

TLN PulseCap™ Series



High Capacitance Tantalum Solid Electrolytic Chip Capacitors Undertab Series



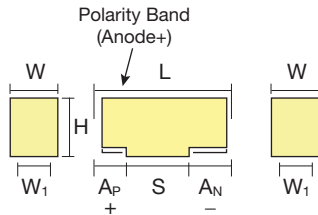
FEATURES

- Large case size for maximum capacitance
- 3x reflow 260°C compatible
- Low profile solution
- Consumer applications (e.g. PCMCIA/USB wireless express cards etc.)
- CV range: 1000-3300µF / 4-10V
- 2 case sizes available



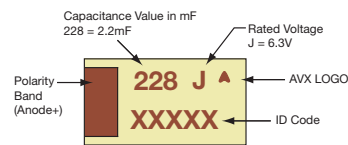
APPLICATIONS

- Data transfer modems
- SSD backup circuits



MARKING

4, 6 CASE



CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L+0.30 (0.012) -0.30 (0.012)	W+0.30 (0.012) -0.30 (0.012)	H max.	W ₁ ±0.20 (0.008)	A _P +0.30 (0.012) -0.20 (0.008)	A _N +0.30 (0.012) -0.20 (0.008)
4	2924	7360-20	7.30 (0.287)	6.00 (0.240)	2.00 (0.079)	4.75 (0.187)	2.00 (0.079)	3.20 (0.126)
6	6030	15075-20	14.50 ^{+0.50} _{-0.00} (0.571 ^{+0.020} _{-0.000})	7.50 ^{+0.50} _{-0.00} (0.295 ^{+0.020} _{-0.000})	2.00 (0.079)	5.50 (0.217)	2.40 (0.094)	2.40 (0.094)

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

HOW TO ORDER

TLN

Type

6

Case Size
See table above

228

Capacitance Code
pF code: 1st two digits represent significant figures, 3rd digit represents multiplier

M

Tolerance
M = ±20%

006

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

R

Packaging
R = Pure Tin 7" Reel

0055

ESR in mΩ

TECHNICAL SPECIFICATIONS

Technical Data:

All technical data relate to an ambient temperature of +25°C

Capacitance Range: 1000 µF to 3300 µF

Capacitance Tolerance: ±20%

Leakage Current DCL: 0.01CV

Rated Voltage (V_R) -55°C ≤ +40°C: 4 6.3 10

Category Voltage (V_C) at 85°C: 2 3.2 5

Category Voltage (V_C) at 125°C: 0.8 1.3 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 RANGE (FIGURE DENOTES CASE SIZE)

Capacitance		Voltage Rating DC (V _R) to 85°C		
µF	Code	4V (G)	6.3V (J)	10V (A)
680	687			
1000	108			4(100)/6(55)
1500	158		4(100)	6(55)
2200	228		6(55)	
3300	338	6(55)	6*	

Available Codes (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)	Rated Temperature (°C)	Category Voltage (V)	Category Temperature (°C)	DCL (µA) Max.	ESR Max. (mΩ) @ 100kHz	MSL	100kHz RMS Current (mA)		
										25°C	85°C	125°C
4 Volt @ 40°C												
TLN6338M004#0055	6	3300	4	40	0.8	125	132	55	3	2045	1840	818
6.3 Volt @ 40°C												
TLN4158M006#0100	4	1500	6.3	40	1.3	125	90	100	3	1285	1156	514
TLN6228M006#0055	6	2200	6.3	40	1.3	125	132	55	3	2045	1840	818
10 Volt @ 40°C												
TLN4108M010#0100	4	1000	10	40	2	125	100	100	3	1285	1156	514
TLN6108M010#0055	6	1000	10	40	2	125	100	55	3	2045	1840	818
TLN6158M010#0055	6	1500	10	40	2	125	150	55	3	2045	1840	818

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 218.

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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QUALIFICATION TABLE

TEST	TLN PulseCap™ series (Temperature range -55°C to +125°C)									
	Condition			Characteristics						
Endurance	Determine after application of rated voltage for 2000 +48/-0 hours at 40±2°C and then leaving 1-2 hours at room temperature. Also determine of 85°C temperature, category voltage for 2000 +48/-0 hours and then leaving 1-2 hours at room temperature. Power supply impedance to be ≤0.1Ω/V.			Visual examination	no visible damage					
				DCL	2 x initial limit					
				ΔC/C	within +5/-30% of initial value					
				ESR	1.25 x initial limit					
Humidity	Determine after storage without applied voltage at 65±2°C and 90-95% relative humidity for 500 hours and then recovery 1-2 hours at room temperature.			Visual examination	no visible damage					
				DCL	2 x initial limit					
				ΔC/C	within ±10% of initial value					
				ESR	1.25 x initial limit					
Temperature Stability	Step	Temperature°C	Duration(min)		+20°C	-55°C	+20°C	+85°C	+125°C	+20°C
	1	+20±2	15	DCL	2 x IL*	n/a	2 x IL*	20 x IL*	25 x IL*	2 x IL*
	2	-55+0/-3	15		ΔC/C	n/a	+5/-20%	±10%	+20/-0%	+25/-0%
	3	+20±2	15	ESR	1.25 x IL*	2.5 x IL*	1.25 x IL*	1.25 x IL*	1.25 x IL*	1.25 x IL*
	4	+85+3/-0	15							
	5	+125+3/-0	15							
	6	+20±2	15							
Surge Voltage	Test temperature: 40°C+3/0°C Test voltage: 1.3 x rated voltage Series protection resistance 1000±100Ω Discharge resistance: 1000Ω Number of cycles: 1000x Cycle duration: 6 min; 30 sec charge, 5 min 30 sec discharge			Visual examination	no visible damage					
				DCL	2 x initial limit					
				ΔC/C	within ±5% of initial value					
				ESR	1.25 x initial limit					

*Initial Limit

