

TWD High Temp Max Cap (HTMC) 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 HTMC series achieves extreme high capacitance values that are similar to the Super capacitor range. The HTMC offers extended temperature range up to 125°C 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.

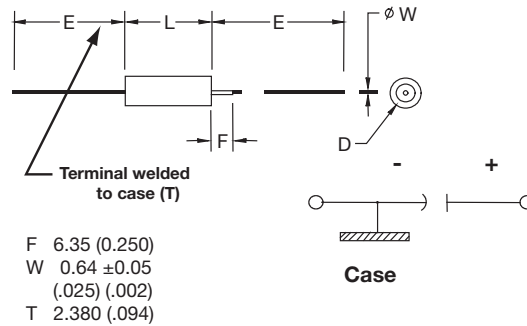
FEATURES

- Super high capacitance
- -55 to 125°C operation temperature
- Hermetic packaging
- Endurance up to 10 000 hrs. on selected codes
- High electrical and mechanical stability

APPLICATIONS

- Special industrial
- Avionics
- Military

OUTLINE DIMENSIONS



CASE DIMENSIONS: millimeters (inches)

DSCC Case Size	AVX Case Size	L +0.79 (0.031) -0.41 (0.016)	D		E ±6.35 (0.250)
			Without Insulating Sleeve ±0.41 (0.016)	With Insulating Sleeve Max	
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	2.5V	6.3V	10V
25	253			E
50	503		E	
150	154	E*		

Available Ratings

Engineering samples - please contact manufacturer

*Codes under development

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HOW TO ORDER

AVX PART NUMBER:

TWD	E	503	*	006	□	B	0	Z	0	^	00
Type	Case Size	Capacitance Code µF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow)	Capacitance Tolerance K = ±10% M = ±20%	Voltage Code 002 = 2.5Vdc 006 = 6.3Vdc 010 = 10Vdc	Insulation Sleeve C = Without Sleeve S = With Sleeve	Packaging B = Tray Pack	Inspection 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



TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C				
Capacitance Range:	25mF to 50mF (for extended range under development, contact manufacturer)				
Capacitance Tolerance:	±10%; ±20%				
Rated Voltage (V _R)	≤ 85°C:	2.5	6.3	10	
Category Voltage (V _C)	≤ 125°C:	n/a	4.2	6.6	
Surge Voltage (V _S)	≤ 85°C:	2.5	7.2	11.5	
Temperature Range:	-55°C to +85°C	-55°C to +125°C			
Endurance:	2000h at +85°C/V _R	10000h at +85°C/V _R			
Reliability:	1% per 1000 hours at 85°C, 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 (°C)	Category Voltage (V)	Category Temperature (°C)	DC Leakage Max (µA) ^{1/}			Maximum Capacitance Change (%)			ESR Max (mOhms) at 1kHz	Case Size		Lifetime at 85°C (hrs.)	
						+25°C	+85°C	+125°C	-55°C	+85°C	+125°C		AVX	DSCC		
6.3 VDC at 85°C																
TWDE503*006□B0Z0^00	50	6.3	85	4.16	125	20	60	60	-15	+20	+30	400	E	T4	10000	
10 VDC at 85°C																
TWDE253*010□B0Z0^00	25	10	85	6.6	125	20	60	60	-15	+20	+30	400	E	T4	10000	

- 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 0.37U_r through 1kOhm.

