

Molded Axial Capacitors



TAR Series

SOLID TANTALUM MOLDED AXIAL LEADED CAPACITORS

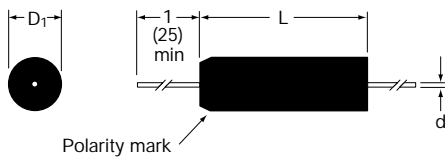


TAR: Designed for use in miniature and subminiature circuit applications.

1. Precision molded and taped and reeled for use in high speed automatic insertion applications.
2. Suitable for decoupling, blocking, by-passing and filtering in computers, data processing, communications and other equipment.
3. Available in four case sizes.
4. Tapered nose identifies positive polarity.
5. Capacitance, tolerance, rated voltage and polarity are marked onto the capacitor body.
6. See page 87 for packaging quantities.

CASE DIMENSIONS: millimeters (inches)

| Case Size | L ±0.25 (0.010) | D ₁ ±0.25 (0.010) | d ±0.05 (0.002) | Typical Weight g |
|-----------|--------------------|---------------------------------|--------------------|------------------|
| Q | 6.35 (0.250) | 2.16 (0.085) | 0.50 (0.020) | 0.20 |
| R | 7.40 (0.290) | 2.50 (0.100) | 0.50 (0.020) | 0.25 |
| S | 8.60 (0.340) | 4.30 (0.170) | 0.50 (0.020) | 0.52 |
| W | 10.4 (0.410) | 4.30 (0.170) | 0.50 (0.020) | 0.53 |



HOW TO ORDER

TAR

Type

R

Case Code

335

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%

015

Rated DC Voltage

*Not recommended for new designs



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TECHNICAL SPECIFICATIONS

| | | | | | | | | | |
|------------------------------------|----------|--|-----|-----|----|----|----|----|----|
| Technical Data: | | All technical data relate to an ambient temperature of +25°C | | | | | | | |
| Capacitance Range: | | 0.1μF to 68μF | | | | | | | |
| Capacitance Tolerance: | | ±20%; ±10%; ±5% | | | | | | | |
| Rated Voltage DC (V _R) | ≧+85°C: | 4 | 6.3 | 10 | 15 | 20 | 25 | 35 | 50 |
| Category Voltage (V _C) | ≧+125°C: | 2.7 | 4 | 6.3 | 10 | 13 | 17 | 23 | 33 |
| Surge Voltage (V _S) | ≧+85°C: | 5.2 | 8 | 13 | 20 | 26 | 33 | 46 | 65 |
| | ≧+125°C: | 3.5 | 5 | 9 | 12 | 16 | 21 | 28 | 40 |
| Temperature Range: | | -55°C to +125°C | | | | | | | |
| Environmental Classification: | | 55/125/56 (IEC 68-2) | | | | | | | |
| Dissipation Factor: | | See part number table | | | | | | | |

| Capacitance Range (letter denotes case code) | | | | | | | | |
|--|------------------------------------|------|-----|-----|-----|-----|-----|-----|
| Capacitance μF | Rated voltage DC (V _R) | | | | | | | |
| | 4V | 6.3V | 10V | 15V | 20V | 25V | 35V | 50V |
| 0.1 | | | | | | | Q | Q |
| 0.15 | | | | | | | Q | Q |
| 0.22 | | | | | | | Q | Q |
| 0.33 | | | | | | | Q | R |
| 0.47 | | | | | | Q | Q | R |
| 0.68 | | | | | | Q | R | R |
| 1.0 | | | | | Q | Q | R | R |
| 1.5 | | | | Q | Q | R | R | S |
| 2.2 | | | Q | Q | R | R | S | S |
| 3.3 | | Q | Q | R | R | R | S | W |
| 4.7 | Q | Q | R | R | R | S | S | W |
| 6.8 | Q | R | R | R | S | S | W | |
| 10 | R | R | R | S | S | S | W | |
| 15 | R | R | S | S | W | W | | |
| 22 | R | S | S | W | W | | | |
| 33 | S | S | W | W | | | | |
| 47 | S | W | W | | | | | |
| 68 | W | W | | | | | | |

Values outside this standard range may be available on request without appropriate release or qualification.

AVX reserves the right to supply capacitors to a tighter specification than that ordered.

MARKING

- Polarity
- Capacitance
- Date code
- Tolerance
- Voltage

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TAR Series

RATINGS AND PART NUMBER REFERENCE

| AVX Part No. | Case Size | Capacitance μF | DCL (μA) Max. | DF % Max. | ESR Max. (Ω) @ 100 kHz |
|---|-----------|---------------------------|----------------------------|-----------|---------------------------------|
| 4 volt @ 85°C (2.7 volt @ 125°C) | | | | | |
| TARQ475(*)004 | Q | 4.7 | 0.5 | 8 | 12 |
| TARQ685(*)004 | Q | 6.8 | 0.5 | 8 | 10 |
| TARR106(*)004 | R | 10 | 0.5 | 8 | 10 |
| TARR156(*)004 | R | 15 | 0.5 | 8 | 8.0 |
| TARR226(*)004 | R | 22 | 0.7 | 8 | 6.0 |
| TARS336(*)004 | S | 33 | 1.1 | 8 | 5.0 |
| TARS476(*)004 | S | 47 | 1.5 | 8 | 3.5 |
| TARW686(*)004 | W | 68 | 2.2 | 8 | 2.5 |
| 6.3 volt @ 85°C (4 volt @ 125°C) | | | | | |
| TARQ335(*)006 | Q | 3.3 | 0.5 | 4 | 14 |
| TARQ475(*)006 | Q | 4.7 | 0.5 | 4 | 10 |
| TARR685(*)006 | R | 6.8 | 0.5 | 6 | 8.0 |
| TARR106(*)006 | R | 10 | 0.5 | 6 | 6.0 |
| TARR156(*)006 | R | 15 | 0.7 | 6 | 5.0 |
| TARS226(*)006 | S | 22 | 1.1 | 6 | 3.7 |
| TARS336(*)006 | S | 33 | 1.5 | 6 | 3.0 |
| TARW476(*)006 | W | 47 | 2.3 | 6 | 2.0 |
| TARW686(*)006 | W | 68 | 3.3 | 6 | 1.8 |
| 10 volt @ 85°C (7 volt @ 125°C) | | | | | |
| TARQ225(*)010 | Q | 2.2 | 0.5 | 4 | 14 |
| TARQ335(*)010 | Q | 3.3 | 0.5 | 4 | 10 |
| TARR475(*)010 | R | 4.7 | 0.5 | 4 | 8.0 |
| TARR685(*)010 | R | 6.8 | 0.5 | 6 | 6.0 |
| TARR106(*)010 | R | 10 | 0.8 | 6 | 5.0 |
| TARS156(*)010 | S | 15 | 1.2 | 6 | 3.7 |
| TARS226(*)010 | S | 22 | 1.5 | 6 | 2.7 |
| TARW336(*)010 | W | 33 | 2.6 | 6 | 2.1 |
| TARW476(*)010 | W | 47 | 3.8 | 6 | 1.7 |
| 15 volt @ 85°C (10 volt @ 125°C) | | | | | |
| TARQ155(*)015 | Q | 1.5 | 0.5 | 4 | 14 |
| TARQ225(*)015 | Q | 2.2 | 0.5 | 4 | 8.0 |
| TARR335(*)015 | R | 3.3 | 0.5 | 4 | 6.0 |
| TARR475(*)015 | R | 4.7 | 0.6 | 4 | 5.0 |
| TARR685(*)015 | R | 6.8 | 0.8 | 6 | 4.0 |
| TARS106(*)015 | S | 10 | 1.2 | 6 | 3.2 |
| TARS156(*)015 | S | 15 | 1.5 | 6 | 2.5 |
| TARW226(*)015 | W | 22 | 2.6 | 6 | 2.0 |
| TARW336(*)015 | W | 33 | 4.0 | 6 | 1.6 |
| 20 volt @ 85°C (13 volt @ 125°C) | | | | | |
| TARQ105(*)020 | Q | 1.0 | 0.5 | 4 | 18 |
| TARQ155(*)020 | Q | 1.5 | 0.5 | 4 | 12 |
| TARR225(*)020 | R | 2.2 | 0.5 | 4 | 7.0 |
| TARR335(*)020 | R | 3.3 | 0.5 | 4 | 5.5 |
| TARR475(*)020 | R | 4.7 | 0.8 | 4 | 4.5 |
| TARS685(*)020 | S | 6.8 | 1.1 | 6 | 3.7 |
| TARS106(*)020 | S | 10 | 1.6 | 6 | 2.8 |
| TARW156(*)020 | W | 15 | 2.4 | 6 | 2.3 |
| TARW226(*)020 | W | 22 | 3.5 | 6 | 1.9 |

| AVX Part No. | Case Size | Capacitance μF | DCL (μA) Max. | DF % Max. | ESR Max. (Ω) @ 100 kHz |
|---|-----------|---------------------------|----------------------------|-----------|---------------------------------|
| 25 volt @ 85°C (17 volt @ 125°C) | | | | | |
| TARQ474(*)025 | Q | 0.47 | 0.5 | 3 | 20 |
| TARQ684(*)025 | Q | 0.68 | 0.5 | 3 | 16 |
| TARQ105(*)025 | Q | 1.0 | 0.5 | 3 | 12 |
| TARR155(*)025 | R | 1.5 | 0.5 | 3 | 8.0 |
| TARR225(*)025 | R | 2.2 | 0.5 | 3 | 6.0 |
| TARR335(*)025 | R | 3.3 | 0.7 | 3 | 5.0 |
| TARS475(*)025 | S | 4.7 | 0.9 | 4 | 4.0 |
| TARS685(*)025 | S | 6.8 | 1.4 | 4 | 3.1 |
| TARS106(*)025 | S | 10 | 1.5 | 4 | 2.5 |
| TARW156(*)025 | W | 15 | 3.0 | 4 | 2.0 |
| 35 volt @ 85°C (23 volt @ 125°C) | | | | | |
| TARQ104(*)035 | Q | 0.1 | 0.5 | 3 | 26 |
| TARQ154(*)035 | Q | 0.15 | 0.5 | 3 | 21 |
| TARQ224(*)035 | Q | 0.22 | 0.5 | 3 | 17 |
| TARQ334(*)035 | Q | 0.33 | 0.5 | 3 | 15 |
| TARQ474(*)035 | Q | 0.47 | 0.5 | 3 | 13 |
| TARQ684(*)035 | R | 0.68 | 0.5 | 3 | 10 |
| TARR105(*)035 | R | 1.0 | 0.5 | 3 | 8.0 |
| TARR155(*)035 | R | 1.5 | 0.5 | 3 | 6.0 |
| TARS225(*)035 | S | 2.2 | 0.6 | 3 | 5.0 |
| TARS335(*)035 | S | 3.3 | 0.9 | 4 | 4.0 |
| TARS475(*)035 | S | 4.7 | 1.3 | 4 | 3.0 |
| TARW685(*)035 | W | 6.8 | 1.9 | 4 | 2.5 |
| TARW106(*)035 | W | 10 | 2.8 | 4 | 2.0 |
| 50 volt @ 85°C (33 volt @ 125°C) | | | | | |
| TARQ104(*)050 | Q | 0.1 | 0.5 | 3 | 26 |
| TARQ154(*)050 | Q | 0.15 | 0.5 | 3 | 21 |
| TARQ224(*)050 | Q | 0.22 | 0.5 | 3 | 17 |
| TARR334(*)050 | R | 0.33 | 0.5 | 3 | 15 |
| TARR474(*)050 | R | 0.47 | 0.5 | 3 | 13 |
| TARR684(*)050 | R | 0.68 | 0.5 | 3 | 10 |
| TARR105(*)050 | R | 1.0 | 0.5 | 3 | 8.0 |
| TARS155(*)050 | S | 1.5 | 0.6 | 4 | 5.0 |
| TARS225(*)050 | S | 2.2 | 0.9 | 4 | 3.5 |
| TARW335(*)050 | W | 3.3 | 1.3 | 4 | 3.0 |
| TARW475(*)050 | W | 4.7 | 1.9 | 4 | 2.5 |

(*) Insert capacitance tolerance code: M for $\pm 20\%$, K for $\pm 10\%$ and J for $\pm 5\%$

NOTE: Voltage ratings are minimum values. AVX reserves the right to supply higher voltage ratings in the same case size.

Axial Capacitors



Tape and Reel Packaging

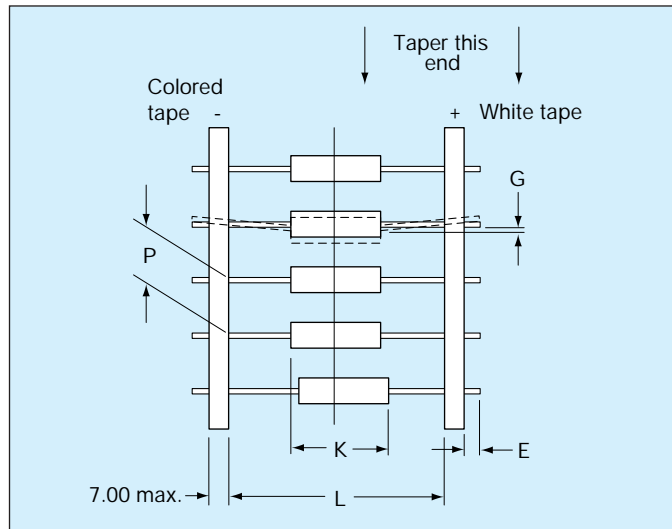
SOLID TANTALUM AXIAL TAR AND TAA

TAPE AND REEL PACKAGING FOR AUTOMATIC COMPONENT INSERTION

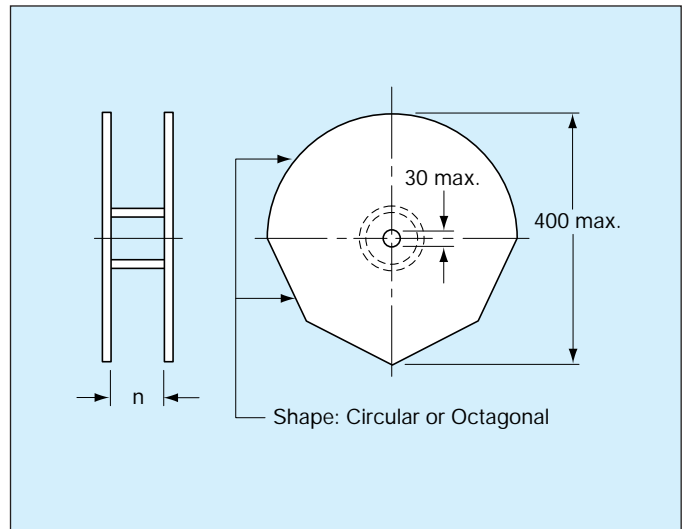
TAR and TAA series are supplied as standard on axial bandolier, in reel format or 'ammo' pack for use on high speed axial automatic insertion equipment, or preforming machines.

The tape format is compatible with standards for component taping set out by major manufacturers of axial automatic insertion equipment.

TAPE SPECIFICATION



REEL CONFIGURATION



PACKAGING QUANTITIES TAR

For reels

| Case Code | Number of Pieces |
|-----------|------------------|
| Q | 4500 |
| R | 4000 |
| S | 2500 |
| W | 2500 |

PACKAGING QUANTITIES TAA

For reels, Standard Suffix G

| Case Code | Number of Pieces |
|-----------|------------------|
| A | 1000 |
| B | 1000 |
| C | 500 |
| D | 500 |

DIMENSIONS:

millimeters (inches)

| | |
|-------------|--|
| E max | 1.60 (0.063) |
| G max | 1.20 (0.047) |
| K | Component body shall be located centrally within a window, width K, where K is 1.40 (0.060) greater than the primary body length |
| L | 52.4 ± 1.50 (2.060 ± 0.060) |
| P | 5.00 ± 0.50 (0.200 ± 0.020) |
| leader max | 400 (15.75) |
| trailer max | 30.0 (1.200) |
| n | Will allow for unhindered reeling and unreeling of the taped components. Preferred dimensions 73.0 (2.870) spacing. |