

TANTALUM CAPACITOR - DIPPED  
RESIN COATED, INFLAMMABLE AND MOISTURE RESISTANT EPOXY POWDER

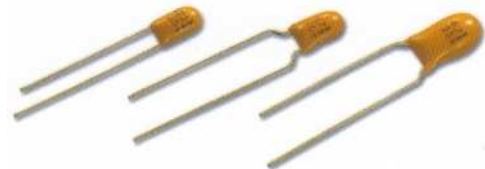
FEATURES

TS19

Epoxy -- coated solid electrolyte tantalum capacitors are encapsulated with flame -- retardant yellow epoxy powder, marked with laser. It meets and exceeds the requirements of IEC Specification 384 -- 15 -- 3, IECQ Specification QC300201/US0003 and Technical Specification SJ/T10856--96, used in military and civil applications such as TV sets, camcorders, computers, program--controlled electronic telephone switching systems, telephones, instruments and meters.

SPECIFICATIONS

|                             |  |
|-----------------------------|--|
| OPERATING TEMPERATURE       | -55°C to +125°C;<br>>85°C with rated voltage derating.           |
| RATED VOLTAGE               | See table 1  |
| DC LEAKAGE AT 20°C          | $10 \leq 0.01 C_R V_R$ or<br>$0.5 \mu A$ (Whichever is greater). |
| DISSIPATION FACTOR AT 20°C  | Please See Table 3   |
| CAPACITANCE RANGE           | $0.047 \mu F \sim 680 \mu F$                                     |
| CAPACITANCE TOLERANCE       | $\pm 20\%$ ; $\pm 10\%$ ; $\pm 5\%$ ; (for special order)        |
| CASE SIZES AND DIMENSIONS   | Please see Table 2   |
| TEMPERATURE CHARACTERISTICS | See Table 3  |



TEMPERATURE CHARACTERISTICS

Table 3

| Capacitance (uF) | Cap. Change (%) |       |        | DF Max. (%) |       |       |        | DCL Max. (μF)   |       |         |
|------------------|-----------------|-------|--------|-------------|-------|-------|--------|---|-------|---------|
|                  | -55°C           | +85°C | +125°C | -55°C       | +20°C | +85°C | +125°C | +20°C   | +85°C | +125°C  |
| <1.0             | -10             | +15   | +25    | 6           | 4     | 6     | 6      | $10 \leq 0.02 C_R U_R$ or<br>$1 \mu F$ whichever is greater | +10lo | +12.5lo |
| 1.5 - 68         |                 |       |        | 8           | 6     | 8     | 8      |   |       |         |
| 10 - 68          |                 |       |        | 10          | 8     | 10    | 10     |   |       |         |
| 100 - 680        |                 |       |        | 12          | 10    | 12    | 12     |   |       |         |

DIMENSIONS - MILLIMETERS

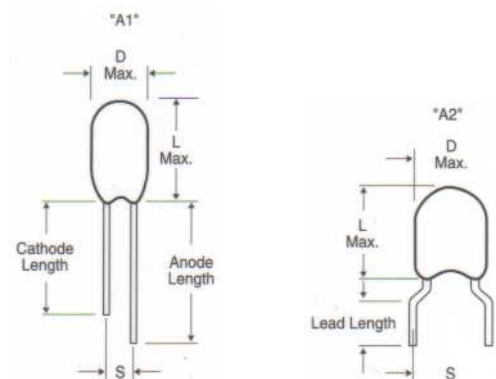
Table 2

| Case Size | D (max) | L (max) | S (±0.5mm) | d (±0.5mm) |
|-----------|---------|---------|------------|------------|
| A         | 4.5     | 7.0     | 2.54       | 0.5        |
| B         | 5.0     | 8.0     | 2.54       | 0.5        |
| C         | 5.5     | 9.5     | 2.54       | 0.5        |
| D         | 6.5     | 11.0    | 2.54       | 0.5        |
| E         | 8.5     | 13.0    | 5.08       | 0.5        |
| F         | 9.5     | 16.5    | 5.08       | 0.5        |

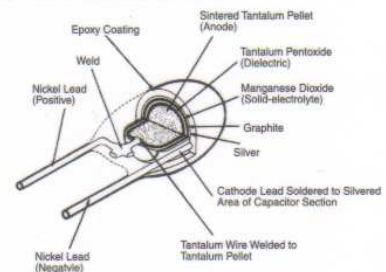
Rated Voltage, Nominal Capacitance and Case Sizes

Table 1

| Rated Voltage (V)       | 3         | 4   | 6.3 | 10  | 16 | 20 | 25 | 35 | 50 |
|-------------------------|-----------|-----|-----|-----|----|----|----|----|----|
| Voltage Derating (V)    | 2         | 2.5 | 4   | 6.3 | 10 | 13 | 16 | 20 | 32 |
| Surge Voltage (V) +85°C | 4         | 5.2 | 8   | 13  | 20 | 26 | 33 | 46 | 65 |
| Capacitance             | Case size |     |     |     |    |    |    |    |    |
| 0.047                   |           |     |     |     |    |    |    | A  | A  |
| 0.068                   |           |     |     |     |    |    |    | A  | A  |
| 0.1                     |           |     |     |     |    |    |    | A  | A  |
| 0.15                    |           |     |     |     |    |    |    | A  | A  |
| 0.22                    |           |     |     |     |    |    |    | A  | A  |
| 0.33                    |           |     |     |     |    |    |    | A  | A  |
| 0.47                    |           |     |     |     |    |    |    | A  | A  |
| 0.68                    |           |     |     |     |    |    |    | A  | A  |
| 1.0                     |           |     |     |     | A  | A  | A  | A  | B  |
| 1.5                     |           |     |     |     | A  | A  | A  | A  | C  |
| 2.2                     |           |     |     | A   | A  | A  | A  | B  | C  |
| 3.3                     |           |     | A   | A   | A  | B  | B  | B  | D  |
| 4.7                     | A         | A   | A   | A   | B  | B  | B  | C  | D  |
| 6.8                     | A         | A   | A   | B   | B  | C  | C  | D  | E  |
| 10                      | A         | A   | B   | B   | B  | C  | C  | D  | E  |
| 15                      | A         | A   | B   | C   | C  | D  | D  | E  | F  |
| 22                      | B         | B   | C   | C   | C  | D  | D  | E  | F  |
| 33                      | B         | B   | C   | D   | D  | E  | E  | F  |    |
| 47                      | C         | C   | D   | D   | D  | E  | E  | F  |    |
| 68                      | D         | D   | D   | D   | E  | F  | F  |    |    |
| 100                     | D         | D   | E   | E   | E  | F  | F  |    |    |
| 150                     | D         | E   | E   | E   | F  |    |    |    |    |
| 220                     | E         | E   | E   | F   |    |    |    |    |    |
| 330                     | E         | F   | F   |     |    |    |    |    |    |
| 470                     | F         |     |     |     |    |    |    |    |    |
| 680                     | F         |     |     |     |    |    |    |    |    |



SINTERED CYLINDRICAL EPOXY-COATED SOLID ELECTROLYTE TANTALUM CAPACITOR



Typical Characteristic Curve

