

TRM Professional Multianode



Tantalum Ultra Low ESR Capacitor

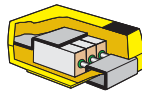


- Improved reliability – 0.5%/1khrs (twice better than standard)
- DCL reduced by 25% to 0.0075 CV
- Robust against higher thermo-mechanical stresses during assembly process
- Multi-anode construction
- Super low ESR
- CV range 22-1500 μ F / 2.5-35V
- “Mirror” construction used with D case capacitors reduces ESL to half
- Automotive, medical, aerospace, military and other hi-end application

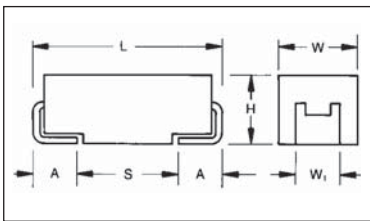
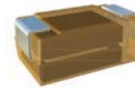


SnPb termination option is not RoHS compliant.

MULTIANODE CONSTRUCTION



MULTIANODE TRMD LOW SELF INDUCTANCE CONSTRUCTION “MIRROR” DESIGN



CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L \pm 0.20 (0.008)	W+0.20 (0.008) -0.10 (0.004)	H+0.20 (0.008) -0.10 (0.004)	W ₁ \pm 0.20 (0.008)	A+0.30 (0.012) -0.20 (0.008)	S Min.
D	2917	7343-31	7.30 (0.287)	4.30 (0.169)	2.90 (0.114)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)
E	2917	7343-43	7.30 (0.287)	4.30 (0.169)	4.10 (0.162)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)

W₁ dimension applies to the termination width for A dimensional area only.

For part marking see page 157

HOW TO ORDER

TRM	E	108	*	004	R	0023
Type	Case Size See table above	Capacitance Code pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	Tolerance K=±10% M=±20%	Rated DC Voltage 002 = 2.5Vdc 004 = 4Vdc 006 = 6.3Vdc 010 = 10Vdc 012 = 12Vdc 016 = 16Vdc 020 = 20Vdc 025 = 25Vdc 035 = 35Vdc	Packaging R = Pure Tin 7" Reel S = Pure Tin 13" Reel H = Tin Lead 7" Reel (Contact Manufacturer) K = Tin Lead 13" Reel (Contact Manufacturer) H, K = Non RoHS	ESR in mΩ

TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C									
Capacitance Range:	22 μ F to 1500 μ F									
Capacitance Tolerance:	±10%; ±20%									
Rated Voltage (V _R)	≤ +85°C:	2.5	4	6.3	10	12	16	20	25	35
Category Voltage (V _C)	≤ +125°C:	1.7	2.7	4	7	8.4	10	13	17	23
Surge Voltage (V _S)	≤ +85°C:	3.3	5.2	8	13	15.6	20	26	32	46
Surge Voltage (V _S)	≤ +125°C:	2.2	3.4	5	8	9.6	13	16	20	28
Temperature Range:	-55°C to +125°C									
Reliability:	0.5% per 1000 hours at 85°C, V _R with 0.1 Ω /V series impedance, 60% confidence level									
	Meets requirements of AEC-Q200									



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

Capacitance		Rated Voltage DC (V _R) to 85°C									
μF	Code	2.5V (e)	4V (G)	6.3V (J)	10V (A)	12V (B)	16V (C)	20V (D)	25V (E)	35V (V)	50V (T)
6.8	685										
10	106										E(150)*
15	156										
22	226									D(70)/E(60,100)	
33	336								D(65)	E(50,65)	
47	476							D(55)	E(65)		
68	686										
100	107						D(55)*	E(35,45)			
150	157				D(45)*		E(30,40)				
220	227				D(35)	E(35)					
330	337		D(35)	D(35)	E(35)	E(35)					
470	477		D(35)	E(30)							
680	687		E(23)								
1000	108	D(25)	E(23)								
1500	158	E(18)									
2200	228										

Available Ratings, (ESR ratings in mOhms in brackets)

Engineering samples - please contact manufacturer

*Codes under development - subject to change

Note: Voltage ratings are minimum values. AVX reserves the right to supply higher ratings in the same case size, to the same reliability standards.

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RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @100kHz	MSL	100kHz RMS Current (A)			100kHz RMS Voltage (V)		
								25°C	85°C	125°C	25°C	85°C	125°C
2.5 Volt @ 85°C (1.7 Volt @ 125°C)													
TRMD108*002#0025	D	1000	2.5	18.8	8	25	3	3.194	2.874	1.277	0.080	0.072	0.032
TRME158*002#0018	E	1500	2.5	28.1	6	18	3	3.873	3.486	1.549	0.070	0.063	0.028
4 Volt @ 85°C (2.7 Volt @ 125°C)													
TRMD337*004#0035	D	330	4	9.9	8	35	3	2.699	2.429	1.080	0.094	0.085	0.038
TRMD477*004#0035	D	470	4	14.1	8	35	3	2.699	2.429	1.080	0.094	0.085	0.038
TRME687*004#0023	E	680	4	20.4	6	23	3	3.426	3.084	1.370	0.079	0.071	0.032
TRME108*004#0023	E	1000	4	30	6	23	3	3.426	3.084	1.370	0.079	0.071	0.032
6.3 Volt @ 85°C (4 Volt @ 125°C)													
TRMD337*006#0035	D	330	6.3	14.9	8	35	3	2.699	2.429	1.080	0.094	0.085	0.038
TRME477*006#0030	E	470	6.3	21.2	6	30	3	3.000	2.700	1.200	0.090	0.081	0.036
10 Volt @ 85°C (7 Volt @ 125°C)													
TRMD227*010#0035	D	220	10	16.5	8	35	3	2.699	2.429	1.080	0.094	0.085	0.038
TRME337*010#0035	E	330	10	24.8	6	35	3	2.777	2.500	1.111	0.097	0.087	0.039
12 Volt @ 85°C (8.4 Volt @ 125°C)													
TRME227*012#0035	E	220	12	19.8	6	35	3	2.777	2.500	1.111	0.097	0.087	0.039
TRME337*012#0035	E	330	12	29.7	6	35	3	2.777	2.500	1.111	0.097	0.087	0.039
16 Volt @ 85°C (10 Volt @ 125°C)													
TRME157*016#0030	E	150	16	18	6	30	3	3.000	2.700	1.200	0.090	0.081	0.036
TRME157*016#0040	E	150	16	18	6	40	3	2.598	2.338	1.039	0.104	0.094	0.042
20 Volt @ 85°C (13 Volt @ 125°C)													
TRMD476*020#0055	D	47	20	7.1	8	55	3	2.153	1.938	0.861	0.118	0.107	0.047
TRME107*020#0035	E	100	20	15	6	35	3	2.777	2.500	1.111	0.097	0.087	0.039
TRME107*020#0045	E	100	20	15	6	45	3	2.449	2.205	0.980	0.110	0.099	0.044
25 Volt @ 85°C (17 Volt @ 125°C)													
TRMD336*025#0065	D	33	25	6.2	8	65	3	1.981	1.783	0.792	0.129	0.116	0.051
TRME476*025#0065	E	47	25	8.8	6	65	3	2.038	1.834	0.815	0.132	0.119	0.053
35 Volt @ 85°C (23 Volt @ 125°C)													
TRMD226*035#0070	D	22	35	5.8	8	70	3	1.909	1.718	0.763	0.134	0.120	0.053
TRME226*035#0060	E	22	35	5.8	6	60	3	2.121	1.909	0.849	0.127	0.115	0.051
TRME226*035#0100	E	22	35	5.8	6	100	3	1.643	1.479	0.657	0.164	0.148	0.066
TRME336*035#0050	E	33	35	8.7	6	50	3	2.324	2.091	0.930	0.116	0.105	0.046
TRME336*035#0065	E	33	35	8.7	6	65	3	2.038	1.834	0.815	0.132	0.119	0.053

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

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

The EIA & CECC standards for low ESR Solid Tantalum Capacitors allow an ESR movement to 1.25 times catalogue limit post mounting.

For typical weight and composition see page 150.

NOTE: AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.

