

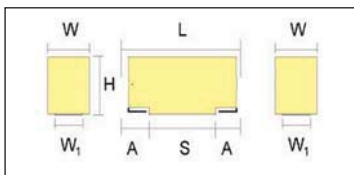
TLN Series



Tantalum Solid Electrolytic Chip Capacitors Undertab Series



- Undertab terminations layout:
 - High Volumetric Efficiency
 - High PCB assembly density
 - High capacitance in smaller dimensions
- 3x reflow 260°C compatible
- Consumer applications (e.g. PCMCIA/USB wireless express cards, mobiles, MP3 etc.)
- 7 case sizes available
- CV range: 47-1000µF / 4-10V



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 max.	W ₁ ±0.20 (0.008)	A+0.30 (0.012) -0.20 (0.008)
G	1206	3216-15	3.20 (0.126)	1.60 (0.063)	1.50 (0.059)	1.20 (0.047)	0.80 (0.031)
K	1206	3216-10	3.20 (0.126)	1.60 (0.063)	1.00 (0.039)	1.20 (0.047)	0.80 (0.031)
L	1210	3528-10	3.50 (0.138)	2.80(0.110)	1.00 (0.039)	2.20(0.087)	0.80 (0.031)
N	0805	2013-10	2.05(0.081)	1.30(0.051)	1.00(0.039)	1.00(0.039)	0.50 (0.020)
S	1206	3216-12	3.20 (0.126)	1.60 (0.063)	1.20 (0.047)	1.20 (0.047)	0.80 (0.031)
T	1210	3528-12	3.50 (0.138)	2.80 (0.110)	1.20 (0.047)	2.20 (0.087)	0.80 (0.031)
Y	2917	7343-20	7.30 (0.287)	4.30 (0.169)	2.00 (0.079)	2.40 (0.094)	1.30 (0.051)

W₁ dimension applies to the termination width for A dimensional area only.

HOW TO ORDER

TLN

Type

S

Case Size
See table above

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

M

Tolerance
M = ±20%

004

Rated DC Voltage
004 = 4Vdc
006 = 6.3Vdc
010 = 10Vdc

R

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

3000

ESR in mΩ

TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C				
Capacitance Range:	47 µF to 1000 µF				
Capacitance Tolerance:	±20%				
Rated Voltage (V _R)	-55°C ≤ +40°C:	4	6.3	10	
Category Voltage (V _C)	at 85°C:	2	3.15	5	
Category Voltage (V _C)	at 125°C:	0.8	1.26	2	
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	4V (G)	6.3V (J)	10V (A)
33	336			
47	476			K(1500)/N(6000)
68	686	N(3000)*	K(5400)	K(5400)/S(6000)
100	107	N(5200)	K(5400)/S(5400)	K(2500)/L(7200)* S(2500)
150	157	K(2500)/S(2500)	K(2500)/L(5400)* S(2500)	H(6000)/(1300)/ S(7200)*T(1500)
220	227	K(2500)/L(1300) S(3000)/T(1500)	L(1000) S(8300)*T(1500)	G(7200)*H(6000)* T(1300)
330	337	G(4000)*L(4000)* S(5200)*	G(5400)*H(3000)* T(5400)	H(7200)*T(9600)*
470	477	G(5200)*H(3000)* T(4000)*	H(5400)*T(8300)*	H(9600)*
680	687	H(4000)*T(5200)*	H(8300)*	
1000	108	H(5200)*	Y(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.

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
4 Volt @ 40°C (2 Volt @ 85°C, 0.8 Volt @ 125°C)													
TLNN107M004#5200	N	100	4	0.4	20	5200	3	88	79	35	456	410	182
TLNK157M004#2500	K	150	4	0.7	12.0	2500	3	148	133	59	371	334	148
TLNS157M004#2500	S	150	4	0.7	12.0	2500	3	148	133	59	371	334	148
TLNK227M004#2500	K	220	4	0.7	44	2500	3	148	133	59	371	334	148
TLNL227M004#1300	L	220	4	1.1	17.6	1300	3	215	193	86	279	251	112
TLNS227M004#3000	S	220	4	0.6	17.6	3000	3	135	122	54	406	366	162
TLNT227M004#1500	T	220	4	1.0	17.6	1500	3	216	194	86	324	292	130
6.3 Volt @ 40°C (3.15 Volt @ 85°C, 1.26 Volt @ 125°C)													
TLNK686M006#5400	K	68	6.3	0.5	4.1	5400	3	101	91	40	545	490	218
TLNK107M006#5400	K	100	6.3	0.5	6	5400	3	101	91	40	545	490	218
TLNS107M006#5400	S	100	6.3	0.5	6	5400	3	101	91	40	545	490	218
TLNK157M006#2500	K	150	6.3	1.1	18	2500	3	148	133	59	371	334	148
TLNS157M006#2500	S	150	6.3	1.1	18	2500	3	148	133	59	371	334	148
TLNL227M006#1000	L	220	6.3	2.2	26.4	1000	3	245	220	98	245	220	98
TLNT227M006#1500	T	220	6.3	1.6	26.4	1500	3	216	194	86	324	292	130
TLNT337M006#5400	T	330	6.3	0.5	19.8	5400	3	114	102	46	615	553	246
TLNY108M006#0150	Y	1000	6.3	5.3	63	150	3	876	788	350	131	118	53
10 Volt @ 40°C (5 Volt @ 85°C, 2 Volt @ 125°C)													
TLNK476M010#1500	K	47	10	2.6	4.7	1500	3	191	172	77	287	259	115
TLNN476M010#6000	N	47	10	0.8	9.4	6000	3	82	73	33	490	441	196
TLNK686M010#5400	K	68	10	0.9	6.8	5400	3	101	91	40	545	490	218
TLNS686M010#6000	S	68	10	0.8	6.8	6000	3	96	86	38	574	517	230
TLNK107M010#2500	K	100	10	1.7	20	2500	3	148	133	59	371	334	148
TLNS107M010#2500	S	100	10	1.7	10	2500	3	148	133	59	371	334	148
TLNH157M010#6000	H	150	10	0.8	30	6000	3	108	97	43	648	583	259
TLNL157M010#1300	L	150	10	2.9	30	1300	3	215	193	86	279	251	112
TLNT157M010#1500	T	150	10	2.6	30	1500	3	216	194	86	324	292	130
TLNT227M010#1300	T	220	10	2.9	44	1300	3	232	209	93	302	271	121

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.

