

STANDARD TANTALUMS CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated voltage DC (V _R) 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/B	A/B/C
1.0	105					A	A	A	A/B	A/B/C
1.5	155				A	A	A	A/B	A/B/C	B/C/D
2.2	225			A	A	A/B	A/B	A/B	A/B/C	B/C/D
3.3	335			A	A	A/B	A/B	A/B/C	B/C	C/D
4.7	475			A	A/B	A/B	A/B/C	A/B/C	B/C/D	C/D
6.8	685			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	B/C	B/C/D	C/D/E	D/E/V
15	156		A	A/B	A/B/C	A/B/C	B/C/D	C/D	C/D	D/E/V
22	226		A	A/B/C	A/B/C	A ^(M) /B/C/D	B/C/D	C/D	D/E	V
33	336	A	A/B	A/B/C	A/B/C/D	B/C/D	C/D	C/D/E	D/E/V	
47	476	A	A/B	A/B/C/D	B/C/D	C/D	C/D/E	D/E	D/E/V	
68	686	A	A/B	B/C/D	B/C/D	C/D	C ^(M) /D/E	D/E/V	V	
100	107	A/B	A/B/C	B/C/D	B/C/D/E	C/D/E	D/E/V	E/V		
150	157	B	B/C	B ^(M) /C/D	C/D/E	D/E/V	E/V	V ^(M)		
220	227	B/D	B/C/D	C/D/E	C/D/E	D ^(M) /E/V				
330	337	D	C/D	C/D/E	D/E/V	E ^(M)				
470	477	C/D	C/D/E	D/E/V	E/U/V					
680	687	C/D/E	D/E	D/E/V	E ^(M) /V ^(M)					
1000	108	D ^(M) /E	D/E/V	E ^(M) /V ^(M)						
1500	158	D/E/V ^(M)	E/V ^(M)							
2200	228	V ^(M)								

LOW PROFILE TANTALUMS CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated voltage DC (V _R) 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						R/S		R/S	S
0.15	154						R/S	R	R/S	S
0.22	224						R/S	R	R/S	P/R/S
0.33	334						R/S	R	R/S	P/R ^(M) /S/T
0.47	474						R/S	R/S	R/S/T	S/T
0.68	684					R/S	R/S/T	R/S	P/S/T	
1.0	105				R/S	R/S/T	R/S/T	P/R/S	P/S/T	W
1.5	155			R/S	R/S	R/S	P/R/S/T	P/S/T	T	W
2.2	225		R/S	R/S	R/S	R/S/T	P/R/S/T	T	T	W
3.3	335		R/S	R/S	K/R/S/T	R/S/T	T	T/W	W	Y
4.7	475	R	R/S	R/S/T	R/S/T	K/P/S/T	T	T/W	W	X/Y
6.8	685	R	R/S/T	R/S/T	P/R/S/T	S/T	T	W	Y	Y
10	106	R/S	R/S/T	P/R/S/T	K/P/R ^(M) /S/T	T/W	W	W	X/Y	
15	156	R	R/S/T	K/P/R/S/T	S/T/W	T ^(M) /W	W	Y	Y	
22	226	P/R	K/P/R/S/T	K/P ^(M) /S/T/W	T/W	W	W/Y	F/Y	Y	
33	336	K/P/S	K/P ^(M) /S/T/W	T/W	W	W/Y	X/Y	F/Y		
47	476	P ^(M) /S	T/W	T/W	H/W/Y	W/X/Y	X/Y	Y		
68	686	T	T/W	W	W/Y	F/X/Y	Y			
100	107	T/W	T ^(M) /W	W/Y	W/X/Y	F ^(M) /Y				
150	157	TM/W	W/Y	W/X/Y	F/XM/Y	Y ^(M)				
220	227	W/Y	W/X/Y	F/X/Y	Y					
330	337	W ^(M) /Y	F/X/Y	Y						
470	477	F/Y	Y	Y						
680	687	Y	Y ^(M)							
1000	108	Y ^(M)								

Released ratings ^(M tolerance only)

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

TAJ Series

Standard and Low Profile Tantalum Capacitors



RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	Rated Temperature (°C)	Category Voltage (V)	Category Temperature (°C)	DCL Max. (μA)	DF Max. (%)	ESR Max. @ 100kHz (Ω)	100kHz RMS Current (mA)			MSL
										25°C	85°C	125°C	
TAJS474*050#NJ	S	0.47	50	85	33	125	0.5	4	9.5	83	74	33	1
TAJT474*050#NJ	T	0.47	50	85	33	125	0.5	4	9.5	92	83	37	1
TAJA684*050#NJ	A	0.68	50	85	33	125	0.5	4	7.9	97	88	39	1
TAJB684*050#NJ	B	0.68	50	85	33	125	0.5	4	8	103	93	41	1
TAJC684*050#NJ	C	0.68	50	85	33	125	0.5	4	7	125	113	50	1
TAJA105*050#NJ	A	1	50	85	33	125	0.5	4	6.6	107	96	43	1
TAJB105*050#NJ	B	1	50	85	33	125	0.5	6	7	110	99	44	1
TAJC105*050#NJ	C	1	50	85	33	125	0.5	4	5.5	141	127	57	1
TAJW105*050#NJ	W	1	50	85	33	125	0.5	6	4.4	143	129	57	1
TAJB155*050#NJ	B	1.5	50	85	33	125	0.8	8	5.4	125	113	50	1
TAJC155*050#NJ	C	1.5	50	85	33	125	0.8	6	4.5	156	141	63	1
TAJD155*050#NJ	D	1.5	50	85	33	125	0.8	6	4	194	174	77	1
TAJW155*050#NJ	W	1.5	50	85	33	125	0.8	6	3.1	170	153	68	1
TAJB225*050#NJ	B	2.2	50	85	33	125	1.1	8	4.5	137	124	55	1
TAJC225*050#NJ	C	2.2	50	85	33	125	1.1	8	2.5	210	189	84	1
TAJD225*050#NJ	D	2.2	50	85	33	125	1.1	6	2.5	245	220	98	1
TAJW225*050#NJ	W	2.2	50	85	33	125	1.1	8	2.5	190	171	76	1
TAJC335*050#NJ	C	3.3	50	85	33	125	1.6	6	2.5	210	189	84	1
TAJD335*050#NJ	D	3.3	50	85	33	125	1.7	6	2	274	246	110	1
TAJY335*050#NJ	Y	3.3	50	85	33	125	1.7	4	1.5	289	260	115	1 ¹⁾
TAJC475*050#NJ	C	4.7	50	85	33	125	2.4	6	1.4	280	252	112	1
TAJD475*050#NJ	D	4.7	50	85	33	125	2.4	6	1.4	327	295	131	1
TAJX475*050#NJ	X	4.7	50	85	33	125	2.4	6	1.0	316	285	126	3
TAJY475*050#NJ	Y	4.7	50	85	33	125	2.4	6	1.2	323	290	129	1 ¹⁾
TAJC685*050#NJ	C	6.8	50	85	33	125	3.4	6	1	332	298	133	1
TAJD685*050#NJ	D	6.8	50	85	33	125	3.4	6	1	387	349	155	1
TAJY685*050#NJ	Y	6.8	50	85	33	125	3.4	6	0.9	373	335	149	1 ¹⁾
TAJD106*050#NJ	D	10	50	85	33	125	5	6	0.8	433	390	173	1
TAJE106*050#NJ	E	10	50	85	33	125	5	6	0.8	454	409	182	1 ¹⁾
TAJV106*050#NJ	V	10	50	85	33	125	5	6	0.65	620	558	248	1 ¹⁾
TAJD156*050#NJ	D	15	50	85	33	125	7.5	6	0.6	500	450	200	1
TAJE156*050#NJ	E	15	50	85	33	125	7.5	6	0.6	524	472	210	1 ¹⁾
TAJV156*050#NJ	V	15	50	85	33	125	7.5	6	0.6	645	581	258	1 ¹⁾
TAJV226*050#NJ	V	22	50	85	33	125	11	8	0.6	645	581	258	1 ¹⁾

1¹⁾ – Dry pack option (see How to order) is 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 274.

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

*Initial Limit

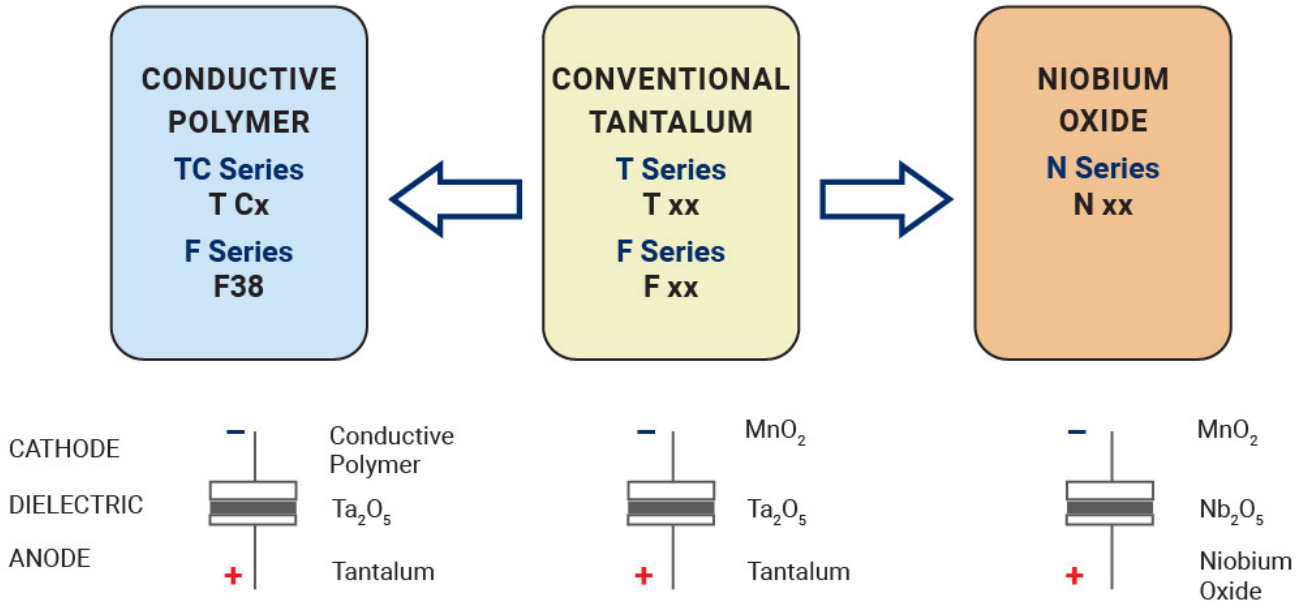
QUALIFICATION TABLE

TEST	TAJ series (Temperature range -55°C to +125°C)									
	Condition			Characteristics						
Endurance	Apply rated voltage (Ur) at 85°C and / or category voltage (Uc) at 125°C for 2000 hours through a circuit impedance of $\leq 0.1\Omega/V$. Stabilize at room temperature for 1-2 hours before measuring.			Visual examination	no visible damage					
				DCL	1.25 x initial limit					
				$\Delta C/C$	within $\pm 10\%$ of initial value					
				DF	initial limit					
Humidity	Store at 65°C and 95% relative humidity for 500 hours, with no applied voltage. Stabilize at room temperature and humidity for 1-2 hours before measuring.			Visual examination	no visible damage					
				DCL	1.5 x initial limit					
				$\Delta C/C$	within $\pm 10\%$ of initial value					
				DF	1.2 x initial limit					
Temperature Stability	Step	Temperature°C	Duration(min)							
	1	+20	15		+20°C	-55°C	+20°C	+85°C	+125°C	+20°C
	2	-55	15	DCL	IL*	n/a	IL*	10 x IL*	12.5 x IL*	IL*
	3	+20	15	$\Delta C/C$	n/a	+0/-10%	$\pm 5\%$	+10/-0%	+12/-0%	$\pm 5\%$
	4	+85	15	DF	IL*	1.5 x IL*	IL*	1.5 x IL*	2 x IL*	IL*
	5	+125	15							
6	+20	15								
Surge Voltage	Apply 1.3x category voltage (Uc) at 125°C for 1000 cycles of duration 6 min (30 sec charge, 5 min 30 sec discharge) through a charge / discharge resistance of 1000 Ω			Visual examination	no visible damage					
				DCL	initial limit					
				$\Delta C/C$	within $\pm 5\%$ of initial value					
				DF	initial limit					
Mechanical Shock	MIL-STD-202, Method 213, Condition C			Visual examination	no visible damage					
				DCL	initial limit					
				$\Delta C/C$	within $\pm 5\%$ of initial value					
				DF	initial limit					
				ESR	initial limit					
Vibration	MIL-STD-202, Method 204, Condition D			Visual examination	no visible damage					
				DCL	initial limit					
				$\Delta C/C$	within $\pm 5\%$ of initial value					
				DF	initial limit					
				ESR	initial limit					

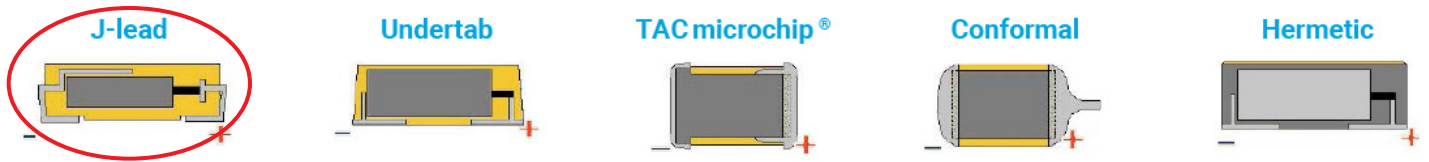
TAJ Series

Standard and Low Profile Tantalum Capacitors

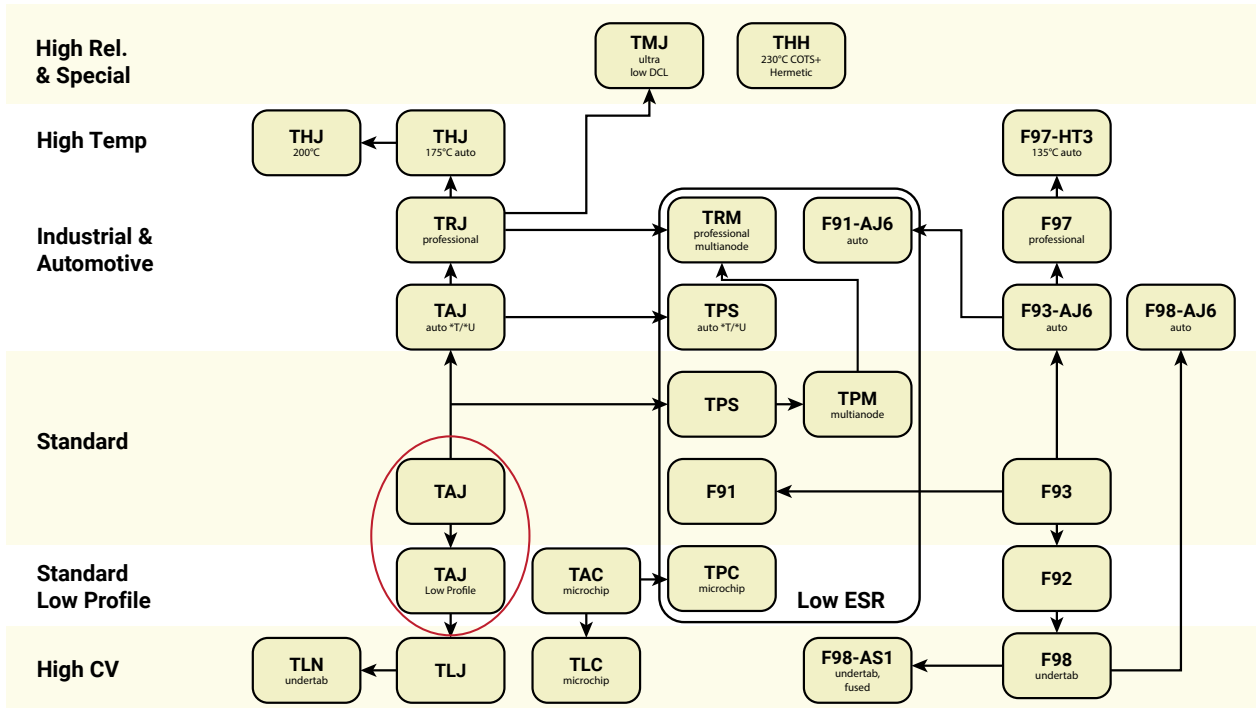
AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP



FIVE CAPACITOR CONSTRUCTION STYLES



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