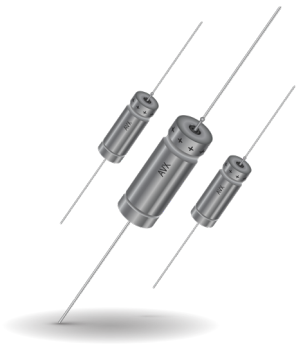
TWA-Y SERIES

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.

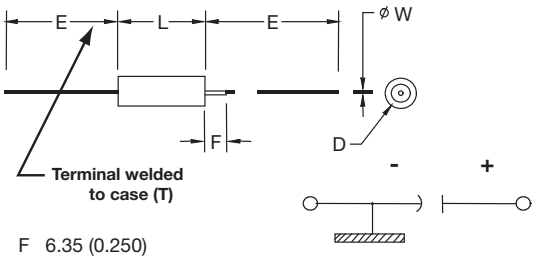
Selected values of the TWA-Y are capable of up to 2000 hours of operation at extreme temperatures with the applicable derated voltage.

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



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)
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_C)	125°C	10	15	20	30	40	50	65	85
High Temperature Voltage: (VT)	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** 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**	**Insulation Sleeve** C = Without Sleeve S = With Sleeve	**Packaging** B = Tray Pack	**Qualification** Y = High Temp	**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 COMPATIBLE COMPONENT

RoHS COMPLIANT

For RoHS compliant products, please select correct termination style.

RIPPLE CURRENT MULTIPLIERS vs. Frequency, temperature and applied voltage[1/ 2/]

Frequency of Applied Ripple Current		120Hz				800Hz				1kHz			
Ambient Still Air Temperature (ºC)		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of 85ºC 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 (ºC)		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of 85ºC 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 125ºC the rated voltage of the capacitors decreases to 66 2/3 of the 85ºC 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)				D
110	117					B	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				
3000	308		E(M)						
4700	478		E						

Available Ratings (M tolerance only)

Engineering samples - please contact manufacturer

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	
15 VDC at 85°C 10 VDC at 125°C 9 VDC at 200°C													
TWAA336*015□BYZ0^00	33	15	4	1	2	90	-28	14	16	820	A	T1	2000
TWAD397*015□BYZ0^00	390	15	1.7	7	28	48	-70	25	25	1396	D	T3	1000
25 VDC at 85°C 15 VDC at 125°C 12 VDC at 200°C													
TWAA226*025□BYZ0^00	22	25	4	1	2	140	-20	10.5	12	825	A	T1	2000
TWAA566*025□BYZ0^00	56	25	4	1	2	140	-20	10.5	12	825	A	T1	500
TWAA686*025□BYZ0^00	68	25	4	1	2	140	-20	10.5	12	825	A	T1	500
TWAB107*025□BYZ0^00	100	25	2.5	1	10	60	-35	13	15	-	B	T2	2000
TWAA127*025□BYZ0^00	120	25	2.3	2	10	35	-42	20	25	1250	A	T1	500
TWAB127*025□BYZ0^00	120	25	2.3	2	10	60	-32	13	15	-	B	T2	500
TWAB277*025□BYZ0^00	270	25	0.9	4	20	17.5	-50	18	28	1800	B	T2	1000
TWAB567*025□BYZ0^00	560	25	1.0	2	10	12	-65	10	15	2100	B	T2	1000
TWAE567*025□BYZ0^00	560	25	1.3	9	36	25	-65	25	30	-	E	T4	2000
TWAD128*025□BYZ0^00	1200	25	0.65	5	20	7	-70	12	18	2600	D	T3	1000
TWAE308M025□BYZ0^00	3000	25	0.5	15	30	3.5	-80	60	85	3100	E	T4	500
TWAE478*025□BYZ0^00	4700	25	0.5	30	180	5	-90	60	80	4250	E	T4	1000
30 VDC at 85°C 20 VDC at 125°C 18 VDC at 200°C													
TWAA156*030□BYZ0^00	15	30	4.4	1	2	200	-20	10.5	16	-	A	T1	2000
TWAA566*030□BYZ0^00	56	30	5.2	2	9	200	-48	12	15	-	A	T1	2000
TWAA107*030□BYZ0^00	100	30	2.3	2	10	35	-38	20	25	1200	A	T1	500
TWAB107*030□BYZ0^00	100	30	2.3	2	12	60	-30	10.5	12	-	B	T2	500
TWAB157*030□BYZ0^00	150	30	2.5	2	18	40	-48	13	15	1100	B	T2	2000
TWAB227*030□BYZ0^00	220	30	0.9	4	20	17.5	-50	18	28	1800	B	T2	1000
TWAD307*030□BYZ0^00	300	30	1.8	8	32	25	-51	20	25	-	D	T3	2000
TWAD397*030□BYZ0^00	390	30	1.8	6	18	25	-65	18	25	-	D	T3	2000
TWAB477*030□BYZ0^00	470	30	1.0	2	10	15	-65	10	18	1800	B	T2	1000
TWAD477*030□BYZ0^00	470	30	1.0	3	25	15	-65	15	25	1600	D	T3	2000
TWAE567*030□BYZ0^00	560	30	1.3	9	36	25	-65	25	30	-	E	T4	2000
TWAD108*030□BYZ0^00	1000	30	0.7	7	25	7	-70	10	18	2500	D	T3	1000
50 VDC at 85°C 30 VDC at 125°C 30 VDC at 200°C													
TWAA106*050□BYZ0^00	10	50	5.3	1	2	250	-24	8	9	715	A	T1	2000
TWAA336*050□BYZ0^00	33	50	5	2	9	200	-39	10	12	-	A	T1	2000
TWAB476*050□BYZ0^00	47	50	3	0.8	8	70	-28	13	15	1155	B	T2	500
TWAB606*050□BYZ0^00	60	50	2.6	2	12	60	-30	10.5	12	-	B	T2	500
TWAA686*050□BYZ0^00	68	50	2.5	2	10	45	-25	20	25	1050	A	T1	1000
TWAB826*050□BYZ0^00	82	50	2.4	2	16	60	-32	13	15	-	B	T2	500
TWAA107M050□BYZ0^00	100	50	5	2	15	70	-45	50	95	1500	A	T1	500
TWAB127*050□BYZ0^00	120	50	2.5	4	24	40	-42	12	15	-	B	T2	2000
TWAB227*050□BYZ0^00	220	50	0.9	4	20	17.5	-50	18	28	1800	B	T2	1000
TWAD277*050□BYZ0^00	270	50	1.8	8	32	25	-51	20	25	-	D	T3	2000
TWAE337*050□BYZ0^00	330	50	1.5	9	36	25	-46	25	30	1900	E	T4	2000
TWAE108*050□BYZ0^00	1000	50	0.7	11	110	20	-70	30	40	3200	E	T4	2000
TWAE158*050□BYZ0^00	1500	50	1	35	130	6	-75	45	55	3500	E	T4	1000
60 VDC at 85°C 40 VDC at 125°C 36 VDC at 200°C													
TWAA226*060□BYZ0^00	22	60	5	3	12	200	-34	10	12	500	A	T1	2000
TWAA276*060□BYZ0^00	27	60	5	3	12	200	-34	10	12	-	A	T1	2000
TWAA476*060□BYZ0^00	47	60	2	2	10	55	-25	15	25	1050	A	T1	500
TWAB506*060□BYZ0^00	50	60	2.6	2	12	60	-30	10.5	12	-	B	T2	500
TWAB686*060□BYZ0^00	68	60	2.5	2	16	60	-32	10.5	12	-	B	T2	500
TWAB107*060□BYZ0^00	100	60	2.5	1.7	10	40	-40	8	15	1100	B	T2	2000
TWAB157*060□BYZ0^00	150	60	1.5	2	10	30	-35	12	20	1650	B	T2	500
TWAD227*060□BYZ0^00	220	60	1.8	8	32	25	-45	16	20	-	D	T3	2000
TWAE277*060□BYZ0^00	270	60	1.3	9	36	25	-45	20	25	-	E	T4	2000
TWAE108*060□BYZ0^00	1000	60	0.5	20	60	4.5	-70	30	60	3200	E	T4	2000

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	
75 VDC at 85°C 50 VDC at 125°C 45 VDC at 200°C													
TWAA226*075□BYZ0^00	22	75	5.1	3	12	157	-19	10	12	600	A	T1	2000
TWAA336*075□BYZ0^00	33	75	2.5	2	10	70	-25	15	25	1050	A	T1	1000
TWAB566*075□BYZ0^00	56	75	2.6	2	17	60	-30	10.5	15	-	B	T2	500
TWAA686M075□BYZ0^00	68	75	5	2	15	70	-45	50	95	1500	A	T1	500
TWAB826*075□BYZ0^00	82	75	2.5	4	24	37	-30	12	15	-	B	T2	500
TWAB117*075□BYZ0^00	110	75	1.5	2	10	30	-35	12	20	1650	B	T2	500
TWAD187*075□BYZ0^00	180	75	2.2	9	36	25	-40	16	20	-	D	T3	2000
TWAE227*075□BYZ0^00	220	75	1.2	5	50	20	-40	8	15	1800	E	T4	2000
TWAE477*075□BYZ0^00	470	75	0.9	10	125	10	-50	10	35	2750	E	T4	1000
TWAE687*075□BYZ0^00	680	75	0.9	11	110	10	-70	30	40	2750	E	T4	500
TWAE757*075□BYZ0^00	750	75	0.7	12	120	10	-70	30	40	3800	E	T4	500
TWAE108*075□BYZ0^00	1000	75	0.5	30	90	4.5	-70	30	60	3500	E	T4	1000
100 VDC at 85°C 65 VDC at 125°C 60 VDC at 200°C													
TWAA106M100□BYZ0^00	10	100	3.5	5	25	190	-18	10	30	1050	A	T1	2000
TWAA156*100□BYZ0^00	15	100	5.5	7	35	140	-18	10	30	1050	A	T1	500
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 at 85°C 85 VDC at 125°C 75 VDC at 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.
*Not recommended for new designs, for new design use part number with Inspection level "S" – COTS-Plus

DF = 2πfC x (ESR)
2π = 6.28
f = 120Hz
C = Actual measured capacitance
ESR = Actual measured ESR

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
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TWAB476M125SBYZ0000 TWAA226M075SBYZ0000 TWAA276K060CBYZ0000 TWAA226K025SBYZ0700
TWAA226M075CBYZ0000 TWAA226M025SBYZ0700 TWAB686M100SBYZ0700 TWAE477K075SBYZ0000
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TWAA276M060SBYZ0000 TWAE227K125CBYZ0700 TWAA226K060CBYZ0700 TWAA336M050SBYZ0000
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TWAA476M060SBYZ0000 TWAE567K025SBYZ0000 TWAD128M025SBYZ0000 TWAE407K100CBYZ0000
TWAA106K050SBYZ0700 TWAA226K075SBYZ0700 TWAA106K050CBYZ0700 TWAB826M050CBYZ0700
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TWAB567M025SBYZ0000 TWAA226M060SBYZ0000 TWAA226M075SBYZ0700 TWAA226M060CBYZ0000
TWAA156M030SBYZ0000 TWAD397M030SBYZ0000 TWAA336M050SBYZ0700 TWAB566M075SBYZ0000