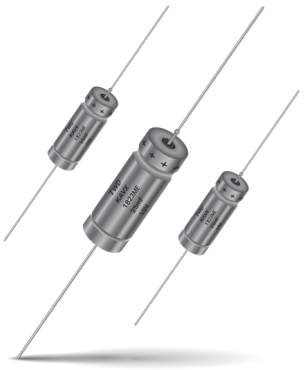
TWD HIGH TEMP MAX CAP SERIES

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.

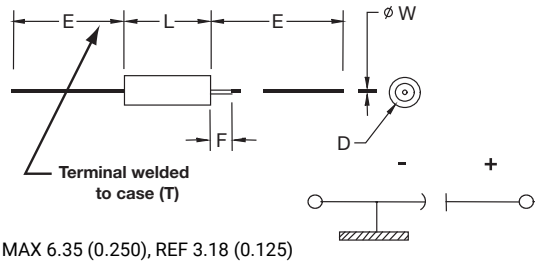
FEATURES

- 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 MAX 6.35 (0.250), REF 3.18 (0.125)
W 0.64 + 0.05 (0.025) (0.002)
T 2.380 (0.094)

CASE DIMENSIONS: millimeters (inches)

DLA Case Size	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	3V	6.3V	10V
25	253			E
50	503		E	
100	104	E		

Available Ratings

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HOW TO ORDER

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 digitrepresents multiplier (number of zeros to follow)	Capacitance Tolerance K = ±10% M = ±20%	Voltage Code 003=3Vdc 006 = 6.3Vdc 010 = 10Vdc	Insulation Sleeve C=WithoutSleeve 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 100mF (for extended range under development, contact manufacturer)			
Capacitance Tolerance:		±10%; ±20%			
Rated Voltage (V_R)	≤+105°C:	3	6.3	10	
Category Voltage (V_C)	≤+125°C:	2	4.2	6.6	
Category Voltage (V_C)	≤+150°C:	2	4.2	6.6	
HIgh Temperature Voltage (V_T)	≤+175°C:	1.5	3.15	5	
Surge Voltage (V_S)	≤+105°C:	3.45	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,VR with 0.1Ω/Vseries impedance, 60% confidence level			
Termination Finish:		Sn Plating, SnPb Plating 60/40			

RATINGS & PART NUMBER REFERENCE

Part Number	Cap (mF)[2/] at 25°C	Rated Voltage (V)	Rated Temperature (°C)	DC Leakage max (µA)[1/]			Maximum Capacitance Change (%)					ESR Max (mOhms) at 1kHz	Case Size		Lifetime at 105°C (hrs.)	Lifetime at 175°C (hrs.)
				+25°C	+85°C & +105°C & +125°C	+150°C & +175°C	-55°C	+85°C	+125°C	+150°C	+175°C		KYOCERA AVX	DLA		
3 VDC at 105°C																
TWDE104*003□B0Z0^00	100	3	85	40	60	500	-25	38	55	65	80	500	E	T4	2,000	1000
6.3 VDC at 105°C																
TWDE503*006□B0Z0^00	50	6.3	85	20	60	600	-15	20	30	50	60	400	E	T4	10,000	2000
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	2000

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.