

# TAJ Series

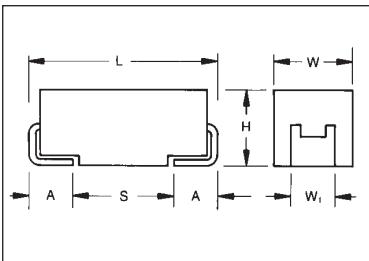
## Standard Tantalum



The TAJ standard series encompasses the five key sizes recognized by major OEMs throughout the world. The V case size has been added to the TAJ range to allow high CVs to be offered. The

operational temperature is  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  at rated voltage and up to  $+125^{\circ}\text{C}$  with voltage derating in applications utilizing recommended series resistance.

### CASE DIMENSIONS: millimeters (inches)



For part marking see page 108

Code	EIA Code	$L \pm 0.20$ (0.008)	$W \pm 0.20$ (0.008) $-0.10$ (0.004)	$H \pm 0.20$ (0.008) $-0.10$ (0.004)	$W_1 \pm 0.20$ (0.008)	$A \pm 0.30$ (0.012) $-0.20$ (0.008)	S Min.
A	3216-18	3.20 (0.126)	1.60 (0.063)	1.60 (0.063)	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
B	3528-21	3.50 (0.138)	2.80 (0.110)	1.90 (0.075)	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
C	6032-28	6.00 (0.236)	3.20 (0.126)	2.60 (0.102)	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
D	7343-31	7.30 (0.287)	4.30 (0.169)	2.90 (0.114)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)
E	7343-43	7.30 (0.287)	4.30 (0.169)	4.10 (0.162)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)
V	7361-38	7.30 (0.287)	6.10 (0.240)	$3.45 \pm 0.30$ $(0.136 \pm 0.012)$	3.10 (0.120)	1.40 (0.055)	4.40 (0.173)

$W_1$  dimension applies to the termination width for A dimensional area only.

### HOW TO ORDER

**TAJ**

Type

**C**

Case Code  
See table above

**106**

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

**M**

Tolerance  
 $K = \pm 10\%$   
 $M = \pm 20\%$

**035**

Rated DC Voltage  
002=2.5Vdc  
004=4Vdc  
006=6.3Vdc  
010=10Vdc  
016=16Vdc  
020=20Vdc  
025=25Vdc  
035=35Vdc  
050=50Vdc

**R**

Packaging  
R = 7" T/R  
S = 13" T/R  
A = Gold Plating  
7" Reel  
B = Gold Plating  
13" Reel  
Y = Lead Free  
7" Reel  
P = Lead Free  
13" Reel

**\*\***

Additional characters may be added for special requirements

### TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of $+25^{\circ}\text{C}$									
Capacitance Range:	0.1 $\mu\text{F}$ to 1000 $\mu\text{F}$									
Capacitance Tolerance:	$\pm 10\%$ ; $\pm 20\%$									
Rated Voltage ( $V_R$ )	$\leq +85^{\circ}\text{C}$ :	2.5	4	6.3	10	16	20	25	35	50
Category Voltage ( $V_C$ )	$\leq +125^{\circ}\text{C}$ :	1.3	2.7	4	7	10	13	17	23	33
Surge Voltage ( $V_S$ )	$\leq +85^{\circ}\text{C}$ :	2.7	5.2	8	13	20	26	32	46	65
Surge Voltage ( $V_S$ )	$\leq +125^{\circ}\text{C}$ :	1.7	3.2	5	8	12	16	20	28	40
Temperature Range:	$-55^{\circ}\text{C}$ to $+125^{\circ}\text{C}$									
Reliability:	1% per 1000 hours at $85^{\circ}\text{C}$ , $V_R$ with 0.1 $\Omega/V_R$ series impedance, 60% confidence level									
Qualification:	CECC 30801 - 005 issue 2 EIA 535BAAC									



### CAPACITANCE AND RATED VOLTAGE, $V_R$ (VOLTAGE CODE) RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated voltage DC ( $V_R$ ) to 85°C								
$\mu\text{F}$	Code	2.5V	4V	6.3V	10V	16V	20V	25V	35V	50V
0.10	104								A	A
0.15	154								A	A/B
0.22	224								A	A/B
0.33	334								A	B
0.47	474							A	A/B	B/C
0.68	684						A	A	A/B	B/C
1.0	105					A	A	A	A/B	B/C
1.5	155				A	A	A	A/B	A/B/C	C/D
2.2	225			A	A	A/B	A/B	A/B	B/C	C/D
3.3	335			A	A	A/B	A/B	B/C	B/C	C/D
4.7	475		A	A	A/B	A/B	A/B/C	B/C	B/C/D	D
6.8	685		A	A/B	A/B	A/B/C	B/C	B/C	C/D	D
10	106		A	A/B	A/B/C	A/B/C	B/C	C/D	C/D/E	D/E
15	156		A/B	A/B	A/B/C	B/C	B/C/D	C/D	C/D	E
22	226		A	A/B/C	A/B/C	B/C/D	B/C/D	C/D	D/E	
33	336		A/B	A/B/C	B/C/D	B/C/D	C/D	D/E	D/E	
47	476	A	A/B	B/C/D	B/C/D	C/D	C/D/E	D/E	E	
68	686	A	B/C	B/C/D	C/D	C/D	D/E	E/V		
100	107		B/C	B/C/D	C/D/E	D/E	D/E/V	V		
150	157	B	B	C/D	C/D/E	D/E/V	E/V			
220	227	B/D	C/D	C/D/E	D/E	D/E/V				
330	337	D	C/D/E	C/D/E	D/E/V	E/V				
470	477	C/D	D/E	D/E/V	E/V					
680	687		D/E	E/V	V					
1000	108	E	E/V	V						
1500	158	E/V								

Non preferred Ratings - not recommended for new designs, higher voltage or smaller case size substitution are offered.

Developmental Ratings - subject to change.

Note: Voltage ratings are minimum values. AVX reserves the right to supply higher ratings in the same case size, to the same reliability standards.

### RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @100kHz
TAJA476*002#	A	47	2.5	0.9	6	3000
TAJB157*002#	B	150	2.5	3	10	1600
TAJB227*002#	B	220	2.5	4.4	8	1600
TAJD227*002#	D	220	2.5	5.5	8	300
TAJD337*002#	D	330	2.5	8.2	8	300
TAJC477*002#	C	470	25	9.4	12	200
TAJD477*002#	D	470	2.5	11.6	8	200
TAJE108*002#	E	1000	2.5	20	20	900
TAJV158*002#	V	1500	2.5	30	20	400
TAJA336*004#	A	33	4	1.3	6	3000
TAJA476*004#	A	47	4	1.9	8	2600
TAJB686*004#	B	68	4	2.7	6	1800
TAJB107*004#	B	100	4	4	8	900
TAJB157*004#	B	150	4	6	8	1500
TAJC227*004#	C	220	4	8.8	8	1200
TAJD227*004#	D	220	4	8.8	8	900
TAJC337*004#	C	330	4	13.2	8	900
TAJD337*004#	D	330	4	13.2	8	900
TAJD477*004#	D	470	4	18.8	12	900
TAJE477*004#	E	470	4	18.8	10	500
TAJD687*004#	D	680	4	27.2	14	500
TAJE687*004#	E	680	4	27.2	14	900
TAJE108*004#	E	1000	4	40	14	400
TAJV108*004#	V	1000	4	40	16	400
TAJA106*006#	A	10	6.3	0.6	6	4000
TAJA156*006#	A	15	6.3	0.9	6	3500
TAJA226*006#	A	22	6.3	1.4	6	3000
TAJA336*006#	A	33	6.3	2.1	8	2500
TAJB476*006#	B	47	6.3	3	6	2000
TAJC476*006#	C	47	6.3	3	6	1600
TAJB686*006#	B	68	6.3	4	8	900
TAJC686*006#	C	68	6.3	4.3	6	1500
TAJB107*006#	B	100	6.3	6.3	10	1700
TAJC107*006#	C	100	6.3	6.3	6	900
TAJC157*006#	C	150	6.3	9.5	6	1300
TAJD157*006#	D	150	6.3	9.5	6	900
TAJC227*006#	C	220	6.3	13.9	8	1200
TAJD227*006#	D	220	6.3	13.9	8	900
TAJE227*006#	E	220	6.3	13.9	8	900
TAJD337*006#	D	330	6.3	20.8	8	400
TAJE337*006#	E	330	6.3	20.8	8	400
TAJD477*006#	D	470	6.3	28	12	400
TAJE477*006#	E	470	6.3	28	10	400
TAJV477*006#	V	470	6.3	28	10	400
TAJE687*006#	E	680	6.3	42.8	10	500
TAJV687*006#	V	680	6.3	42.8	10	500
TAJV108*006#	V	1000	6.3	63	16	400

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @100kHz
TAJA475*010#	A	4.7	10	0.5	6	5000
TAJA685*010#	A	6.8	10	0.7	6	4000
TAJA106*010#	A	10	10	1	6	3000
TAJA156*010#	A	15	10	1.5	6	3200
TAJB156*010#	B	15	10	1.5	6	2800
TAJA226*010#	A	22	10	2.2	8	3000
TAJB226*010#	B	22	10	2.2	6	2400
TAJB336*010#	B	33	10	3.3	6	1800
TAJC336*010#	C	33	10	3.3	6	1600
TAJB476*010#	B	47	10	4.7	8	1000
TAJC476*010#	C	47	10	4.7	6	1200
TAJC686*010#	C	68	10	6.8	6	1300
TAJC107*010#	C	100	10	10	8	1200
TAJD107*010#	D	100	10	10	6	900
TAJC157*010#	C	150	10	15	8	900
TAJD157*010#	D	150	10	15	6	900
TAJE157*010#	E	150	10	15	8	900
TAJD227*010#	D	220	10	22	8	500
TAJE227*010#	E	220	10	22	8	500
TAJD337*010#	D	330	10	33	8	900
TAJE337*010#	E	330	10	33	8	900
TAJV337*010#	V	330	10	33	10	900
TAJE477*010#	E	470	10	47	10	500
TAJV477*010#	V	470	10	47	10	500
TAJA226*016#	A	2.2	16	0.5	6	6500
TAJA335*016#	A	3.3	16	0.5	6	5000
TAJB335*016#	B	3.3	16	0.5	6	4500
TAJA475*016#	A	4.7	16	0.8	6	4000
TAJB475*016#	B	4.7	16	0.8	6	3500
TAJA685*016#	A	6.8	16	1.1	6	3500
TAJB685*016#	B	6.8	16	1.1	6	2500
TAJA106*016#	A	10	16	1.6	8	3000
TAJB106*016#	B	10	16	1.6	6	2800
TAJC106*016#	C	10	16	1.6	6	2000
TAJB156*016#	B	15	16	2.4	6	2500
TAJC156*016#	C	15	16	2.4	6	1800
TAJB226*016#	B	22	16	3.5	6	2300
TAJC226*016#	C	22	16	3.5	6	1600
TAJD226*016#	D	22	16	3.5	6	1100
TAJB336*016#	B	33	16	5.3	8	2100
TAJC336*016#	C	33	16	5.3	6	1500
TAJD336*016#	D	33	16	5.3	6	900
TAJC476*016#	C	47	16	7.5	6	1400
TAJD476*016#	D	47	16	7.5	6	900
TAJC686*016#	C	68	16	10.9	6	1300
TAJD686*016#	D	68	16	10.9	6	900
TAJD107*016#	D	100	16	16	6	900
TAJE107*016#	E	100	16	16	6	900
TAJD157*016#	D	150	16	24	6	900
TAJE157*016#	E	150	16	24	6	900
TAJV157*016#	V	150	16	24	8	500
TAJE227*016#	E	220	16	35.2	10	500
TAJV227*016#	V	220	16	35.2	8	900

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

\*Insert K for ±10% and M for ±20%

Capacitance Tolerance

# Standard Plating – Insert R for 7" reel and S for 13" reel

# Gold Plating – Insert A for 7" reel and B for 13" reel

NOTE: AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.

### RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @100kHz
TAJA105*020#	A	1	20	0.5	4	9000
TAJA155*020#	A	1.5	20	0.5	6	6500
TAJA225*020#	A	2.2	20	0.5	6	5300
TAJB225*020#	B	2.2	20	0.5	6	3500
TAJA335*020#	A	3.3	20	0.7	6	4500
TAJB335*020#	B	3.3	20	0.7	6	3000
TAJA475*020#	A	4.7	20	0.9	6	4000
TAJB475*020#	B	4.7	20	0.9	6	3000
TAJB685*020#	B	6.8	20	1.4	6	2500
TAJC685*020#	C	6.8	20	1.4	6	2000
TAJB106*020#	B	10	20	2	6	2100
TAJC106*020#	C	10	20	2	6	1900
TAJB156*020#	B	15	20	3	6	2000
TAJC156*020#	C	15	20	3	6	1700
TAJB226*020#	B	22	20	4.4	6	1800
TAJC226*020#	C	22	20	4.4	6	1600
TAJD226*020#	D	22	20	4.4	6	900
TAJC336*020#	C	33	20	6.6	6	1500
TAJD336*020#	D	33	20	6.6	6	900
TAJC476*020#	C	47	20	9.4	6	900
TAJD476*020#	D	47	20	9.4	6	900
TAJE476*020#	E	47	20	9.4	6	900
TAJD686*020#	D	68	20	13.6	6	900
TAJE686*020#	E	68	20	13.6	6	900
TAJD107*020#	D	100	20	20	6	900
TAJE107*020#	E	100	20	20	6	900
TAJV107*020#	V	100	20	20	8	900
TAJE157*020#	E	150	20	30	8	300
TAJV157*020#	V	150	20	30	8	500
TAJA474*025#	A	0.47	25	0.5	4	14000
TAJA684*025#	A	0.68	25	0.5	4	10000
TAJA105*025#	A	1	25	0.5	4	8000
TAJA155*025#	A	1.5	25	0.5	6	7500
TAJB155*025#	B	1.5	25	0.5	6	5000
TAJA225*025#	A	2.2	25	0.6	6	7000
TAJB225*025#	B	2.2	25	0.6	6	4500
TAJB335*025#	B	3.3	25	0.8	6	3500
TAJB475*025#	B	4.7	25	1.2	6	2800
TAJB685*025#	B	6.8	25	1.7	6	2800
TAJC685*025#	C	6.8	25	1.7	6	2000
TAJC106*025#	C	10	25	2.5	6	1800
TAJD106*025#	D	10	25	2.5	6	1200
TAJC156*025#	C	15	25	3.8	6	1600
TAJD156*025#	D	15	25	3.8	6	1000
TAJC226*025#	C	22	25	5.5	6	1400
TAJD226*025#	D	22	25	5.5	6	900
TAJD336*025#	D	33	25	8.3	6	900
TAJE336*025#	E	33	25	8.3	6	900
TAJD476*025#	D	47	25	11.8	6	900
TAJE476*025#	E	47	25	11.8	6	900
TAJE686*025#	E	68	25	17	6	900
TAJV686*025#	V	68	25	17	6	900
TAJV107*025#	V	100	25	25	8	400

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @100kHz
TAJA104*035#	A	0.1	35	0.5	4	24000
TAJA154*035#	A	0.15	35	0.5	4	21000
TAJA224*035#	A	0.22	35	0.5	4	18000
TAJA334*035#	A	0.33	35	0.5	4	15000
TAJA474*035#	A	0.47	35	0.5	4	12000
TAJB474*035#	B	0.47	35	0.5	4	10000
TAJA684*035#	A	0.68	35	0.5	4	8000
TAJB684*035#	B	0.68	35	0.5	4	8000
TAJA105*035#	A	1	35	0.5	4	7500
TAJB105*035#	B	1	35	0.5	4	6500
TAJA155*035#	A	1.5	35	0.5	6	7500
TAJB155*035#	B	1.5	35	0.5	6	5200
TAJC155*035#	C	1.5	35	0.5	6	4500
TAJB225*035#	B	2.2	35	0.8	6	4200
TAJC225*035#	C	2.2	35	0.8	6	3500
TAJB335*035#	B	3.3	35	1.2	6	3500
TAJC335*035#	C	3.3	35	1.2	6	2500
TAJB475*035#	B	4.7	35	1.2	6	3100
TAJC475*035#	C	4.7	35	1.6	6	2200
TAJD475*035#	D	4.7	35	1.6	6	1500
TAJC685*035#	C	6.8	35	2.4	6	1800
TAJD685*035#	D	6.8	35	2.4	6	1300
TAJC106*035#	C	10	35	3.5	6	1600
TAJD106*035#	D	10	35	3.5	6	1000
TAJE106*035#	E	10	35	3.5	6	900
TAJC156*035#	C	15	35	5.3	6	1400
TAJD156*035#	D	15	35	5.3	6	900
TAJD226*035#	D	22	35	7.7	6	900
TAJC226*035#	E	22	35	7.7	6	900
TAJD336*035#	D	33	35	11.6	6	900
TAJE336*035#	E	33	35	11.6	6	900
TAJE476*035#	E	47	35	16.5	6	900
TAJA104*050#	A	0.1	50	0.5	4	22000
TAJA154*050#	A	0.15	50	0.5	4	15000
TAJB154*050#	B	0.15	50	0.5	4	17000
TAJA224*050#	A	0.22	50	0.5	4	18000
TAJB224*050#	B	0.22	50	0.5	4	14000
TAJB334*050#	B	0.33	50	0.5	4	12000
TAJB474*050#	B	0.47	50	0.7	4	9500
TAJC474*050#	C	0.47	50	0.5	4	8000
TAJB684*050#	B	0.68	50	0.5	4	8000
TAJC684*050#	C	0.68	50	0.5	4	7000
TAJB105*050#	B	1	50	0.5	4	7000
TAJC105*050#	C	1	50	0.5	4	5500
TAJA155*050#	A	1.5	50	0.8	6	4500
TAJD155*050#	D	1.5	50	0.8	6	4000
TAJC225*050#	C	2.2	50	1.1	6	3000
TAJD225*050#	D	2.2	50	1.1	6	2500
TAJC335*050#	C	3.3	50	1.7	6	2500
TAJD335*050#	D	3.3	50	1.7	6	2000
TAJD475*050#	D	4.7	50	2.4	6	1400
TAJD685*050#	D	6.8	50	3.4	6	1000
TAJD106*050#	D	10	50	5	6	800
TAJE106*050#	E	10	50	5	6	1000
TAJE106*050#	E	15	50	7.5	6	600
TAJE156*050#	E	15	50	7.5	6	600

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

\* Insert K for ±10% and M for ±20% Capacitance Tolerance # Standard Plating – Insert R for 7" reel and S for 13" reel # Gold Plating – Insert A for 7" reel and B for 13" reel

**NOTE:** AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.

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