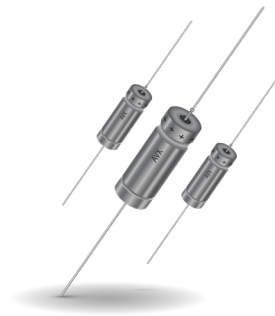


TWA-Y SERIES

High Temperature – COTS-Plus 200°C Wet Electrolytic Tantalum Capacitor



GENERAL DESCRIPTION

The TWA-Y series represents a high temperature version of conventional wet electrolytic tantalum capacitors that are designed for use at 200°C. High capacitance cathode system allows high level of CV (Capacitance/Voltage) in standard case sizes.

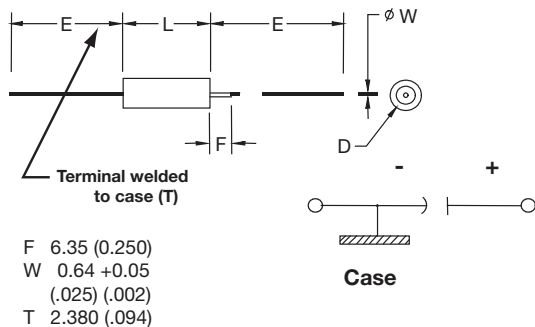
Selected values of the TWA-Y are capable of up to 2000 hours of operation at extreme temperatures with the applicable derated voltage.

Mechanical testing being conducted in accordance to MIL-STD- 202, High Frequency vibration - method 204, test condition "D" Mechanical Shock Test - method 213, test condition "I".

This design includes a welded tantalum can and header assembly that provides a hermetic seal to withstand also harsh shock and vibration requirements.

Contact the factory for additional options for customized component design.

OUTLINE DIMENSIONS



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 Insulating Sleeve Max	E ±6.35 (0.250)
T1	A	11.51 (0.453)	4.78 (0.188)	5.56 (0.219)	38.10 (1.500)
T2	B	16.28 (0.641)	7.14 (0.281)	7.92 (0.312)	57.15 (2.250)
T3	D	19.46 (0.766)	9.52 (0.375)	10.31 (0.406)	57.15 (2.250)
T4	E	26.97 (1.062)	9.52 (0.375)	10.31 (0.406)	57.15 (2.250)

VOLTAGE RATINGS (Operating Temperature -55°C to 125°C)

Voltage (DC)									
Rated Voltage: (V _R)	85°C	15	25	30	50	60	75	100	125
Derated Voltage: (V _D)	125°C	10	15	20	30	40	50	65	85
High Temperature Voltage: (V _T)	200°C	9	12	18	30	36	45	60	75

HOW TO ORDER

AVX PART NUMBER:

TWA	E	757	*	075	□	B	Y	Z	0	^	00
Type	Case Size	Capacitance Code	Capacitance Tolerance	Voltage Code	Insulation Sleeve	Packaging	Qualification	Reliability	Qualification Level	Termination Finish	Custom Test Options
		pF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow)	K = ±10% M = ±20%		C = Without Sleeve S = With Sleeve	B = Tray Pack	Y = High Temp	Z = Non-ER	0 = N/A	0 = Sn/Pb 60/40 7 = Matte tin	00 = Standard

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

RoHS
COMPLIANT

For RoHS compliant products, please select correct termination style.

TWA-Y SERIES

High Temperature – COTS-Plus 200°C Wet Electrolytic Tantalum Capacitor



RIPPLE CURRENT MULTIPLIERS vs. Frequency, temperature and applied voltage^{1/2/}

Frequency of Applied Ripple Current		120Hz				800Hz				1kHz			
Ambient Still Air Temperature (°C)		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of 85°C Rated Peak Voltage	100%	0.60	0.39	-	-	0.71	0.43	-	-	0.72	0.45	-	-
	90%	0.60	0.46	-	-	0.71	0.55	-	-	0.72	0.55	-	-
	80%	0.60	0.52	0.35	-	0.71	0.62	0.42	-	0.72	0.62	0.42	-
	70%	0.60	0.58	0.44	-	0.71	0.69	0.52	-	0.72	0.70	0.52	-
	66-2/3%	0.60	0.60	0.46	0.27	0.71	0.71	0.55	0.32	0.72	0.72	0.55	0.32

Frequency of Applied Ripple Current		10kHz				40kHz				100kHz			
Ambient Still Air Temperature (°C)		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of 85°C Rated Peak Voltage	100%	0.88	0.55	-	-	1.00	0.63	-	-	1.10	0.69	-	-
	90%	0.88	0.67	-	-	1.00	0.77	-	-	1.10	0.85	-	-
	80%	0.88	0.76	0.52	-	1.00	0.87	0.59	-	1.10	0.96	0.65	-
	70%	0.88	0.85	0.64	-	1.00	0.97	0.73	-	1.10	1.07	0.80	-
	66-2/3%	0.88	0.88	0.68	0.40	1.00	1.00	0.77	0.45	1.10	1.10	0.85	0.50

1/At 125°C the rated voltage of the capacitors decreases to 66 2/3 of the 85°C rated voltage.

2/The peak of the applied ac ripple voltage plus the applied dc voltage must not exceed the dc voltage rating of the capacitors.

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

Capacitance		Rated Voltage DC (V ^R) to 85°C								
µF	Code	15V	25V	30V	50V	60V	75V	100V	125V	
10	106				A			A ^(M)	A ^(M)	
15	156			A				A		
22	226		A			A	A	B		
27	276					A			B	
33	336	A			A		A			
47	476				B	A			B	
50	506					B				
56	566		A	A			B			
60	606				B					
68	686		A		A	B	A ^(M)	B		
82	826				B		B		D,E	
100	107		B	A,B	A ^(M)	B			D	
110	117						B			
120	127		A,B		B					
150	157			B		B		D	E	
180	187						D			
220	227			B	B	D	E	E	E	
270	277		B		D	E				
300	307			D						
330	337				E			E	E	
390	397	D		D						
400	407							E		
470	477			B,D			E	E	E	
560	567		B,E	E				E		
680	687						E			
750	757						E	E		
1000	108			D	E	E	E			
1200	128		D							
1500	158				E					
1800	188		E							
2200	228		E							
3000	308		E ^(M)							
4700	478		E							

Available Ratings ^(M tolerance only)

Engineering samples - please contact manufacturer



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

TWA-Y SERIES

High Temperature – COTS-Plus 200°C Wet Electrolytic Tantalum Capacitor



RATINGS & PART NUMBER REFERENCE

AVX Part Number	Cap (µF) 25°C at 120Hz	DC Rated Voltage (V) at 85°C	ESR Max (Ohms) at 120Hz	DC Leakage max (µA)		Impedance max (Ohms) -55°C at 120Hz	Maximum Capacitance Change (%)			AC Ripple (mA rms) 85°C at 40kHz	Case Size		Lifetime at 200°C (hrs.)
				+25°C	+85 & +125°C		-55°C	+85°C	+125°C		AVX	DLA	
TWAB226*100□BYZ0*00	22	100	4	1	5	100	-10	8	15	1065	B	T2	500
TWAB686*100□BYZ0*00	68	100	2.5	2	10	37	-30	4	12	1650	B	T2	500
TWAD157*100□BYZ0*00	150	100	1.6	3	25	22	-35	6	12	2100	D	T3	2000
TWAE227*100□BYZ0*00	220	100	1.2	5	50	15	-40	6	12	2750	E	T4	1000
TWAE337*100□BYZ0*00	330	100	0.8	6	60	10	-45	7	20	3600	E	T4	2000
TWAE407*100□BYZ0*00	400	100	0.8	10	150	10	-50	10	35	4100	E	T4	2000
TWAE477*100□BYZ0*00	470	100	0.7	15	150	10	-50	10	35	4100	E	T4	2000
TWAE567*100□BYZ0*00	560	100	1.0	25	200	10	-60	45	110	4100	E	T4	1500
TWAE757*100□BYZ0*00	750	100	0.6	30	150	5	-60	50	120	4200	E	T4	500
125 VDC @ 85°C 85 VDC @ 125°C 75 VDC @ 200°C													
TWAA106M125□BYZ0*00	10	125	5.5	1	5	190	-15	10	30	1050	A	T1	2000
TWAB276*125□BYZ0*00	27	125	4	2	10	100	-10	8	15	1200	B	T2	500
TWAB476*125□BYZ0*00	47	125	2.3	2	10	47	-25	5	12	1650	B	T2	1000
TWAD826*125□BYZ0*00	82	125	2.8	12	48	50	-30	15	17	-	D	T3	2000
TWAE826*125□BYZ0*00	82	125	1.6	2	10	39	-24	10	20	1900	E	T4	2000
TWAD107*125□BYZ0*00	100	125	1.8	3	25	35	-35	5	12	2100	D	T3	2000
TWAE157*125□BYZ0*00	150	125	1.6	5	50	20	-35	6	16	2750	E	T4	2000
TWAE227*125□BYZ0*00	220	125	1.4	10	50	12	-40	8	15	3600	E	T4	2000
TWAE337*125□BYZ0*00	330	125	1	15	150	20	-60	20	60	2500	E	T4	2000
TWAE477*125□BYZ0*00	470	125	1	30	160	25	-70	30	70	3500	E	T4	1000

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2V. DCL is measured at rated voltage after 5 minutes.

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

DF = 2πfC x (ESR)

$$2\pi = 6.28$$

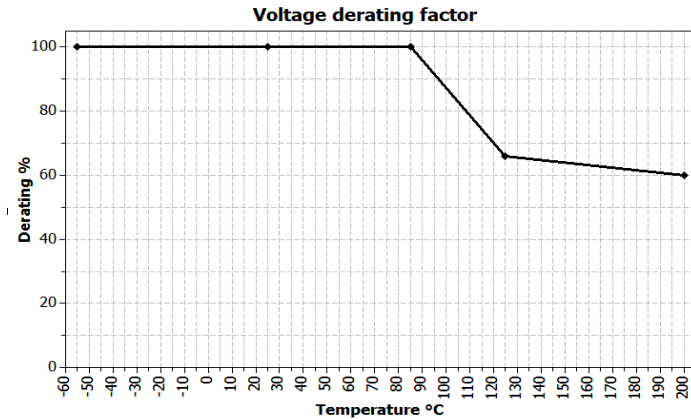
$$f = 120\text{Hz}$$

C = Actual measured capacitance

ESR = Actual measured ESR

RECOMMENDED DERATED FACTOR

Voltage and temperature derating as percentage of Vr



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

AVX:

TWAE407M100SBYZ0700	TWAE108K050SBYZ0000	TWAE407K100SBYZ0000	TWAE757K075SBYZ0000
TWAE477M100SBYZ0700	TWAE687K075SBYZ0000	TWAD227K060SBYZ0000	TWAA336K050SBYZ0000
TWAA106K050SBYZ0000	TWAB107K025SBYZ0000	TWAB506K060SBYZ0000	TWAD277K050SBYZ0000
TWAA336K015SBYZ0000	TWAA566K030SBYZ0000	TWAE567K030SBYZ0000	TWAB826K050SBYZ0000
TWAD826K125SBYZ0000	TWAB127K025SBYZ0000	TWAE277K060SBYZ0000	TWAD107K125SBYZ0000
TWAE337K050SBYZ0000	TWAA276K060SBYZ0000	TWAA156K030SBYZ0000	TWAA226K025SBYZ0000
TWAD397K030SBYZ0000	TWAB686K060SBYZ0000	TWAB476K125SBYZ0000	TWAB277K025SBYZ0000
TWAB227K030SBYZ0000	TWAD397K015SBYZ0000	TWAB157K030SBYZ0000	TWAE227K075SBYZ0000
TWAE407K100SBYZ0700	TWAE757M100CBYZ0000	TWAA566M030SBYZ0000	TWAA276M060CBYZ0700
TWAA156K030CBYZ0000	TWAA566K030CBYZ0000	TWAA336M015CBYZ0000	TWAB506M060SBYZ0000
TWAA336M050CBYZ0000	TWAD227M060CBYZ0700	TWAE477M100CBYZ0000	TWAA336K075SBYZ0000
TWAB476M125SBYZ0000	TWAA226M075SBYZ0000	TWAA276K060CBYZ0000	TWAA226K025SBYZ0700
TWAA226M075CBYZ0000	TWAA226M025SBYZ0700	TWAB686M100SBYZ0700	TWAE477K075SBYZ0000
TWAB686M100SBYZ0000	TWAA226M025SBYZ0000	TWAA156M030CBYZ0700	TWAA106M050CBYZ0700
TWAB476K125CBYZ0700	TWAE227M125CBYZ0700	TWAE108M050SBYZ0700	TWAE477M100CBYZ0700
TWAE227M125SBYZ0700	TWAA226K075CBYZ0700	TWAA276M060SBYZ0700	TWAD307M030SBYZ0000
TWAE108M075SBYZ0000	TWAA336K050CBYZ0700	TWAD107M125SBYZ0000	TWAD108M030SBYZ0000
TWAA566M030SBYZ0700	TWAB826M050SBYZ0000	TWAA156M030CBYZ0000	TWAE687K075SBYZ0700
TWAA276M060SBYZ0000	TWAE227K125CBYZ0700	TWAA226K060CBYZ0700	TWAA336M050SBYZ0000
TWAA336M075SBYZ0000	TWAB477M030SBYZ0000	TWAA127K025SBYZ0000	TWAE108M075SBYZ0700
TWAA476M060SBYZ0000	TWAE567K025SBYZ0000	TWAD128M025SBYZ0000	TWAE407K100CBYZ0000
TWAA106K050SBYZ0700	TWAA226K075SBYZ0700	TWAA106K050CBYZ0700	TWAB826M050CBYZ0700
TWAD227M060SBYZ0000	TWAE757K100SBYZ0000	TWAA226M060CBYZ0700	TWAA226K075SBYZ0000
TWAB567M025SBYZ0000	TWAA226M060SBYZ0000	TWAA226M075SBYZ0700	TWAA226M060CBYZ0000
TWAA156M030SBYZ0000	TWAD397M030SBYZ0000	TWAA336M050SBYZ0700	TWAB566M075SBYZ0000