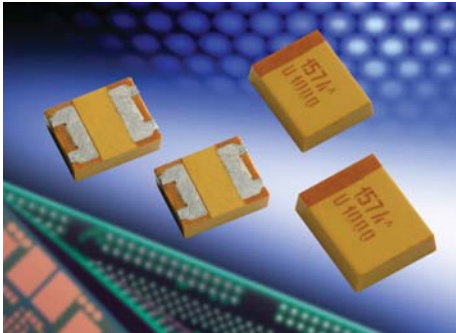


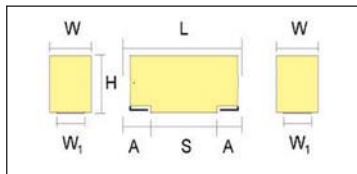
# TCN Series



## Tantalum Solid Electrolytic Chip Capacitors Undertab Series with Conductive Polymer Electrode



- Conductive polymer electrode reduces failure mode ignition
- Lower ESR
- Undertab terminations layout:
  - High Volumetric Efficiency
  - High PCB assembly density
  - High capacitance in smaller dimensions
- 3x reflow 260°C compatible
- Consumer applications (e.g. mobiles, MP3 etc.)



For part marking see page 123

### 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 <sub>1</sub> ±0.20 (0.008)	A+0.30 (0.012) -0.20 (0.008)
L	3528-10	3.50 (0.138)	2.80 (0.110)	1.00 (0.039) max	2.20 (0.087)	0.80 (0.031)
T	3528-12	3.50 (0.138)	2.80 (0.110)	1.20 (0.047) max	2.20 (0.087)	0.80 (0.031)

W<sub>1</sub> dimension applies to the termination width for A dimensional area only.

### HOW TO ORDER

**TCN**



Type

**L**



Case Code  
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%

**006**



Rated DC Voltage  
006 = 6.3Vdc

**R**



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

**0200**



ESR in mΩ

### TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C		
Capacitance Range:	150 μF		
Capacitance Tolerance:	±20%		
Rated Voltage (V <sub>R</sub> )	≤ ±85°C:	6.3	
Category Voltage (V <sub>C</sub> )	≤ ±105°C:	5	
Category Voltage (V <sub>3</sub> )	≤ ±85°C:	8	
Category Voltage (V <sub>3</sub> )	≤ ±105°C:	6	
Temperature Range:	-55°C to +105°C		
Reliability:	1% per 1000 hours at 85°C, V <sub>R</sub> with 0.1V <sub>R</sub> series impedance with 60% confidence level		

# TCN Series



## Tantalum Solid Electrolytic Chip Capacitors Undertab Series with Conductive Polymer Electrode

### CAPACITANCE AND RATED VOLTAGE, $V_R$ (VOLTAGE CODE) RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage DC to 85°C / 0.66DC to 105°C					
$\mu\text{F}$	Code	2.5V (e)	4V (G)	6.3V (J)	10V (A)	16V (C)	20V (D)
22	226				N		
33	336			N	K/R		
47	476		N	R	P/S		
68	686			K/P	G/L/T		
100	107		R	G/S	T		
150	157		G/S	L(200)/T(200)	H/M		
220	227		L/T	H	M/U		
330	337		H/M	M/U			
470	477		U	U			

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 ( $\mu\text{F}$ )	Rated Voltage (V)	DCL ( $\mu\text{A}$ ) Max.	ESR Max. (m $\Omega$ ) @100kHz	100kHz Ripple Current (mA)			100kHz Ripple Voltage (mV)		
						25°C	85°C	125°C	25°C	85°C	125°C
<b>6.3 Volt @ 85°C (5 Volt @ 105°C)</b>											
TCNL157M006#0200	L	150	6.3	90	200	592	532	237	118	106	47
TCNT157M006#0200	T	150	6.3	90	200	592	532	237	118	106	47

# 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, 0.5 RMS with DC bias of 1.5V. DCL is measured at rated voltage after 5 minutes.

ESR allowed to move up to 1.25 times catalog limit post mounting.

TCN series is MSL level 3 according to J-STD-020C.

**NOTE: AVX reserves the rights to supply higher voltage rating in the same case size to the same reliability standards.**

