | A | A | A/B | C |
| 1.5 | 155 | A/P | A | A/P | A | A/B | A/B | A/B/C | D |
| 2.2 | 225 | A/P | A | A/P | A/B | A/B | A/B | B/C | C/D |
| 3.3 | 335 | A/P | A | A/P | A/B | A/B | B/C | C/D | D |
| 4.7 | 475 | A/P | A | A/B/P | A/B | A/B/C | B/C | C/D | D |
| 6.8 | 685 | A/P | A | A/B | A/B | B/C | B/C | C/D | D |
| 10 | 106 | A/P | A/B | A/B | A/B/C | B/C/D | B/C/D | C/D | |
| 15 | 156 | A/B | A | A/B/C | B/C | C | C/D | D/E | |
| 22 | 226 | A/B | A/B/C | A/B/C | B/C/D | C/D | D | | |
| 33 | 336 | B/C | A/B | B/C/D | C/D | C/D | D/E | | |
| 47 | 476 | B/C | B/C | B/C/D | C/D | D/E | D/E | | |
| 68 | 686 | B/C | B/C/D | C/D | D | D/E | | | |
| 100 | 107 | B/C | B/C | C/D | D/E | | | | |
| 150 | 157 | C/D/E | C/D | D/E | E | | | | |
| 220 | 227 | C/D/E | C/D | D | | | | | |
| 330 | 337 | E | D | | | | | | |

Note: Specifications are subject to change without notice. For more details and updates, please visit our website.