

# 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*
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#### 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 H<sub>1</sub> 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



## 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 224 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 <sub>1</sub>	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 188)



# Dipped Radial Capacitors



## TAP Series

### TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C							
Capacitance Range:	0.10 $\mu$ F to 330 $\mu$ 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 $\mu$ F							
	$\leq$ 0.06 for $C_R$ 2.2-6.8 $\mu$ F							
	$\leq$ 0.08 for $C_R$ 10-68 $\mu$ F							
	$\leq$ 0.10 for $C_R$ 100-330 $\mu$ F							
Reliability:	1% per 1000 hrs. at 85°C with 0.1 $\Omega$ /V series impedance, 60% confidence level.							
Qualification:	CECC 30201 - 032							

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

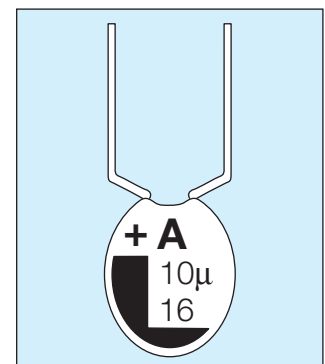
Capacitance		Rated voltage DC ( $V_R$ )						
$\mu$ F	Code	6.3V	10V	16V	20V	25V	35V	50V
0.10	104						A	A
0.15	154						A	A
0.22	224						A	A
0.33	334						A	A
0.47	474						A	A
0.68	684						A	B
1.0	105				A	A	A	C
1.5	155			A	A	A	A	D
2.2	225		A	A	A	A	B	E
3.3	335	A	A	A	B	B	C	F
4.7	475	A	A	B	C	C	E	G
6.8	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 $\mu\text{F}$	DCL ( $\mu\text{A}$ ) Max.	DF % Max.	ESR Max. ( $\Omega$ ) @ 100 kHz
<b>6.3 volt @ 85°C (4 volt @ 125°C)</b>					
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
<b>10 volt @ 85°C (6.3 volt @ 125°C)</b>					
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
<b>16 volt @ 85°C (10 volt @ 125°C)</b>					
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
<b>20 volt @ 85°C (13 volt @ 125°C)</b>					
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 $\mu\text{F}$	DCL ( $\mu\text{A}$ ) Max.	DF % Max.	ESR Max. ( $\Omega$ ) @ 100 kHz
<b>25 volt @ 85°C (16 volt @ 125°C)</b>					
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
<b>35 volt @ 85°C (23 volt @ 125°C)</b>					
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
<b>50 volt @ 85°C (33 volt @ 125°C)</b>					
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.