



**THE DATASHEET OF
TAP475M035SCS**



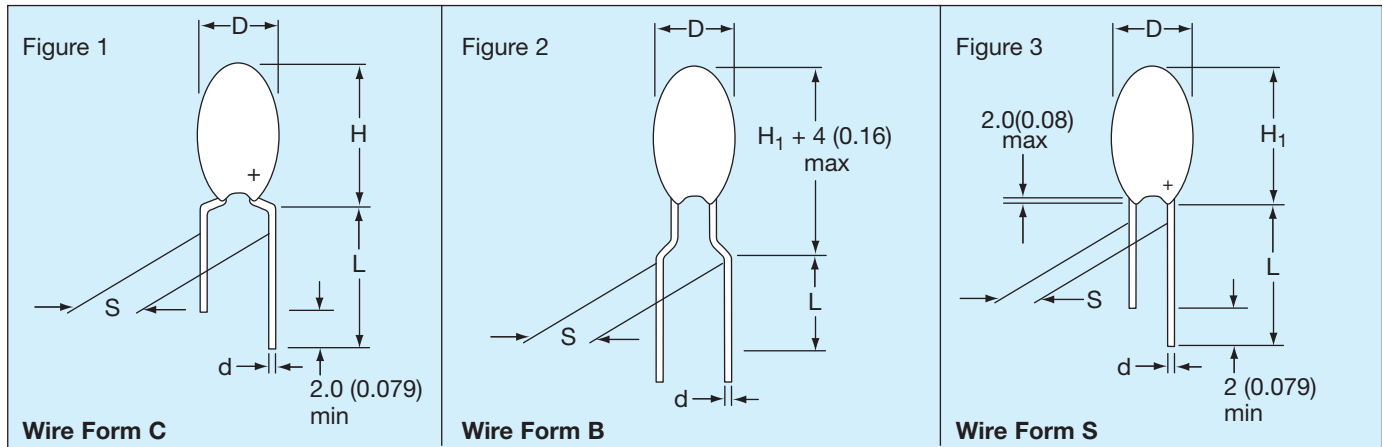
Dipped Radial Capacitors



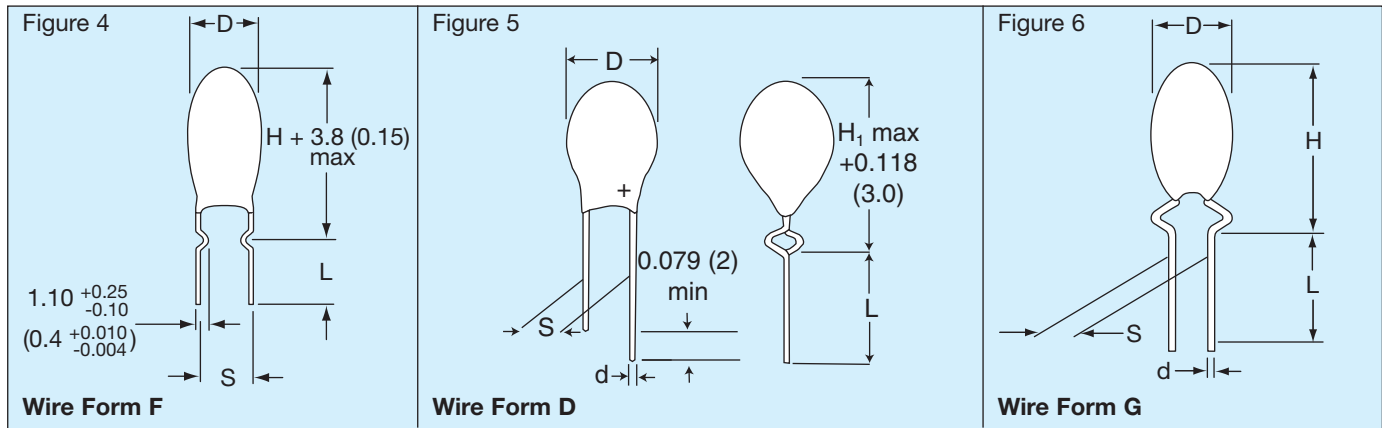
Wire Form Outline

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 CRW Tape/Reel 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 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 SRW Tape/Reel 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 DTW Tape/Reel 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 H₁ dimensions, refer to individual product on following pages.

* For case size availability in tape and reel, please refer to pages 199-200.

Dipped Radial Capacitors



TAP Series

SOLID TANTALUM RESIN DIPPED CAPACITORS



TAP 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. It is designed and conditioned to operate to +125°C (see page 228 for voltage derating above 85°C) and is available loose or taped and reeled for auto insertion. The 15 case sizes with wide capacitance and working voltage ranges means the TAP can accommodate almost any application.



MAXIMUM CASE DIMENSIONS: millimeters (inches)

| Wire Case | C, F, G, H H | B, S, D *H ₁ | D |
|-----------|-----------------|----------------------------|--------------|
| A | 8.50 (0.330) | 7.00 (0.280) | 4.50 (0.180) |
| B | 9.00 (0.350) | 7.50 (0.300) | 4.50 (0.180) |
| C | 10.0 (0.390) | 8.50 (0.330) | 5.00 (0.200) |
| D | 10.5 (0.410) | 9.00 (0.350) | 5.00 (0.200) |
| E | 10.5 (0.410) | 9.00 (0.350) | 5.50 (0.220) |
| F | 11.5 (0.450) | 10.0 (0.390) | 6.00 (0.240) |
| G | 11.5 (0.450) | 10.0 (0.390) | 6.50 (0.260) |
| H | 12.0 (0.470) | 10.5 (0.410) | 7.00 (0.280) |
| J | 13.0 (0.510) | 11.5 (0.450) | 8.00 (0.310) |
| K | 14.0 (0.550) | 12.5 (0.490) | 8.50 (0.330) |
| L | 14.0 (0.550) | 12.5 (0.490) | 9.00 (0.350) |
| M | 14.5 (0.570) | 13.0 (0.510) | 9.00 (0.350) |
| N | 16.0 (0.630) | | 9.00 (0.350) |
| P | 17.0 (0.670) | | 10.0 (0.390) |
| R | 18.5 (0.730) | | 10.0 (0.390) |

HOW TO ORDER

TAP

Type

475

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)

035

Rated DC Voltage

SCS

Suffix indicating wire form and packaging
(see page 192)



Dipped Radial Capacitors



TAP Series

TECHNICAL SPECIFICATIONS

| | | | | | | | | |
|-------------------------------|---|-----|-----|----|----|----|----|----|
| Technical Data: | All technical data relate to an ambient temperature of +25°C | | | | | | | |
| Capacitance Range: | 0.10 μ F to 330 μ F | | | | | | | |
| Capacitance Tolerance: | \pm 20%; \pm 10% (\pm 5% consult your AVX representative for details) | | | | | | | |
| Rated Voltage DC (V_R) | \leq +85°C: | 6.3 | 10 | 16 | 20 | 25 | 35 | 50 |
| Category Voltage (V_C) | \leq +125°C: | 4 | 6.3 | 10 | 13 | 16 | 23 | 33 |
| Surge Voltage (V_S) | \leq +85°C: | 8 | 13 | 20 | 26 | 33 | 46 | 65 |
| Surge Voltage (V_S) | \leq +125°C: | 5 | 9 | 12 | 16 | 21 | 28 | 40 |
| Temperature Range: | -55°C to +125°C | | | | | | | |
| Environmental Classification: | 55/125/56 (IEC 68-2) | | | | | | | |
| Dissipation Factor: | \leq 0.04 for C_R 0.1-1.5 μ F | | | | | | | |
| | \leq 0.06 for C_R 2.2-6.8 μ F | | | | | | | |
| | \leq 0.08 for C_R 10-68 μ F | | | | | | | |
| | \leq 0.10 for C_R 100-330 μ F | | | | | | | |
| Reliability: | 1% per 1000 hrs. at 85°C with 0.1 Ω /V series impedance, 60% confidence level. | | | | | | | |
| Qualification: | CECC 30201 - 032 | | | | | | | |

CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

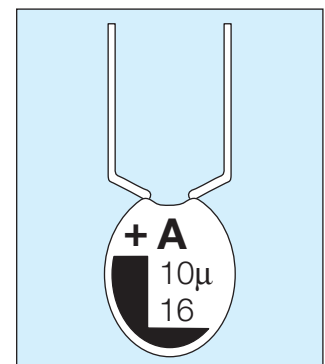
| Capacitance | | Rated voltage DC (V_R) | | | | | | |
|-------------|------|----------------------------|-----|-----|-----|-----|-----|-----|
| μ F | Code | 6.3V | 10V | 16V | 20V | 25V | 35V | 50V |
| 0.10 | 104 | | | | | | A | A |
| 0.15 | 154 | | | | | | A | A |
| 0.22 | 224 | | | | | | A | A |
| 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:
 - \pm 20% = Standard (no marking)
 - \pm 10% = "K" on reverse side of unit
 - \pm 5% = "J" on reverse side of unit



Dipped Radial Capacitors



TAP Series

RATINGS AND PART NUMBER REFERENCE

| AVX Part No. | Case Size | Capacitance μF | DCL (μA) Max. | DF % Max. | ESR Max. (Ω) @ 100 kHz |
|--|-----------|---------------------------|----------------------------|-----------|---------------------------------|
| 6.3 volt @ 85°C (4 volt @ 125°C) | | | | | |
| TAP 335(+006 | A | 3.3 | 0.5 | 6 | 13.0 |
| TAP 475(+006 | A | 4.7 | 0.5 | 6 | 10.0 |
| TAP 685(+006 | A | 6.8 | 0.5 | 6 | 8.0 |
| TAP 106(+006 | B | 10 | 0.5 | 8 | 6.0 |
| TAP 156(+006 | C | 15 | 0.8 | 8 | 5.0 |
| TAP 226(+006 | D | 22 | 1.1 | 8 | 3.7 |
| TAP 336(+006 | E | 33 | 1.7 | 8 | 3.0 |
| TAP 476(+006 | F | 47 | 2.4 | 8 | 2.0 |
| TAP 686(+006 | G | 68 | 3.4 | 8 | 1.8 |
| TAP 107(+006 | H | 100 | 5.0 | 10 | 1.6 |
| TAP 157(+006 | K | 150 | 7.6 | 10 | 0.9 |
| TAP 227(+006 | M | 220 | 11.0 | 10 | 0.9 |
| TAP 337(+006 | P | 330 | 16.6 | 10 | 0.7 |
| 10 volt @ 85°C (6.3 volt @ 125°C) | | | | | |
| TAP 225(+010 | A | 2.2 | 0.5 | 6 | 13.0 |
| TAP 335(+010 | A | 3.3 | 0.5 | 6 | 10.0 |
| TAP 475(+010 | A | 4.7 | 0.5 | 6 | 8.0 |
| TAP 685(+010 | B | 6.8 | 0.5 | 6 | 6.0 |
| TAP 106(+010 | C | 10 | 0.8 | 8 | 5.0 |
| TAP 156(+010 | D | 15 | 1.2 | 8 | 3.7 |
| TAP 226(+010 | E | 22 | 1.7 | 8 | 2.7 |
| TAP 336(+010 | F | 33 | 2.6 | 8 | 2.1 |
| TAP 476(+010 | G | 47 | 3.7 | 8 | 1.7 |
| TAP 686(+010 | H | 68 | 5.4 | 8 | 1.3 |
| TAP 107(+010 | K | 100 | 8.0 | 10 | 1.0 |
| TAP 157(+010 | N | 150 | 12.0 | 10 | 0.8 |
| TAP 227(+010 | P | 220 | 17.6 | 10 | 0.6 |
| TAP 337(+010 | R | 330 | 20.0 | 10 | 0.5 |
| 16 volt @ 85°C (10 volt @ 125°C) | | | | | |
| TAP 155(+016 | A | 1.5 | 0.5 | 4 | 10.0 |
| TAP 225(+016 | A | 2.2 | 0.5 | 6 | 8.0 |
| TAP 335(+016 | A | 3.3 | 0.5 | 6 | 6.0 |
| TAP 475(+016 | B | 4.7 | 0.6 | 6 | 5.0 |
| TAP 685(+016 | C | 6.8 | 0.8 | 6 | 4.0 |
| TAP 106(+016 | D | 10 | 1.2 | 8 | 3.2 |
| TAP 156(+016 | E | 15 | 1.9 | 8 | 2.5 |
| TAP 226(+016 | F | 22 | 2.8 | 8 | 2.0 |
| TAP 336(+016 | F | 33 | 4.2 | 8 | 1.6 |
| TAP 476(+016 | J | 47 | 6.0 | 8 | 1.3 |
| TAP 686(+016 | L | 68 | 8.7 | 8 | 1.0 |
| TAP 107(+016 | N | 100 | 12.8 | 10 | 0.8 |
| TAP 157(+016 | N | 150 | 19.2 | 10 | 0.6 |
| TAP 227(+016 | R | 220 | 20.0 | 10 | 0.5 |
| 20 volt @ 85°C (13 volt @ 125°C) | | | | | |
| TAP 105(+020 | A | 1.0 | 0.5 | 4 | 10.0 |
| TAP 155(+020 | A | 1.5 | 0.5 | 4 | 9.0 |
| TAP 225(+020 | A | 2.2 | 0.5 | 6 | 7.0 |
| TAP 335(+020 | B | 3.3 | 0.5 | 6 | 5.5 |
| TAP 475(+020 | C | 4.7 | 0.7 | 6 | 4.5 |
| TAP 685(+020 | D | 6.8 | 1.0 | 6 | 3.6 |
| TAP 106(+020 | E | 10 | 1.6 | 8 | 2.9 |
| TAP 156(+020 | F | 15 | 2.4 | 8 | 2.3 |
| TAP 226(+020 | H | 22 | 3.5 | 8 | 1.8 |
| TAP 336(+020 | J | 33 | 5.2 | 8 | 1.4 |
| TAP 476(+020 | K | 47 | 7.5 | 8 | 1.2 |
| TAP 686(+020 | N | 68 | 10.8 | 8 | 0.9 |
| TAP 107(+020 | N | 100 | 16.0 | 10 | 0.6 |

| AVX Part No. | Case Size | Capacitance μF | DCL (μA) Max. | DF % Max. | ESR Max. (Ω) @ 100 kHz |
|---|-----------|---------------------------|----------------------------|-----------|---------------------------------|
| 25 volt @ 85°C (16 volt @ 125°C) | | | | | |
| TAP 105(+025 | A | 1.0 | 0.5 | 4 | 10.0 |
| TAP 155(+025 | A | 1.5 | 0.5 | 4 | 8.0 |
| TAP 225(+025 | A | 2.2 | 0.5 | 6 | 6.0 |
| TAP 335(+025 | B | 3.3 | 0.6 | 6 | 5.0 |
| TAP 475(+025 | C | 4.7 | 0.9 | 6 | 4.0 |
| TAP 685(+025 | D | 6.8 | 1.3 | 6 | 3.1 |
| TAP 106(+025 | E | 10 | 2.0 | 8 | 2.5 |
| TAP 156(+025 | F | 15 | 3.0 | 8 | 2.0 |
| TAP 226(+025 | H | 22 | 4.4 | 8 | 1.5 |
| TAP 336(+025 | J | 33 | 6.6 | 8 | 1.2 |
| TAP 476(+025 | M | 47 | 9.4 | 8 | 1.0 |
| TAP 686(+025 | N | 68 | 13.6 | 8 | 0.8 |
| 35 volt @ 85°C (23 volt @ 125°C) | | | | | |
| TAP 104(+035 | A | 0.1 | 0.5 | 4 | 26.0 |
| TAP 154(+035 | A | 0.15 | 0.5 | 4 | 21.0 |
| TAP 224(+035 | A | 0.22 | 0.5 | 4 | 17.0 |
| TAP 334(+035 | A | 0.33 | 0.5 | 4 | 15.0 |
| TAP 474(+035 | A | 0.47 | 0.5 | 4 | 13.0 |
| TAP 684(+035 | A | 0.68 | 0.5 | 4 | 10.0 |
| TAP 105(+035 | A | 1.0 | 0.5 | 4 | 8.0 |
| TAP 155(+035 | A | 1.5 | 0.5 | 4 | 6.0 |
| TAP 225(+035 | B | 2.2 | 0.6 | 6 | 5.0 |
| TAP 335(+035 | C | 3.3 | 0.9 | 6 | 4.0 |
| TAP 475(+035 | E | 4.7 | 1.3 | 6 | 3.0 |
| TAP 685(+035 | F | 6.8 | 1.9 | 6 | 2.5 |
| TAP 106(+035 | F | 10 | 2.8 | 8 | 2.0 |
| TAP 156(+035 | H | 15 | 4.2 | 8 | 1.6 |
| TAP 226(+035 | K | 22 | 6.1 | 8 | 1.3 |
| TAP 336(+035 | M | 33 | 9.2 | 8 | 1.0 |
| TAP 476(+035 | N | 47 | 10.0 | 8 | 0.8 |
| 50 volt @ 85°C (33 volt @ 125°C) | | | | | |
| TAP 104(+050 | A | 0.1 | 0.5 | 4 | 26.0 |
| TAP 154(+050 | A | 0.15 | 0.5 | 4 | 21.0 |
| TAP 224(+050 | A | 0.22 | 0.5 | 4 | 17.0 |
| TAP 334(+050 | A | 0.33 | 0.5 | 4 | 15.0 |
| TAP 474(+050 | A | 0.47 | 0.5 | 4 | 13.0 |
| TAP 684(+050 | B | 0.68 | 0.5 | 4 | 10.0 |
| TAP 105(+050 | C | 1.0 | 0.5 | 4 | 8.0 |
| TAP 155(+050 | D | 1.5 | 0.6 | 4 | 6.0 |
| TAP 225(+050 | E | 2.2 | 0.8 | 6 | 3.5 |
| TAP 335(+050 | F | 3.3 | 1.3 | 6 | 3.0 |
| TAP 475(+050 | G | 4.7 | 1.8 | 6 | 2.5 |
| TAP 685(+050 | H | 6.8 | 2.7 | 6 | 2.0 |
| TAP 106(+050 | J | 10 | 4.0 | 8 | 1.6 |
| TAP 156(+050 | K | 15 | 6.0 | 8 | 1.2 |
| TAP 226(+050 | L | 22 | 8.8 | 8 | 1.0 |

(*) 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.

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