

# 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



### 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	
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	25	30	50	60	75	100	125
Derated Voltage: ( $V_C$ )	125°C	15	20	30	40	50	65	85
Surge Voltage: ( $V_S$ )	85°C	28.8	34.5	57.5	69	86.3	115	144



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### HOW TO ORDER

#### AVX PART NUMBER:

<b>TWA</b>	<b>D</b>	<b>337</b>	<b>*</b>	<b>050</b>	<b>□</b>	<b>B</b>	<b>E</b>	<b>Z</b>	<b>0</b>	<b>^</b>	<b>00</b>
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	Inspection 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  
For RoHS compliant products, please select correct termination style.

### RIPPLE CURRENT MULTIPLIERS vs. Frequency, temperature and applied voltage<sup>1/2/</sup>

Frequency of Applied Ripple Current		120Hz				800Hz				1kHz			
		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of 85°C Rated Peak	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	–	–
Voltage	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			
		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of 85°C Rated Peak	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	–	–
Voltage	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.

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

Capacitance		Rated Voltage DC ( $V_R$ ) to 85°C						
$\mu\text{F}$	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

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

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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Поставка более 17-ти миллионов наименований электронных компонентов;
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Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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