

# TAJ Series

## Standard Tantalum

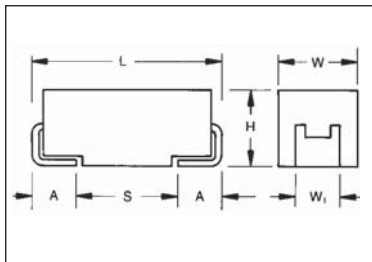


- General purpose SMT chip tantalum series
- 6 case sizes available
- Low profile options available
- CV range: 0.10-2200 $\mu$ F / 2.5-50V



LEAD-FREE COMPATIBLE COMPONENT

### CASE DIMENSIONS: millimeters (inches)



For part marking see page 131

Code	EIA Code	EIA Metric	L $\pm$ 0.20 (0.008)	W+0.20 (0.008) -0.10 (0.004)	H+0.20 (0.008) -0.10 (0.004)	W $\pm$ 0.20 (0.008)	A+0.30 (0.012) -0.20 (0.008)	S Min.
A	1206	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	1210	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	2312	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	2917	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	2917	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	2924	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<sub>1</sub> dimension applies to the termination width for A dimensional area only.

### HOW TO ORDER

<b>TAJ</b>	<b>C</b>	<b>106</b>	<b>M</b>	<b>035</b>	<b>R</b>	<b>NJ</b>	<b>-</b>
<b>Type</b>	<b>Case Size</b> See table above	<b>Capacitance Code</b> pF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow)	<b>Tolerance</b> K=±10% M=±20%	<b>Rated DC Voltage</b> 002=2.5Vdc 004=4Vdc 006=6.3Vdc 010=10Vdc 016=16Vdc 020=20Vdc 025=25Vdc 035=35Vdc 050=50Vdc	<b>Packaging</b> R = Lead Free 7" Reel S = Lead Free 13" Reel A = Gold Plating 7" Reel B = Gold Plating 13" Reel H = Tin Lead 7" Reel (Contact Manufacturer) K = Tin Lead 13" Reel (Contact Manufacturer) H, K = Non RoHS	<b>Specification Suffix</b> NJ = Standard Suffix	<b>Additional characters may be added for special requirements</b> V = Dry pack Option (selected codes only)

### TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C										
Capacitance Range:	0.10 $\mu$ F to 2200 $\mu$ F										
Capacitance Tolerance:	$\pm$ 10%; $\pm$ 20%										
Rated Voltage (V <sub>R</sub> )	$\leq$ +85°C:	2.5	4	6.3	10	16	20	25	35	50	
Category Voltage (V <sub>C</sub> )	$\leq$ +125°C:	1.7	2.7	4	7	10	13	17	23	33	
Surge Voltage (V <sub>S</sub> )	$\leq$ +85°C:	3.3	5.2	8	13	20	26	32	46	65	
Surge Voltage (V <sub>S</sub> )	$\leq$ +125°C:	2.2	3.4	5	8	13	16	20	28	40	
Temperature Range:	-55°C to +125°C										
Reliability:	1% per 1000 hours at 85°C, V <sub>R</sub> with 0.1 $\Omega$ /V series impedance, 60% confidence level										
Qualification:	CECC 30801 - 005 issue 2 EIA 535BAAC										
Termination Finished:	Sn Plating (standard), Gold and SnPb Plating upon request										



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

Capacitance		Rated voltage DC (V <sub>R</sub> ) to 85°C								
µF	Code	2.5V (e)	4V (G)	6.3V (J)	10V (A)	16V (C)	20V (D)	25V (E)	35V (V)	50V (T)
0.10	104								A	A
0.15	154								A	A/B
0.22	224								A	A/B
0.33	334							A	A	B
0.47	474							A	A/B	A/B/C
0.68	684						A	A	A/B	A/B/C
1.0	105					A	A	A	A/B	A <sup>(M)</sup> /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	A/B/C	C/D
3.3	335		A	A	A	A/B	A/B	A/B/C	A/B/C	C/D
4.7	475		A	A	A/B	A/B	A/B/C	A/B/C	B/C/D	C/D
6.8	685		A	A/B	A/B	A/B/C	A/B/C	B/C	C/D	C/D
10	106		A	A/B	A/B/C	A/B/C	A <sup>(M)</sup> */B/C	B/C/D	C/D/E	D/E/V
15	156		A/B	A/B	A/B/C	A <sup>(M)</sup> /B/C	B/C/D	C/D	C/D	D/E/V
22	226		A	A/B/C	A/B/C	B/C/D	B/C/D	C/D	C/D	V
33	336	A	A/B	A/B/C	A/B/C/D	B/C/D	C/D	D/E	D/E/V	
47	476	A	A/B	A/B/C/D	B/C/D	C/D	C/D/E	D/E	E/V	
68	686	A	A/B/C	B/C/D	B/C/D	C/D	C <sup>(M)</sup> /D/E	E/V	V <sup>(M)</sup>	
100	107	A/B	A/B/C	B/C/D	B <sup>(M)</sup> /C/D/E	C/D/E	D/E/V	E <sup>(M)</sup> /V		
150	157	B	B/C	B <sup>(M)</sup> /C/D	C/D/E	D/E/V	E/V	V <sup>(M)</sup> *		
220	227	B/D	B <sup>(M)</sup> /C/D	C/D/E	C/D/E	E/V				
330	337	D	C/D/E	C/D/E	D/E/V					
470	477	C/D	C/D/E	D/E/V	E/V					
680	687	C/D/E	D/E	E/V						
1000	108	D <sup>(M)</sup> /E	D/E/V	E <sup>(M)</sup> /V <sup>(M)</sup>						
1500	158	D/E/V <sup>(M)</sup>	E/V <sup>(M)</sup>							
2200	228	V <sup>(M)</sup>								

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

Released codes <sup>(M tolerance only)</sup>

Engineering samples - please contact manufacturer

\*Codes under development - 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	Cap (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (Ω) @100kHz	MSL
<b>50 Volt @ 85°C (33 Volt @ 125°C)</b>							
TAJA104*050#NJ	A	0.1	50	0.5	4	22	1
TAJA154*050#NJ	A	0.15	50	0.5	4	15	1
TAJB154*050#NJ	B	0.15	50	0.5	4	17	1
TAJA224*050#NJ	A	0.22	50	0.5	4	18	1
TAJB224*050#NJ	B	0.22	50	0.5	4	14	1
TAJB334*050#NJ	B	0.33	50	0.5	4	12	1
TAJA474*050#NJ	A	0.47	50	0.5	4	9.5	1
TAJB474*050#NJ	B	0.47	50	0.7	4	9.5	1
TAJC474*050#NJ	C	0.47	50	0.5	4	8	1
TAJA684*050#NJ	A	0.68	50	0.5	4	7.9	1
TAJB684*050#NJ	B	0.68	50	0.5	4	8	1
TAJC684*050#NJ	C	0.68	50	0.5	4	7	1
TAJA105M050#NJ	A	1	50	0.5	4	6.6	1
TAJB105*050#NJ	B	1	50	0.5	6	7	1
TAJC105*050#NJ	C	1	50	0.5	4	5.5	1
TAJC155*050#NJ	C	1.5	50	0.8	6	4.5	1
TAJD155*050#NJ	D	1.5	50	0.8	6	4	1
TAJC225*050#NJ	C	2.2	50	1.1	6	3	1
TAJD225*050#NJ	D	2.2	50	1.1	6	2.5	1
TAJC335*050#NJ	C	3.3	50	1.7	6	2.5	1
TAJD335*050#NJ	D	3.3	50	1.7	6	2	1
TAJC475*050#NJ	C	4.7	50	0.5	4	1.4	1
TAJD475*050#NJ	D	4.7	50	2.4	6	1.4	1
TAJC685*050#NJ	C	6.8	50	3.4	6	1	1
TAJD685*050#NJ	D	6.8	50	3.4	6	1	1
TAJD106*050#NJ	D	10	50	5	6	0.8	1
TAJE106*050#NJ	E	10	50	5	6	1	1 <sup>1)</sup>
TAJV106*050#NJ	V	10	50	5	6	0.65	1 <sup>1)</sup>
TAJD156*050#NJ	D	15	50	7.5	6	0.6	1
TAJE156*050#NJ	E	15	50	7.5	6	0.6	1 <sup>1)</sup>
TAJV156*050#NJ	V	15	50	7.5	6	0.6	1 <sup>1)</sup>
TAJV226*050#NJ	V	22	50	11	8	0.6	1 <sup>1)</sup>

<sup>1)</sup> Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 3.

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

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.

For typical weight and composition see page 124.

**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.**