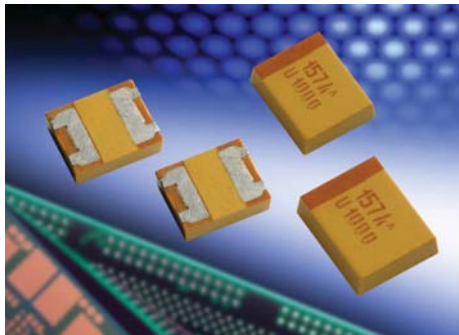
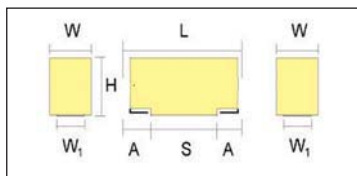


# Tantalum Solid Electrolytic Chip Capacitors Undertab Series with Conductive Polymer Electrode



- Conductive polymer electrode reduces ignition failure mode
- 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.)
- 3 case sizes available



For part marking see page 132

## 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 <sub>i</sub> ±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)
L	1210	3528-10	3.50 (0.138)	2.80 (0.110)	1.00 (0.039)	2.20 (0.087)	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)

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

## HOW TO ORDER

**TCN**  
Type

**L**  
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%

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

**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:	15µF to 470 µF				
Capacitance Tolerance:	±20%				
Rated Voltage (V <sub>R</sub> )	≤ +85°C:	4	6.3	10	
Category Voltage (V <sub>C</sub> )	≤ +105°C:	3.2	5	8	
Surge Voltage (V <sub>S</sub> )	≤ +85°C:	5.2	8	13	
Surge Voltage (V <sub>S</sub> )	≤ +105°C:	4	6	10	
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				



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

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

Capacitance		Rated Voltage DC to 85°C / 0.66DC to 105°C		
µF	Code	4V (G)	6.3V (J)	10V (A)
15	156			N(500)*
22	226			N(500)*
33	336	N(500)*	K(500)*/N(500)*	K(500)*/N(500)*
47	476	N(500)*	K(500)*	K(500)*/S(500)*
68	686	K(500)*/N(500)*	K(500)*/S(500)*	G(150)*/L(150)* S(500)*
100	107	K(500)*/S(500)*	G(200)*/L(200)*	G(150)*/L(150)* S(150)*/T(150)*
150	157	G(200)*/L(200)* S(500)*	G(200)/K(200)* L(200)/S(200)* T(200)	G(150)*/H(150)* T(150)*
220	227	G(200)*/L(150)* S(200)*/T(150)*	H(200)*/T(200)	H(150)*
330	337	H(150)*/T(150)*	H(200)*/T(200)*	
470	477	H(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)	DCL (µA) Max.	ESR Max. (mΩ) @ 100kHz	100kHz Ripple Current (mA)			100kHz Ripple Voltage (mV)		
						25°C	85°C	105°C	25°C	85°C	105°C
<b>6.3 Volt @ 85°C (5 Volt @ 105°C)</b>											
TCNG157M006#0200	G	150	6.3	90	200	548	493	356	110	99	71
TCNL157M006#0200	L	150	6.3	90	200	548	493	356	110	99	71
TCNT157M006#0200	T	150	6.3	90	200	592	532	385	118	106	77
TCNT227M006#0200	T	220	6.3	132	200	592	532	385	118	106	77

# 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.**

