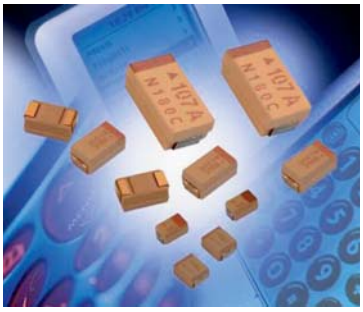
TLJ Series

Tantalum Solid Electrolytic Chip Capacitors
High CV Consumer Series

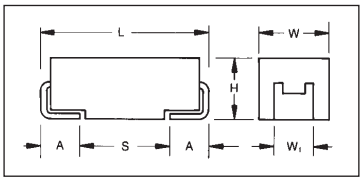


The consumer TLJ series of tantalum capacitors offers high capacitance vs. voltage ratio based on stable MnO_2 electrode capacitors. The TLJ series complies with RoHS requirements and it is an environmentally friendly component ready for lead-free assembly systems up to 3x reflow with 260°C peak temperature. The TLJ series is suitable for wide range of consumer electronic applications such as the latest portable handheld electronics, cellular phones, PDAs or other digital equipment and cameras.

- High Volumetric Efficiency
- Environmentally Friendly
- Small & Low Profile Cases
- 3x Reflow 260°C Compatible
- Consumer Applications

RoHS COMPLIANT

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT



For part marking see page 122

CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	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	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)
G	3216-16	3.20 (0.126)	1.60 (0.063)	1.60 (0.063) max	1.20 0.047)	0.80 (0.031)	1.10 (0.043)
H	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	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	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	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	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	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	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	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)

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

HOW TO ORDER

TLJ **W** **157** **M** **010** **R** **0200**

Type

Case Size
See table above

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

Tolerance
M = ±20%

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

Packaging
R = 7" T/R
S = 13" T/R

ESR in mΩ

TECHNICAL SPECIFICATIONS

Technical Data:		All technical data relate to an ambient temperature of +25°C							
Capacitance Range:		4.7 µF to 330 µF							
Capacitance Tolerance:		±20%							
Rated Voltage (V_R)	-55°C ≤ +40°C:	2.5	4	6.3	10	16	20	35	
Category Voltage (V_C)	at 85°C:	1.25	2	3.15	5	8	10	17.5	
Category Voltage (V_C)	at 125°C:	0.5	0.8	1.26	2	3.2	4	7	
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, V_R (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)
1.0	105							
1.5	155							
2.2	225							
3.3	335							
4.7	475							
6.8	685							
10	106				R(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(3000) P(3000)/R(3000)	K(1500)/N(8300) P(900,2500) S(1500)/R(3200)	A(600)/G(1500) P(3200)/S(1500) T(600)			
68	686		K(1200)/N(8000) P(3000) R(2900)/S(1500)	A(500)/G(800) T(600)/S(1500)	A(1500)			
100	107		A(500)/G(800) N(5200)/P(2700) S(1400)	A(500,800) G(800)/S(1400) P(5400)/T(800)	A(1400)* H(900)/T(900)			
150	157		A(800)/T(800)	A(900)/H(900) T(1200)	B(500) W(150,200)			
220	227	T(1100)	A(1100)/H(900) T(1100)	B(500)/W(200)				
330	337		W(200)					
470	477							
680	687			Y(100,150)				

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	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 (1.25V @ 85°C, 0.5V @ 125°C)												
TLJT227M002#1200	T	220	2.5	0.8	5.5	1100	365	329	146	219	197	88
4 Volt @ 40°C (2 Volt @ 85°C, 0.8 Volt @ 125°C)												
TLJJ685M004#KJ	J	6.8	4	0.4	0.5	5200	44	39	18	228	205	91
TLJJ106M004#KJ	J	10	4	0.4	0.5	4500	47	42	19	212	191	85
TLJN336M004#8000	N	33	4	0.2	1.3	8000	79	71	32	632	569	253
TLJR336M004#3000	R	33	4	0.6	1.3	3000	135	122	54	406	366	162
TLJK476M004#1500	K	47	4	1.0	1.9	1500	208	187	83	312	281	125
TLJN476M004#3000	N	47	4	0.6	1.9	3000	129	116	52	387	349	155
TLJP476M004#3000	P	47	4	0.6	1.9	3000	141	127	57	424	382	170
TLJR476M004#3000	R	47	4	0.6	1.9	3000	135	122	54	406	366	162
TLJK686M004#1200	K	68	4	1.2	2.7	1200	233	209	93	279	251	112
TLJN686M004#8000	N	68	4	0.2	5.4	8000	79	71	32	632	569	253
TLJP686M004#3000	P	68	4	1.2	2.7	3000	141	127	57	424	382	170
TLJR686M004#2900	R	68	4	0.6	2.7	2900	138	124	55	399	359	160
TLJS686M004#1500	S	68	4	1.0	2.7	1500	208	187	83	312	281	125
TLJA107M004#0500	A	100	4	2.1	4.0	500	387	349	155	194	174	77
TLJG107M004#0800	G	100	4	1.6	4.0	800	296	266	118	237	213	95
TLJN107M004#5200	N	100	4	0.4	8.0	5200	98	88	39	510	459	204
TLJS107M004#1400	S	100	4	1.1	4.0	1400	208	187	83	312	281	125
TLJP107M004#2700	P	100	4	0.6	8.0	2700	149	134	60	402	362	161
TLJA157M004#0800	A	150	4	1.6	6.0	800	306	276	122	245	220	98
TLJT157M004#0800	T	150	4	1.6	6.0	800	316	285	126	253	228	101
TLJA227M004#1100	A	220	4	1.3	17.6	1100	261	235	104	287	259	115
TLJH227M004#0900	H	220	4	1.5	8.8	900	298	268	119	268	241	107
TLJT227M004#1100	T	220	4	1.3	17.6	1100	316	285	126	253	228	101
TLJW337M004#0200	W	330	4	3.1	13.2	200	671	604	268	134	121	54
6.3 Volt @ 40C (3.15V @ 85°C, 1.26V @ 125°C)												
TLJJ475M006#KJ	J	4.7	6.3	0.4	0.5	8500	34	31	14	292	262	117
TLJJ685M006#KJ	J	6.8	6.3	0.3	0.5	10000	32	28	13	316	285	126
TLJJ106M006#KJ	J	10	6.3	0.4	0.6	8000	35	32	14	283	255	113
TLJN226M006#5400	N	22	6.3	0.5	1.3	5400	96	87	38	520	468	208
TLJR226M006#3500	R	22	6.3	0.8	1.3	3500	125	113	50	439	395	175
TLJK336M006#1700	K	33	6.3	1.5	2.0	1700	196	176	78	332	299	133
TLJN336M006#8000	N	33	6.3	0.4	2.0	8000	79	71	32	632	569	253
TLJP336M006#3000	P	33	6.3	0.9	2.0	3000	141	127	57	424	382	170
TLJR336M006#3000	R	33	6.3	0.9	2.0	3000	135	122	54	406	366	162
TLJK476M006#1500	K	47	6.3	1.6	2.8	1500	208	187	83	312	281	125
TLJN476M006#8300	N	47	6.3	0.4	5.6	8300	78	70	31	644	580	258
TLJP476M006#0900	P	47	6.3	2.3	2.8	900	258	232	103	232	209	93
TLJP476M006#2500	P	47	6.3	1.1	2.8	2500	155	139	62	387	349	155
TLJR476M006#3200	R	47	6.3	0.9	2.8	3200	131	118	52	420	378	168
TLJS476M006#1500	S	47	6.3	1.6	2.8	1500	208	187	83	312	281	125
TLJA686M006#0500	A	68	6.3	3.3	4.1	500	387	349	155	194	174	77
TLJG686M006#0800	G	68	6.3	1.9	4.1	800	242	217	97	290	261	116
TLJS686M006#1500	S	68	6.3	1.6	4.1	1500	208	187	83	312	281	125
TLJT686M006#0600	T	68	6.3	3.0	4.1	600	365	329	146	219	197	88
TLJA107M006#0500	A	100	6.3	3.3	6.0	500	387	349	155	194	174	77
TLJA107M006#0800	A	100	6.3	2.5	6.0	800	306	276	122	245	220	98
TLJG107M006#0800	G	100	6.3	2.5	6.0	800	296	266	118	237	213	95
TLJP107M006#5400	P	100	6.3	0.5	12.0	5400	105	95	42	596	512	228
TLJS107M006#1400	S	100	6.3	1.7	6.0	1400	215	194	86	302	271	121
TLJT107M006#0800	T	100	6.3	2.5	6.0	800	316	285	126	253	228	101
TLJA157M006#0900	A	150	6.3	2.3	9.0	900	289	260	115	260	234	104
TLJH157M006#0900	H	150	6.3	2.3	9.0	900	298	268	119	268	241	107
TLJT157M006#1200	T	150	6.3	1.9	9.0	1200	316	285	126	253	228	101
TLJB227M006#0500	B	220	6.3	3.3	13.2	500	412	371	165	206	186	82
TLJW227M006#0200	W	220	6.3	4.8	13.2	200	671	604	268	134	121	54
TLJY687M006#0100	Y	680	6.3	5.7	40.8	100	1118	1006	447	112	101	45
TLJY687M006#0150	Y	680	6.3	5.7	40.8	150	913	822	365	137	123	55

Engineering samples - please contact manufacturer

insert R for 7" reel or S for 13" reel

All technical data relates to an ambient temperature of +25°C. Capacitance is measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes. TLJ series is MSL level 3 according to J-STD-020C.

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

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.

TLJ Series

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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	100kHz Ripple Current (mA)			100kHz Ripple Voltage (mV)		
							25°C	85°C	125°C	25°C	85°C	125°C
10 Volt @ 40°C (5V @ 85°C, 2V @ 125°C)												
TLJJ475M010#KJ	J	4.7	10	0.5	0.5	10000	32	28	13	316	285	126
TLJR106M010#3000	R	10	10	1.4	1.0	3000	135	122	54	406	366	162
TLJR156M010#2000	R	15	10	2.0	1.5	2000	166	149	66	332	298	133
TLJK226M010#1800	K	22	10	2.2	2.2	1800	190	171	76	342	308	137
TLJN226M010#3800	N	22	10	1.2	2.2	3800	115	103	46	436	392	174
TLJR226M010#3800	R	22	10	1.2	2.2	3800	120	108	48	457	411	183
TLJK336M010#1500	K	33	10	2.6	3.3	1500	208	187	83	312	281	125
TLJN336M010#9600	N	33	10	0.5	6.6	9600	72	65	29	693	624	277
TLJR336M010#3500	R	33	10	1.3	3.3	3500	125	113	50	439	395	175
TLJP336M010#3500	P	33	10	1.3	3.3	3500	141	127	57	424	382	170
TLJS336M010#1500	S	33	10	2.6	3.3	1500	208	187	83	312	281	125
TLJP476M010#3200	P	47	10	1.4	4.7	3200	137	123	55	438	394	175
TLJA476M010#0600	A	47	10	4.8	4.7	600	354	318	141	212	191	85
TLJG476M010#1500	G	47	10	2.6	4.7	1500	216	194	86	324	292	130
TLJS476M010#1500	S	47	10	2.6	4.7	1500	208	187	83	312	281	125
TLJT476M010#0600	T	47	10	4.8	4.7	600	365	329	146	219	197	88
TLJA686M010#1500	A	68	10	2.6	6.8	1500	224	201	89	335	302	134
TLJH107M010#0900	H	100	10	3.7	10.0	900	298	268	119	268	241	107
TLJT107M010#0900	T	100	10	3.7	10.0	900	298	268	119	268	241	107
TLJB157M010#0500	B	150	10	5.3	15.0	500	412	371	165	206	186	82
TLJW157M010#0150	W	150	10	8.3	15.0	150	775	697	310	116	105	46
TLJW157M010#0200	W	150	10	7.7	15.0	200	671	604	268	134	121	54
16 Volt @ 40°C (8V @ 85°C, 3.2V @ 125°C)												
TLJS106M016#2200	S	10	16	3.0	1.6	2200	172	155	69	378	340	151
TLJT226M016#1000	T	22	16	5.5	3.5	1000	283	255	113	283	255	113
TLJT336M016#1000	T	33	16	5.5	5.3	1000	283	255	113	283	255	113
20 Volt @ 40°C (10V @ 85°C, 4V @ 125°C)												
TLJT106M020#1000	T	10	20	6.9	2.0	1000	283	255	113	283	255	113

Engineering samples - please contact manufacturer

insert R for 7" reel or S for 13" reel

All technical data relates to an ambient temperature of +25°C. Capacitance is measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes. TLJ series is MSL level 3 according to J-STD-020C.

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

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.