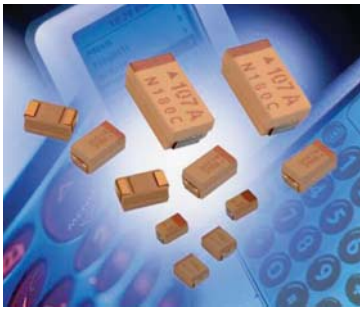
TLJ Series

Tantalum Solid Electrolytic Chip Capacitors
High CV Consumer Series

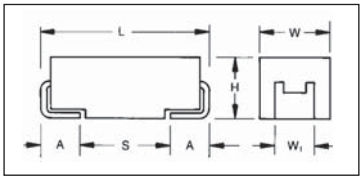


- High Volumetric Efficiency
- 3x reflow 260°C compatible
- 13 case sizes available including low profile codes
- Environmentally friendly
- Consumer applications (e.g. mobiles phones, PDA etc.)
- CV range: 10-680µF / 2.5-20V

RoHS COMPLIANT

LEAD-FREE

LEAD-FREE COMPATIBLE COMPONENT



For part marking see page 130

CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L±0.20 (0.008)	W+0.20 (0.008) -0.10 (0.004)	H+0.20 (0.008) -0.10 (0.004)	W_1±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)
F	2312	6032-20	6.00 (0.236)	3.20 (0.126)	2.00 (0.079) max.	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
G	1206	3216-15	3.20 (0.126)	1.60 (0.063)	1.50 (0.059) max	1.20 0.047)	0.80 (0.031)	1.10 (0.043)
H	1210	3528-15	3.50 (0.138)	2.80 (0.110)	1.50 (0.059) max	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
K	1206	3216-10	3.20 (0.126)	1.60 (0.063)	1.0 (0.039) max	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
N	0805	2013-10	2.05 (0.081)	1.3 (0.051)	1.0 (0.039) max	1.0 (0.039)	0.5 (0.020)	0.85 (0.033)
P	0805	2012-15	2.05 (0.081)	1.35 (0.053)	1.50 (0.059) max	1.0±0.1 (0.039±0.004)	0.50 (0.020)	0.85 (0.033)
R	0805	2012-12	2.05 (0.081)	1.30 (0.051)	1.20 (0.047) max	1.0±0.1 (0.039±0.004)	0.50 (0.020)	0.85 (0.033)
S	1206	3216-12	3.20 (0.126)	1.60 (0.063)	1.20 (0.047) max	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
T	1210	3528-12	3.50 (0.138)	2.80 (0.110)	1.20 (0.047) max	2.20 (0.087)	0.80 (0.031)	1.40 (0.033)
W	2312	6032-15	6.00 (0.236)	3.20 (0.126)	1.50 (0.059) max	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
Y	2917	7343-20	7.30 (0.287)	4.30 (0.169)	2.00 (0.079) max	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)

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

HOW TO ORDER

TLJ — **Type**

W — **Case Size**
See table above

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

M — **Tolerance**
M = ±20%

010 — **Rated DC Voltage**
002 = 2.5Vdc
004 = 4Vdc
006 = 6.3Vdc
010 = 10Vdc
016 = 16Vdc
020 = 20Vdc

R — **Packaging**
R = Lead Free 7" Reel
S = Lead Free 13" Reel

0200 — **ESR in mΩ**

TECHNICAL SPECIFICATIONS

Technical Data:		All technical data relate to an ambient temperature of +25°C						
Capacitance Range:		10 µF to 680 µF						
Capacitance Tolerance:		±20%						
Rated Voltage (V_R)	-55°C ≤ +40°C:	2.5	4	6.3	10	16	20	
Category Voltage (V_C)	at 85°C:	1.25	2	3.15	5	8	10	
Category Voltage (V_C)	at 125°C:	0.5	0.8	1.26	2	3.2	4	
Temperature Range:		-55°C to +125°C with category voltage						
Reliability:		0.2% per 1000 hours at 85°C, 0.5xV_R with 0.1Ω/V series impedance with 60% confidence level						

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

Capacitance		Rated Voltage DC to 40°C / 0.5DC to 85°C / 0.2DC to 125°C						
µF	Code	2.5V (e)	4V (G)	6.3V (J)	10V (A)	16V (C)	20V (D)	35V (V)
6.8	685							
10	106				N(2500) R(2000,3000)	S(2200)	T(1000)	
15	156				R(2000)			
22	226			N(5400)/R(3500)	K(1800)/N(3800) R(3800)	T(1000)		
33	336		N(8000)/R(3000)	K(1700)/N(8000) P(3000)/R(3000)	K(1500)/N(9600) P(3500) R(3500)/S(1500)	T(1000)		
47	476		K(1500)/N(4000) P(3000)/R(3000)	K(1500)/N(8300) P(700,900,1800,2500) R(3200)/S(1500)	A(600)/G(1500) P(3200)/R(3200) S(1500)/T(600)			
68	686		K(1200)/N(8000) P(3000) R(2900)/S(1500)	A(500)/G(800) S(1500)/T(600)	A(1500)			
100	107		A(500)/G(800) N(5200)/P(2700) S(1400)	A(500,800)/G(800) P(5400)/T(800)	A(1400) H(900)/T(900)			
150	157		A(800)/T(800)	A(900)/G(2500) H(900)/T(1200)	B(500) W(150,200)			
220	227	T(1100)	A(1100)/G(3000) H(900)/T(1100)	B(500)/T(2000) W(200)	B(1100)/F(300)			
330	337		T(2700)/W(200)	F(300)				
470	477							
680	687			Y(100,150)				
1000	108							
1500	158							

Available Ratings, (ESR ratings in mOhms in brackets)

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.

TLJ Series

Tantalum Solid Electrolytic Chip Capacitors
High CV Consumer Series

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Maximum Surge Current (A)*	DCL (µA) Max.	ESR Max. (mΩ) @100kHz	MSL	100kHz Ripple Current (mA)			100kHz Ripple Voltage (mV)		
								25°C	85°C	125°C	25°C	85°C	125°C
2.5 Volt @ 40°C (1.25 Volt @ 85°C, 0.5 Volt @ 125°C)													
TLJT227M002#1200	T	220	2.5	0.8	5.5	1100	3	365	329	146	219	197	88
4 Volt @ 40°C (2 Volt @ 85°C, 0.8 Volt @ 125°C)													
TLJN336M004#8000	N	33	4	0.2	1.3	8000	3	79	71	32	632	569	253
TLJR336M004#3000	R	33	4	0.6	1.3	3000	3	135	122	54	406	366	162
TLJK476M004#1500	K	47	4	1.0	1.9	1500	3	208	187	83	312	281	125
TLJN476M004#4000	N	47	4	0.6	1.9	4000	3	112	101	45	447	402	179
TLJP476M004#3000	P	47	4	0.6	1.9	3000	3	141	127	57	424	382	170
TLJR476M004#3000	R	47	4	0.6	1.9	3000	3	135	122	54	406	366	162
TLJK686M004#1200	K	68	4	1.2	2.7	1200	3	233	209	93	279	251	112
TLJN686M004#8000	N	68	4	0.2	5.4	8000	3	79	71	32	632	569	253
TLJP686M004#3000	P	68	4	1.2	2.7	3000	3	141	127	57	424	382	170
TLJR686M004#2900	R	68	4	0.6	2.7	2900	3	138	124	55	399	359	160
TLJS686M004#1500	S	68	4	1.0	2.7	1500	3	208	187	83	312	281	125
TLJA107M004#0500	A	100	4	2.1	4.0	500	3	387	349	155	194	174	77
TLJG107M004#0800	G	100	4	1.6	4.0	800	3	296	266	118	237	213	95
TLJN107M004#5200	N	100	4	0.4	8.0	5200	3	98	88	39	510	459	204
TLJP107M004#2700	P	100	4	0.6	8.0	2700	3	149	134	60	402	362	161
TLJS107M004#1400	S	100	4	1.1	4.0	1400	3	208	187	83	312	281	125
TLJA157M004#0800	A	150	4	1.6	6.0	800	3	306	276	122	245	220	98
TLJT157M004#0800	T	150	4	1.6	6.0	800	3	316	285	126	253	228	101
TLJA227M004#1100	A	220	4	1.3	17.6	1100	3	261	235	104	287	259	115
TLJG227M004#3000	G	220	4	0.6	17.6	3000	3	153	137	61	458	412	183
TLJH227M004#0900	H	220	4	1.5	8.8	900	3	298	268	119	268	241	107
TLJT227M004#1100	T	220	4	1.3	17.6	1100	3	316	285	126	253	228	101
TLJT337M004#2700	T	330	4	0.6	26.4	2700	3	172	155	69	465	418	186
TLJW337M004#0200	W	330	4	3.1	13.2	200	3	671	604	268	134	121	54
6.3 Volt @ 40°C (3.15 Volt @ 85°C, 1.26 Volt @ 125°C)													
TLJN226M006#5400	N	22	6.3	0.5	1.3	5400	3	96	87	38	520	468	208
TLJR226M006#3500	R	22	6.3	0.8	1.3	3500	3	125	113	50	439	395	175
TLJK336M006#1700	K	33	6.3	1.5	2.0	1700	3	196	176	78	332	299	133
TLJN336M006#8000	N	33	6.3	0.4	2.0	8000	3	79	71	32	632	569	253
TLJP336M006#3000	P	33	6.3	0.9	2.0	3000	3	141	127	57	424	382	170
TLJR336M006#3000	R	33	6.3	0.9	2.0	3000	3	135	122	54	406	366	162
TLJK476M006#1500	K	47	6.3	1.6	2.8	1500	3	208	187	83	312	281	125
TLJN476M006#8300	N	47	6.3	0.4	5.6	8300	3	78	70	31	644	580	258
TLJP476M006#0700	P	47	6.3	2.7	2.8	700	3	293	263	117	205	184	82
TLJP476M006#0900	P	47	6.3	2.3	2.8	900	3	258	232	103	232	209	93
TLJP476M006#1800	P	47	6.3	1.4	2.8	1800	3	183	164	73	329	296	131
TLJP476M006#2500	P	47	6.3	1.1	2.8	2500	3	155	139	62	387	349	155
TLJR476M006#3200	R	47	6.3	0.9	2.8	3200	3	131	118	52	420	378	168
TLJS476M006#1500	S	47	6.3	1.6	2.8	1500	3	208	187	83	312	281	125
TLJA686M006#0500	A	68	6.3	3.3	4.1	500	3	387	349	155	194	174	77
TLJG686M006#0800	G	68	6.3	1.9	4.1	800	3	242	217	97	290	261	116
TLJS686M006#1500	S	68	6.3	1.6	4.1	1500	3	208	187	83	312	281	125
TLJT686M006#0600	T	68	6.3	3.0	4.1	600	3	365	329	146	219	197	88
TLJA107M006#0500	A	100	6.3	3.3	6.0	500	3	387	349	155	194	174	77
TLJA107M006#0800	A	100	6.3	2.5	6.0	800	3	306	276	122	245	220	98
TLJG107M006#0800	G	100	6.3	2.5	6.0	800	3	296	266	118	237	213	95
TLJP107M006#5400	P	100	6.3	0.5	12.0	5400	3	105	95	42	596	512	228
TLJT107M006#0800	T	100	6.3	2.5	6.0	800	3	316	285	126	253	228	101
TLJA157M006#0900	A	150	6.3	2.3	9.0	900	3	289	260	115	260	234	104
TLJG157M006#2500	G	150	6.3	1.1	18.0	2500	3	167	151	67	418	376	167
TLJH157M006#0900	H	150	6.3	2.3	9.0	900	3	298	268	119	268	241	107
TLJT157M006#1200	T	150	6.3	1.9	9.0	1200	3	316	285	126	253	228	101
TLJB227M006#0500	B	220	6.3	3.3	13.2	500	3	412	371	165	206	186	82
TLJT227M006#2000	T	220	6.3	1.3	26.4	2000	3	200	180	80	400	360	160
TLJW227M006#0200	W	220	6.3	4.8	13.2	200	3	671	604	268	134	121	54
TLJF337M006#0300	F	330	6.3	4.2	19.8	300	3	577	520	231	173	156	69
TLJY687M006#0100	Y	680	6.3	5.7	40.8	100	3	1118	1006	447	112	101	45
TLJY687M006#0150	Y	680	6.3	5.7	40.8	150	3	913	822	365	137	123	55

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.

ESR allowed to move up to 1.25 times catalogue limit post mounting
DCL allowed to move up to 2.00 times catalogue limit post mounting

For typical weight and composition see page 123.

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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High CV Consumer Series

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Maximum Surge Current (A)*	DCL (µA) Max.	ESR Max. (mΩ) @100kHz	MSL	100kHz Ripple Current (mA)			100kHz Ripple Voltage (mV)		
								25°C	85°C	125°C	25°C	85°C	125°C
10 Volt @ 40°C (5 Volt @ 85°C, 2 Volt @ 125°C)													
TLJN106M010#2500	N	10	10	1.7	1.0	2500	3	141	127	57	354	318	141
TLJR106M010#2000	R	10	10	2.0	1.0	2000	3	166	149	66	332	298	133
TLJR106M010#3000	R	10	10	1.4	1.0	3000	3	135	122	54	406	366	162
TLJR156M010#2000	R	15	10	2.0	1.5	2000	3	166	149	66	332	298	133
TLJK226M010#1800	K	22	10	2.2	2.2	1800	3	190	171	76	342	308	137
TLJN226M010#3800	N	22	10	1.2	2.2	3800	3	115	103	46	436	392	174
TLJR226M010#3800	R	22	10	1.2	2.2	3800	3	120	108	48	457	411	183
TLJK336M010#1500	K	33	10	2.6	3.3	1500	3	208	187	83	312	281	125
TLJN336M010#9600	N	33	10	0.5	6.6	9600	3	72	65	29	693	624	277
TLJP336M010#3500	P	33	10	1.3	3.3	3500	3	141	127	57	424	382	170
TLJR336M010#3500	R	33	10	1.3	3.3	3500	3	125	113	50	439	395	175
TLJS336M010#1500	S	33	10	2.6	3.3	1500	3	208	187	83	312	281	125
TLJA476M010#0600	A	47	10	4.8	4.7	600	3	354	318	141	212	191	85
TLJG476M010#1500	G	47	10	2.6	4.7	1500	3	216	194	86	324	292	130
TLJP476M010#3200	P	47	10	1.4	4.7	3200	3	137	123	55	438	394	175
TLJR476M010#3200	R	47	10	1.4	9.4	3200	3	131	118	52	420	378	168
TLJS476M010#1500	S	47	10	2.6	4.7	1500	3	208	187	83	312	281	125
TLJT476M010#0600	T	47	10	4.8	4.7	600	3	365	329	146	219	197	88
TLJA686M010#1500	A	68	10	2.6	6.8	1500	3	224	201	89	335	302	134
TLJA107M010#1400	A	100	10	2.7	10.0	1400	3	231	208	93	324	292	130
TLJH107M010#0900	H	100	10	3.7	10.0	900	3	298	268	119	268	241	107
TLJT107M010#0900	T	100	10	3.7	10.0	900	3	298	268	119	268	241	107
TLJB157M010#0500	B	150	10	5.3	15.0	500	3	412	371	165	206	186	82
TLJW157M010#0150	W	150	10	8.3	15.0	150	3	775	697	310	116	105	46
TLJW157M010#0200	W	150	10	7.7	15.0	200	3	671	604	268	134	121	54
TLJB227M010#1100	B	220	10	3.2	22.0	1100	3	278	250	111	306	275	122
TLJF227M010#0300	F	220	10	6.7	22.0	300	3	577	520	231	173	156	69
16 Volt @ 40°C (8 Volt @ 85°C, 3.2 Volt @ 125°C)													
TLJS106M016#2200	S	10	16	3.0	1.6	2200	3	172	155	69	378	340	151
TLJT226M016#1000	T	22	16	5.5	3.5	1000	3	283	255	113	283	255	113
TLJT336M016#1000	T	33	16	5.5	5.3	1000	3	283	255	113	283	255	113
20 Volt @ 40°C (10 Volt @ 85°C, 4 Volt @ 125°C)													
TLJT106M020#1000	T	10	20	6.9	2.0	1000	3	283	255	113	283	255	113

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ESR allowed to move up to 1.25 times catalogue limit post mounting
DCL allowed to move up to 2.00 times catalogue limit post mounting

For typical weight and composition see page 123.

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