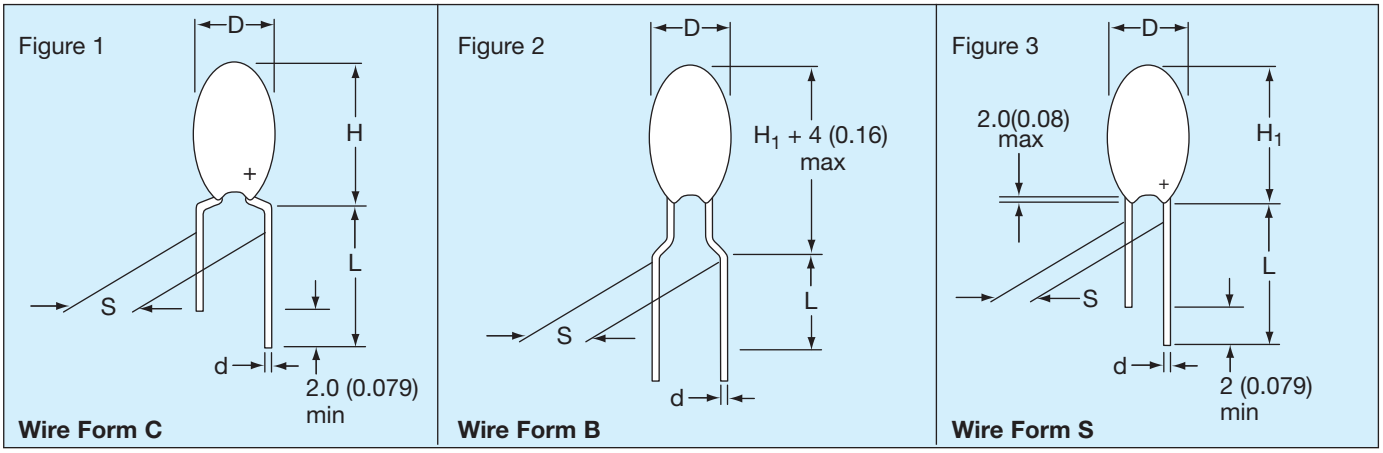
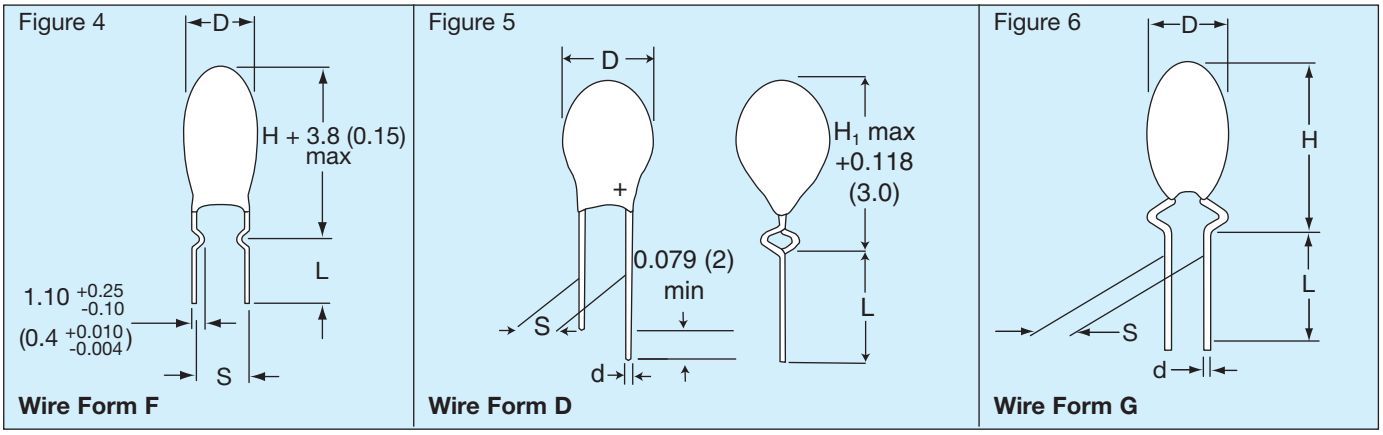
### SOLID TANTALUM RESIN DIPPED TAP/TEP

**Preferred Wire Forms**




**Non-Preferred Wire Forms** (Not recommended for new designs)




## DIMENSIONS

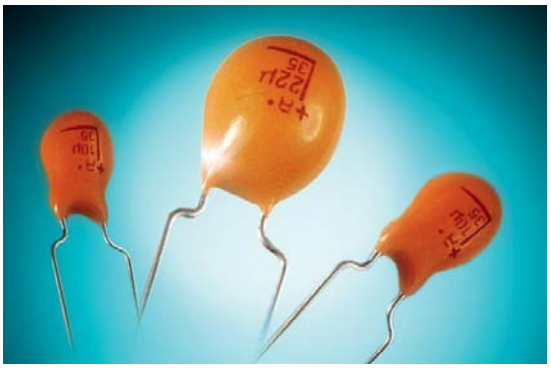
**millimeters (inches)**

| Wire Form | Figure | Case Size | L (see note 1) | S | d | Packaging Suffixes Available* |
|---|---|---|---|---|---|---|
| **Preferred Wire Forms** | | | | | | |
| C | Figure 1 | A - R* | 16.0±4.00 (0.630±0.160) | 5.00±1.00 (0.200±0.040) | 0.50±0.05 (0.020±0.002) | CCS Bulk<br>CRW Tape/Reel<br>CRS Tape/Ammo |
| B | Figure 2 | A - J* | 16.0±4.00 (0.630±0.160) | 5.00±1.00 (0.200±0.040) | 0.50±0.05 (0.020±0.002) | BRW Tape/Reel<br>BRS Tape/Ammo |
| S | Figure 3 | A - J* | 16.0±4.00 (0.630±0.160) | 2.50±0.50 (0.100±0.020) | 0.50±0.05 (0.020±0.002) | SCS Bulk<br>SRW Tape/Reel<br>SRS Tape/Ammo |
| **Non-Preferred Wire Forms** (Not recommended for new designs) | | | | | | |
| F | Figure 4 | A - R | 3.90±0.75 (0.155±0.030) | 5.00±0.50 (0.200±0.020) | 0.50±0.05 (0.020±0.002) | FCS Bulk |
| D | Figure 5 | A - H* | 16.0±4.00 (0.630±0.160) | 2.50±0.75 (0.100±0.020) | 0.50±0.05 (0.020±0.002) | DCS Bulk<br>DTW Tape/Reel<br>DTS Tape/Ammo |
| G | Figure 6 | A - J | 16.0±4.00 (0.630±0.160) | 3.18±0.50 (0.125±0.020) | 0.50±0.05 (0.020±0.002) | GSB Bulk |
| H | Similar to Figure 1 | A - R | 16.0±4.00 (0.630±0.160) | 6.35±1.00 (0.250±0.040) | 0.50±0.05 (0.020±0.002) | HSB Bulk |

Notes: (1) Lead lengths can be supplied to tolerances other than those above and should be specified in the ordering information.
(2) For D, H, and $H_1$ dimensions, refer to individual product on following pages.
* For case size availability in tape and reel, please refer to pages 195-196.

# Dipped Radial Capacitors

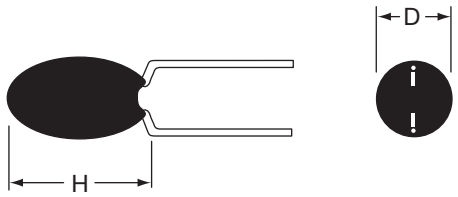
## TEP Series Tin-Lead (Sn/Pb) Finish Product



TEP is a Tin–Lead finish version of the conformally coated tantalum radial leaded capacitor (TAP), It is a professional grade device manufactured with a flame retardant coating and featuring low leakage current and impedance, very small physical sizes and exceptional temperature stability, available in bulk and T&R packaging for auto insertion. The wide range of Capacitance, working voltages and case sizes enables TEP to accommodate to almost any application.

**Not RoHS Compliant**

## CASE DIMENSIONS: millimeters (inches)




| Wire | C, F, G, H | B, S, D | |
|---|---|---|---|
| Case | H | *$H_1$ | D |
| A | 8.50 (0.335) | 7.00 (0.276) | 4.50 (0.177) |
| B | 9.00 (0.354) | 7.50 (0.295) | 4.50 (0.177) |
| C | 10.0 (0.394) | 8.50 (0.335) | 5.00 (0.197) |
| D | 10.5 (0.413) | 9.00 (0.354) | 5.00 (0.197) |
| E | 10.5 (0.413) | 9.00 (0.354) | 5.50 (0.217) |
| F | 11.5 (0.453) | 10.0 (0.394) | 6.00 (0.236) |
| G | 11.5 (0.453) | 10.0 (0.394) | 6.50 (0.256) |
| H | 12.0 (0.472) | 10.5 (0.413) | 7.00 (0.276) |
| J | 13.0 (0.512) | 11.5 (0.453) | 8.00 (0.315) |
| K | 14.0 (0.551) | | 8.50 (0.335) |
| L | 14.0 (0.551) | | 9.00 (0.354) |
| M | 14.5 (0.571) | | 9.00 (0.354) |
| N | 16.0 (0.630) | | 9.00 (0.354) |
| P | 17.0 (0.669) | | 10.0 (0.394) |
| R | 18.5 (0.728) | | 10.0 (0.394) |

## HOW TO ORDER

**TEP**
Type

**106**
**Capacitance Code**
pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)

**M**
**Capacitance Tolerance**
K = ±10%
M = ±20%
(For J = ±5% tolerance, please consult factory)

**016**
**Rated DC Voltage**

**SCS**
**Suffix indicating wire form and packaging**
(see page 188)

# Dipped Radial Capacitors

## TEP Series

## TECHNICAL SPECIFICATIONS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Technical Data: | | All technical data relate to an ambient temperature of +25°C | | | | | | | |
| Capacitance Range: | | 0.10 µF to 330 µF | | | | | | | |
| Capacitance Tolerance: | | ±10%; ±20% (±5% consult your AVX representative for details) | | | | | | | |
| Rated Voltage DC ($V_R$) | ≤ +85°C: | 6.3 | 10 | 16 | 20 | 25 | 35 | 50 | |
| Category Voltage ($V_C$) | ≤ +125°C: | 4 | 6.3 | 10 | 13 | 16 | 23 | 33 | |
| Surge Voltage ($V_S$) | ≤ +85°C: | 8 | 13 | 20 | 26 | 33 | 46 | 65 | |
| Surge Voltage ($V_S$) | ≤ +125°C: | 5 | 9 | 12 | 16 | 21 | 28 | 40 | |
| Temperature Range: | | -55°C to +125°C | | | | | | | |
| Dissipation Factor: | | ≦0.04 for $C_R$ 0.1-1.5µF | | | | | | | |
| | | ≦0.06 for $C_R$ 2.2-6.8µF | | | | | | | |
| | | ≦0.08 for $C_R$ 10-68µF | | | | | | | |
| | | ≦0.10 for $C_R$ 100-330µF | | | | | | | |
| Reliability: | | 1% per 1000 hrs. at 85°C, $V_R$ with 0.1Ω/V series impedance, 60% confidence level. | | | | | | | |

## CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

| Capacitance | | Rated voltage DC ($V_R$) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| µF | Code | 6.3V | 10V | 16V | 20V | 25V | 35V | 50V |
| 0.10 | 104 | | | | | | A | A |
| 0.15 | 154 | | | | | | A | A |
| 0.22 | 224 | | | | | | A | A |
| 0.33 | 334 | | | | | | A | A |
| 0.47 | 474 | | | | | | A | A |
| 0.68 | 684 | | | | | | A | B |
| 1.0 | 105 | | | | A | A | A | C |
| 1.5 | 155 | | | A | A | A | A | D |
| 2.2 | 225 | | A | A | A | A | B | E |
| 3.3 | 335 | A | A | A | B | B | C | F |
| 4.7 | 475 | A | A | B | C | C | E | G |
| 6.8 | 685 | A | B | C | D | D | F | H |
| 10 | 106 | B | C | D | E | E | F | J |
| 15 | 156 | C | D | E | F | F | H | K |
| 22 | 226 | D | E | F | H | H | K | L |
| 33 | 336 | E | F | F | J | J | M | |
| 47 | 476 | F | G | J | K | M | N | |
| 68 | 686 | G | H | L | N | N | | |
| 100 | 107 | H | K | N | N | | | |
| 150 | 157 | K | N | N | | | | |
| 220 | 227 | M | P | R | | | | |
| 330 | 337 | P | R | | | | | |

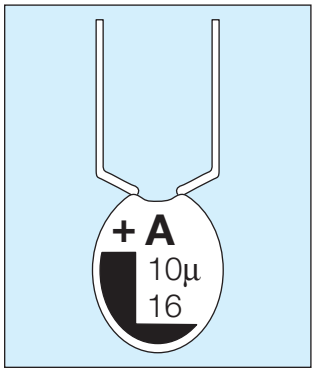
Values outside this standard range may be available on request.
AVX reserves the right to supply capacitors to a higher voltage rating, in the same case size, than that ordered.

## MARKING

Polarity, capacitance, rated DC voltage, and an "A" (AVX logo) are laser marked on the capacitor body which is made of flame retardant gold epoxy resin with a limiting oxygen index in excess of 30 (ASTM-D-2863).

- Polarity
- Capacitance
- Voltage
- AVX logo

- Tolerance code:
  - ±20% = Standard (no marking)
  - ±10% = "K" on reverse side of unit
  - ±5% = "J" on reverse side of unit



### RATINGS & PART NUMBER REFERENCE

| AVX Part No. | Case Size | Cap (µF) | DCL (µA) Max. | DF % Max. | ESR Max. (Ω) @100kHz |
|---|---|---|---|---|---|
| TEP335(*)006 | A | 3.3 | 0.5 | 6 | 13 |
| TEP475(*)006 | A | 4.7 | 0.5 | 6 | 10 |
| TEP685(*)006 | A | 6.8 | 0.5 | 6 | 8 |
| TEP106(*)006 | B | 10 | 0.5 | 8 | 6 |
| TEP156(*)006 | C | 15 | 0.8 | 8 | 5 |
| TEP226(*)006 | D | 22 | 1.1 | 8 | 3.7 |
| TEP336(*)006 | E | 33 | 1.7 | 8 | 3 |
| TEP476(*)006 | F | 47 | 2.4 | 8 | 2 |
| TEP686(*)006 | G | 68 | 3.4 | 8 | 1.8 |
| TEP107(*)006 | H | 100 | 5 | 10 | 1.6 |
| TEP157(*)006 | K | 150 | 7.6 | 10 | 0.9 |
| TEP227(*)006 | M | 220 | 11 | 10 | 0.9 |
| TEP337(*)006 | P | 330 | 16.6 | 10 | 0.7 |
| TEP335(*)006 | A | 3.3 | 0.5 | 6 | 13 |
| TEP225(*)010 | A | 2.2 | 0.5 | 6 | 13 |
| TEP335(*)010 | A | 3.3 | 0.5 | 6 | 10 |
| TEP475(*)010 | A | 4.7 | 0.5 | 6 | 8 |
| TEP685(*)010 | B | 6.8 | 0.5 | 6 | 6 |
| TEP106(*)010 | C | 10 | 0.8 | 8 | 5 |
| TEP156(*)010 | D | 15 | 1.2 | 8 | 3.7 |
| TEP226(*)010 | E | 22 | 1.7 | 8 | 2.7 |
| TEP336(*)010 | F | 33 | 2.6 | 8 | 2.1 |
| TEP476(*)010 | G | 47 | 3.7 | 8 | 1.7 |
| TEP686(*)010 | H | 68 | 5.4 | 8 | 1.3 |
| TEP107(*)010 | K | 100 | 8 | 10 | 1 |
| TEP157(*)010 | N | 150 | 12 | 10 | 0.8 |
| TEP227(*)010 | P | 220 | 17.6 | 10 | 0.6 |
| TEP337(*)010 | R | 330 | 20 | 10 | 0.5 |
| TEP155(*)016 | A | 1.5 | 0.5 | 4 | 10 |
| TEP225(*)016 | A | 2.2 | 0.5 | 6 | 8 |
| TEP335(*)016 | A | 3.3 | 0.5 | 6 | 6 |
| TEP475(*)016 | B | 4.7 | 0.6 | 6 | 5 |
| TEP685(*)016 | C | 6.8 | 0.8 | 6 | 4 |
| TEP106(*)016 | D | 10 | 1.2 | 8 | 3.2 |
| TEP156(*)016 | E | 15 | 1.9 | 8 | 2.5 |
| TEP226(*)016 | F | 22 | 2.8 | 8 | 2 |
| TEP336(*)016 | F | 33 | 4.2 | 8 | 1.6 |
| TEP476(*)016 | J | 47 | 6 | 8 | 1.3 |
| TEP686(*)016 | L | 68 | 8.7 | 8 | 1 |
| TEP107(*)016 | N | 100 | 12.8 | 10 | 0.8 |
| TEP157(*)016 | N | 150 | 19.2 | 10 | 0.6 |
| TEP227(*)016 | R | 220 | 20 | 10 | 0.5 |
| TEP105(*)020 | A | 1 | 0.5 | 4 | 10 |
| TEP155(*)020 | A | 1.5 | 0.5 | 4 | 9 |
| TEP225(*)020 | A | 2.2 | 0.5 | 6 | 7 |
| TEP335(*)020 | B | 3.3 | 0.5 | 6 | 5.5 |
| TEP475(*)020 | C | 4.7 | 0.7 | 6 | 4.5 |
| TEP685(*)020 | D | 6.8 | 1 | 6 | 3.6 |
| TEP106(*)020 | E | 10 | 1.6 | 8 | 2.9 |
| TEP156(*)020 | F | 15 | 2.4 | 8 | 2.3 |

| AVX Part No. | Case Size | Cap (µF) | DCL (µA) Max. | DF % Max. | ESR Max. (Ω) @100kHz |
|---|---|---|---|---|---|
| TEP226(*)020 | H | 22 | 3.5 | 8 | 1.8 |
| TEP336(*)020 | J | 33 | 5.2 | 8 | 1.4 |
| TEP476(*)020 | K | 47 | 7.5 | 8 | 1.2 |
| TEP686(*)020 | N | 68 | 10.8 | 8 | 0.9 |
| TEP107(*)020 | N | 100 | 16 | 10 | 0.6 |
| TEP105(*)025 | A | 1 | 0.5 | 4 | 10 |
| TEP155(*)025 | A | 1.5 | 0.5 | 4 | 8 |
| TEP225(*)025 | A | 2.2 | 0.5 | 6 | 6 |
| TEP335(*)025 | B | 3.3 | 0.6 | 6 | 5 |
| TEP475(*)025 | C | 4.7 | 0.9 | 6 | 4 |
| TEP685(*)025 | D | 6.8 | 1.3 | 6 | 3.1 |
| TEP106(*)025 | E | 10 | 2 | 8 | 2.5 |
| TEP156(*)025 | F | 15 | 3 | 8 | 2 |
| TEP226(*)025 | H | 22 | 4.4 | 8 | 1.5 |
| TEP336(*)025 | J | 33 | 6.6 | 8 | 1.2 |
| TEP476(*)025 | M | 47 | 9.4 | 8 | 1 |
| TEP686(*)025 | N | 68 | 13.6 | 8 | 0.8 |
| TEP104(*)035 | A | 0.1 | 0.5 | 4 | 26 |
| TEP154(*)035 | A | 0.15 | 0.5 | 4 | 21 |
| TEP224(*)035 | A | 0.22 | 0.5 | 4 | 17 |
| TEP334(*)035 | A | 0.33 | 0.5 | 4 | 15 |
| TEP474(*)035 | A | 0.47 | 0.5 | 4 | 13 |
| TEP684(*)035 | A | 0.68 | 0.5 | 4 | 10 |
| TEP105(*)035 | A | 1 | 0.5 | 4 | 8 |
| TEP155(*)035 | A | 1.5 | 0.5 | 4 | 6 |
| TEP225(*)035 | B | 2.2 | 0.6 | 6 | 5 |
| TEP335(*)035 | C | 3.3 | 0.9 | 6 | 4 |
| TEP475(*)035 | E | 4.7 | 1.3 | 6 | 3 |
| TEP685(*)035 | F | 6.8 | 1.9 | 6 | 2.5 |
| TEP106(*)035 | F | 10 | 2.8 | 8 | 2 |
| TEP156(*)035 | H | 15 | 4.2 | 8 | 1.6 |
| TEP226(*)035 | K | 22 | 6.1 | 8 | 1.3 |
| TEP336(*)035 | M | 33 | 9.2 | 8 | 1 |
| TEP476(*)035 | N | 47 | 10 | 8 | 0.8 |
| TEP104(*)050 | A | 0.1 | 0.5 | 4 | 26 |
| TEP154(*)050 | A | 0.15 | 0.5 | 4 | 21 |
| TEP224(*)050 | A | 0.22 | 0.5 | 4 | 17 |
| TEP334(*)050 | A | 0.33 | 0.5 | 4 | 15 |
| TEP474(*)050 | A | 0.47 | 0.5 | 4 | 13 |
| TEP684(*)050 | B | 0.68 | 0.5 | 4 | 10 |
| TEP105(*)050 | C | 1 | 0.5 | 4 | 8 |
| TEP155(*)050 | D | 1.5 | 0.6 | 4 | 6 |
| TEP225(*)050 | E | 2.2 | 0.8 | 6 | 3.5 |
| TEP335(*)050 | F | 3.3 | 1.3 | 6 | 3 |
| TEP475(*)050 | G | 4.7 | 1.8 | 6 | 2.5 |
| TEP685(*)050 | H | 6.8 | 2.7 | 6 | 2 |
| TEP106(*)050 | J | 10 | 4 | 8 | 1.6 |
| TEP156(*)050 | K | 15 | 6 | 8 | 1.2 |
| TEP226(*)050 | L | 22 | 8.8 | 8 | 1 |

ООО «ЛайфЭлектроникс» “LifeElectronics” LLC

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

*Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.*

*С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров*

*Мы предлагаем:*

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

*В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.*

*Конструкторский отдел помогает осуществить:*

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

*Тел: +7 (812) 336 43 04 (многоканальный)*
*Email: org@lifeelectronics.ru*

***www.lifeelectronics.ru***