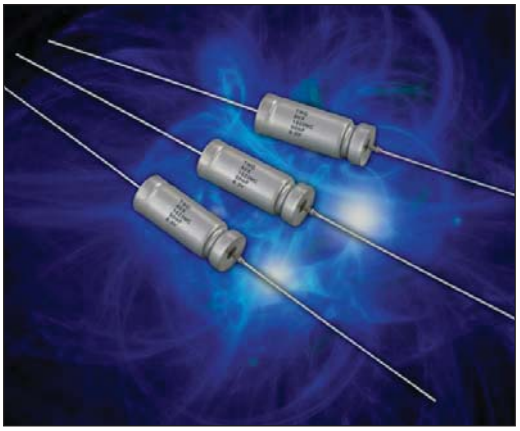
TWD High Temp Max Cap Series

Wet Tantalum Super Capacitor



The TWD series is an axial leaded wet electrolytic tantalum capacitor designed for DC (hold-up) and low frequency pulse applications.

Utilizing high CV Tantalum powders the TWD series achieves extreme high capacitance values that are similar to the Super capacitor range. The TWD offers extended temperature range up to 175ºC and extended life up to 10000 hrs.

Components are suitable for automatic mounting and soldering.

Well-established wet tantalum design is suitable for applications with hi-reliability requirements. Contact the factory about design possibilities beyond those contained in this datasheet.

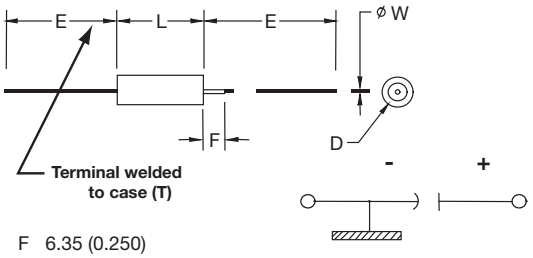
FEATURES

- Super high capacitance
- -55 to 175°C operation temperature
- Hermetic packaging
- Endurance up to 10 000 hrs. on selected codes
- High electrical and mechanical stability

APPLICATIONS

- Special industrial
- Avionics
- Military
- Down hole drilling

OUTLINE DIMENSIONS



F 6.35 (0.250)
W 0.64 ±0.05 (.025) (.002)
T 2.380 (.094)

CASE DIMENSIONS: millimeters (inches)

DLA Case Size	AVX Case Size	L +0.79 (0.031) -0.41 (0.016)	D Without Insulating Sleeve ±0.41 (0.016)	D With Insulatiing Sleeve Max	E ±6.35 (0.250)
T4	E	26.97 (1.062)	9.52 (0.375)	10.31 (0.406)	57.15 (2.250)

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

DC Capacitance		Rated Voltage DC (V_R) to 85°C	
mF	Code	6.3V	10V
25	253		E
50	503	E	

Available Ratings

TWD High Temp Max Cap Series

Wet Tantalum Super Capacitor

HOW TO ORDER

AVX PART NUMBER:

TWD	E	503	*	006	□	B	0	Z	0	^	00
Type	**Case Size**	**Capacitance Code** pF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow)	**Capacitance Tolerance** K = ±10% M = ±20%	**Voltage Code** 006 = 6.3Vdc 010 = 10Vdc	**Insulation Sleeve** C = Without Sleeve S = With Sleeve	**Packaging** B = Tray Pack	**Inspecition Level** 0 = N/A	**Reliability** Z = Non-ER	**Qualification Level** 0 = N/A	**Termination Finish** 0 = Sn/Pb 60/40 7 = Matte tin	**Custom Test Options** 00 = Standard

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

For RoHS compliant products, please select correct termination style.

TECHNICAL SPECIFICATIONS

Technical Data:		All technical data relate to an ambient temperature of +25ºC		
Capacitance Range:		25mF to 50mF (for extended range under development, contact manufacturer)		
Capacitance Tolerance:		±10%; ±20%		
Rated Voltage (V_R)	≤ 105ºC:	6.3	10	
Category Voltage (V_C)	≤ 125ºC:	4.2	6.6	
HIgh Temperature Voltage (V_T)	≤ 175ºC:	*	5	
Surge Voltage (V_S)	≤ 105ºC:	7.2	11.5	
Temperature Range:		-55ºC to +175ºC		
Endurance:		10,000h at +105°C/V_R and 2000h at +175°C/V_T		
Reliability:		1% per 1000 hours at 85ºC,V_R with 0.1Ω/Vseries impedance, 60% confidence level		
Termination Finish:		Sn Plating, SnPb Plating 60/40		

RATINGS & PART NUMBER REFERENCE

AVX Part Number	Cap (mF)[2/] at 25°C	Rated Voltage (V)	Rated Temperature (ºC)	D Leakeage Max (µA)[1/]			Maximum Capacitance Change (%)					ESR Max (mOhms) at 1kHz	Case Size		Lifetime at 105ºC (hrs.)	Lifetime at 175ºC (hrs.)
				+25°C	+85°C & +105ºC & +125ºC	+150°C & +175ºC	-55°C	+85°C	+125°C	+150°C	+175°C		AVX	DLA		
6.3 VDC at 105°C																
TWDE503*006□B0Z0^00	50	6.3	85	20	60	–	-15	20	30	–	–	400	E	T4	10,000	*
10 VDC at 105°C																
TWDE253*010□B0Z0^00	25	10	85	20	60	600	-15	20	30	35	40	400	E	T4	10,000	2 000

1/ DCL is measured at rated or category voltage after 20 minutes.

2/ DC capacitance is measured by discharging initially fully charged capacitor down to 0.37Ur through 1kOhm.

*/ Under development, contact factory for more details.