TWA-E Series

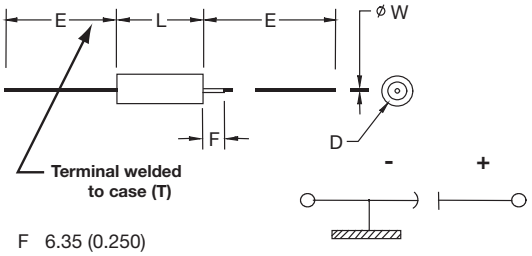
CECC Wet Electrolytic Tantalum Capacitor

The TWA-E series is an axial leaded wet electrolytic tantalum capacitor manufactured in EU in accordance with CECC 30 202-001. High capacitance cathode system allows high level of CV (Capacitance/Voltage) in DSCC compatible case sizes.

This design includes a welded tantalum can and header assembly that provides a hermetic seal to withstand harsh shock and vibration requirements of MIL-PRF-39006.

Customized capacitance and voltage packages are possible and welcomed. Contact the factory about design possibilities beyond those contained in this datasheet.

OUTLINE DIMENSIONS



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

CASE DIMENSIONS: millimeters (inches)

DSCC 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 -55ºC to 125ºC)

Voltage (DC)								
Rated Voltage: (V_R)	85ºC	25	30	50	60	75	100	125
Derated Voltage: (V_C)	125ºC	15	20	30	40	50	65	85
Surge Voltage: (V_S)	85ºC	28.8	34.5	57.5	69	86.3	115	144

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HOW TO ORDER

AVX PART NUMBER:

TWA	D	337	*	050	□	B	E	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	**Inspecition Level** E = In accordance with CECC testing	**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.

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	100%	0.60	0.39	–	–	0.71	0.43	–	–	0.72	0.45	–	–
85°C	90%	0.60	0.46	–	–	0.71	0.55	–	_	0.72	0.55	–	–
Rated	80%	0.60	0.52	0.35	–	0.71	0.62	0.42	–	0.72	0.62	0.42	–
Peak	70%	0.60	0.58	0.44	–	0.71	0.69	0.52	–	0.72	0.70	0.52	–
Voltage	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	100%	0.88	0.55	–	–	1.00	0.63	–	–	1.10	0.69	–	–
85°C	90%	0.88	0.67	–	–	1.00	0.77	–	_	1.10	0.85	–	–
Rated	80%	0.88	0.76	0.52	–	1.00	0.87	0.59	–	1.10	0.96	0.65	–
Peak	70%	0.88	0.85	0.64	–	1.00	0.97	0.73	–	1.10	1.07	0.80	–
Voltage	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	25V	30V	50V	60V	75V	100V	125V
15	156							A*
22	226						A*	
33	336					A*		
47	476			A*				B*
68	686	A					B	
100	107				B	B		D
120	127			B				D*
150	157			B			D	E
220	227		B			D*,E	E	E
330	337	B		D*,E		E	E	
470	477			D,E		E		
560	567	D*			E			
680	687	E	D,E	E		E		
750	757	D,E	D,E			E	E*	
1000	108	D,E	E	D*,E				
1500	158	E						
2200	228				E			
3000	308			E				
4700	478	E						

Released codes

Engineering samples - please contact manufacturer

*Codes under development

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RATINGS & PART NUMBER REFERENCE

AVX Part Number	Cap (µF) 25ºC at 120Hz	DC Rated Votage (V) at 85ºC	ESR Max (ohms) at 120Hz	DC Leakage max (µA)		TANG δ Max +25ºC (%)	Impedance max (Ohms) -55ºC at 120Hz	Maximum Capacitance Change (%)			AC Ripple (mA rms) 85ºC at 40kHZ	Case Size	
				+25ºC	+85 & +125ºC			-55ºC	+85ºC	+125ºC		AVX	DSCC
25 VDC at 85°C 15 VDC at 125°C													
TWAA686*025□BEZ0^00	68	25	2.5	0.6	3	12	45	-40	12	15	850	A	T1
TWAB337*025□BEZ0^00	330	25	1.3	2	20	30	25	-60	10	15	1550	B	T2
TWAE687*025□BEZ0^00	680	25	0.75	3	12	45	12	-50	8	15	2100	E	T4
TWAD757*025□BEZ0^00	750	25	1	3	25	45	15	-50	8	15	2000	D	T3
TWAE757*025□BEZ0^00	750	25	0.75	3.5	16	50	9	-55	10	18	2200	E	T4
TWAD108*025□BEZ0^00	1000	25	1	4	30	45	15	-50	8	15	2300	D	T3
TWAE108*025□BEZ0^00	1000	25	0.7	4	20	60	9	-55	10	18	2400	E	T4
TWAE158*025□BEZ0^00	1500	25	0.5	6	24	65	7	-65	15	20	2850	E	T4
TWAE478*025□BEZ0^00	4700	25	0.25	18	92	90	1.8	-74	32	34	5700	E	T4
30 VDC at 85°C 20 VDC at 125°C													
TWAB227*030□BEZ0^00	220	30	2	1.9	10	15	30	-40	8	15	1200	B	T2
TWAD687*030□BEZ0^00	680	30	1	3.3	25	45	15	-50	8	15	1900	D	T3
TWAE687*030□BEZ0^00	680	30	0.8	4.5	18	45	10	-60	8	15	2100	E	T4
TWAD757*030□BEZ0^00	750	30	1	3.6	30	45	15	-50	8	15	2000	D	T3
TWAE757*030□BEZ0^00	750	30	0.8	5	20	45	10	-65	10	18	2200	E	T4
TWAE108*030□BEZ0^00	1000	30	0.7	5	20	55	7	-70	10	18	2500	E	T4
50 VDC at 85°C 30 VDC at 125°C													
TWAA476*050□BEZ0^00	47	50	2	1	5	9	35	-25	8	15	850	A	T1
TWAB127*050□BEZ0^00	120	50	2	2	10	14	30	-45	8	15	1200	B	T2
TWAB157*050□BEZ0^00	150	50	2	2	10	16	25	-50	8	15	1400	B	T2
TWAD337*050□BEZ0^00	330	50	0.85	3	25	25	15	-50	8	15	1650	D	T3
TWAE337*050□BEZ0^00	330	50	0.8	2.5	25	24	15	-50	8	15	1900	E	T4
TWAD477*050□BEZ0^00	470	50	1	3	25	35	11	-50	8	15	2100	D	T3
TWAE477*050□BEZ0^00	470	50	0.75	3	30	32	10	-50	8	15	2200	E	T4
TWAE687*050□BEZ0^00	680	50	0.7	5	40	42	8	-58	10	20	2750	E	T4
TWAD108*050□BEZ0^00	1000	50	1.2	15	125	100	15	-90	100	140	3800	D	T3
TWAE108*050□BEZ0^00	1000	50	0.7	11	110	45	20	-70	30	40	3200	E	T4
TWAE308*050□BEZ0^00	3000	50	0.3	30	150	80	3.5	-80	60	85	3100	E	T4
60 VDC at 85°C 40 VDC at 125°C													
TWAB107*060□BEZ0^00	100	60	2.5	1.7	10	12	30	-40	8	15	1100	B	T2
TWAE567*060□BEZ0^00	560	60	0.8	5	40	45	10	-58	8	15	2750	E	T4
TWAE228*060□BEZ0^00	2200	60	0.5	30	150	80	3.5	-80	60	85	3000	E	T4
75 VDC at 85°C 50 VDC at 125°C													
TWAA336*075□BEZ0^00	33	75	2.5	1	5	8	66	-25	5	9	1050	A	T1
TWAB107*075□BEZ0^00	100	75	2.5	2	10	12	24	-35	6	10	1400	B	T2
TWAD227*075□BEZ0^00	220	75	1.2	3	30	24	20	-45	6	10	1500	D	T3
TWAE227*075□BEZ0^00	220	75	1.1	2.5	30	22	20	-50	6	10	1800	E	T4
TWAE337*075□BEZ0^00	330	75	1	3	40	30	12	-50	6	10	2200	E	T4
TWAE477*075□BEZ0^00	470	75	0.9	5	50	38	12	-55	6	10	2750	E	T4
TWAE687*075□BEZ0^00	680	75	0.9	11	110	45	10	-70	30	40	2750	E	T4
TWAE757*075□BEZ0^00	750	75	0.7	12	120	60	10	-70	30	40	3800	E	T4
100 VDC at 85°C 65 VDC at 125°C													
TWAA226*100□BEZ0^00	22	100	3.5	1	5	7	125	-18	3	10	1400	A	T1
TWAB686*100□BEZ0^00	68	100	2.5	2	10	13	37	-30	4	12	1650	B	T2
TWAD157*100□BEZ0^00	150	100	1.6	3	25	22	22	-35	6	12	2100	D	T3
TWAE227*100□BEZ0^00	220	100	1.2	5	50	24	15	-40	6	12	2750	E	T4
TWAE337*100□BEZ0^00	330	100	0.8	6	60	30	10	-45	7	20	3600	E	T4
TWAE757*100□BEZ0^00	750	100	0.7	20	200	45	10	-40	20	50	6700	E	T4
125 VDC at 85°C 85 VDC at 125°C													
TWAD107*125□BEZ0^00	100	125	1.8	3	25	18	35	-35	5	12	2100	D	T3
TWAE157*125□BEZ0^00	150	125	1.6	5	50	35	20	-35	6	16	2750	E	T4
TWAE227*125□BEZ0^00	220	125	1.4	10	50	25	12	-40	8	15	3600	E	T4

All technical data relates to an ambient temperature of +25ºC. 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.

LifeElectronics
Живое партнерство

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