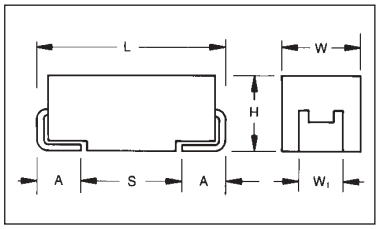
TPM Multianode

Tantalum Ultra Low ESR Capacitor

Low ESR, high capacitance and high ripple current are the key parameters for processor filtering. Multianode configuration within a standard E case package meets these requirements. Parameters such as ESR 15mΩ, capacitance 1500µF and ripple current above 4A rms makes TPM series ready to use with the latest processor families.



For part marking see page 108

CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	L±0.20 (0.008)	W+0.20 (0.008) -0.10 (0.004)	H+0.20 (0.008) -0.10 (0.004)	W_1±0.20 (0.008)	A+0.30 (0.012) -0.20 (0.008)	S Min.
E	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)

W_1 dimension applies to the termination width for A dimensional area only.

HOW TO ORDER

TPM	E	108	*	004	R	0018
Type	**Case Size**	**Capacitance Code** 1st two digits represent significant figures, 3rd digit represents multiplier in pF	**Capacitance Tolerance** K=±10% M=±20%	**Rated DC Voltage** 002=2.5Vdc 004=4Vdc 006=6.3Vdc 010=10Vdc 016=16Vdc 020=20Vdc 025=25Vdc 035=35Vdc 050=50Vdc	**Packaging** R = 7" T/R S = 13" T/R Y = Lead Free 7" Reel P = Lead Free 13" Reel	**ESR** value in mΩ

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

TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C									
Capacitance Range:	47µF to 1500µF									
Capacitance Tolerance:	±10%, ±20%									
Leakage Current DCL:	0.01CV									
Rated Voltage (V_R)	< +85°C:	2.5	4	6.3	10	16	20	25	35	50
Category Voltage (V_C)	< +125°C:	1.8	2.7	4.2	6.6	10.6	13.2	16.5	23.1	33
Surge Voltage (V_S)	< +85°C:	3.2	5.2	8	13	20.8	26	32.5	45.5	65
Surge Voltage (V_S)	< +125°C:	2.0	3.2	5	8	12.8	16	20	28	40
Temperature Range:	-55°C to +125°C									
Reliability:	1% per 1000 hours at 85°C, Vr with 0.1/V series impedance, 60% confidence level									

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CAPACITANCE AND RATED VOLTAGE RANGE
LETTER DENOTES CASE SIZE ESR LIMIT IN BRACKETS

Capacitance	Rated Voltage DC (V_R) to 85°C								
µF	2.5V	4V	6.3V	10V	16V	20V	25V	35V	50V
10									E(120)
15									
22								E(100)	
33								E(65)	
47								E(65)	
68							E(55)		
100						E(35,45)			
150					E(35,40)				
220					E(40)				
330				E(23,35)					
470			E(23,30)	E(23,30)					
680		E(18,23)	E(18,23)						
1000		E(18,23)							
1500	E(15,18)	E(25)							
2200	E(18,25)								

Developmental Ratings - subject to change, AVX reserve rights to change ESR specification prior to release.

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @100kHz	100kHz Ripple Current Ratings (A)			100kHz Ripple Voltage Ratings (V)		
							25ºC	85ºC	125ºC	25ºC	85ºC	125ºC
2.5 Volt @ 85°C (1.7 Volt @ 125°C)												
TPME158*002#0015	E	1500	2.5	38	10	15	4.243	3.818	1.697	0.064	0.057	0.025
TPME158*002#0018	E	1500	2.5	38	10	18	3.873	3.486	1.549	0.070	0.063	0.028
4 Volt @ 85°C (2.6 Volt @ 125°C)												
TPME687*004#0018	E	680	4	27	6	18	3.873	3.486	1.549	0.070	0.063	0.028
TPME687*004#0023	E	680	4	27	6	23	3.426	3.084	1.370	0.079	0.071	0.032
TPME108*004#0018	E	1000	4	40	6	18	3.873	3.486	1.549	0.070	0.063	0.028
TPME108*004#0023	E	1000	4	40	6	23	3.426	3.084	1.370	0.079	0.071	0.032
6 Volt @ 85°C (4.2 Volt @ 125°C)												
TPME477*006#0023	E	470	6.3	28	6	23	3.426	3.084	1.370	0.079	0.071	0.032
TPME477*006#0030	E	470	6.3	28	6	30	3.000	2.700	1.200	0.090	0.081	0.036
TPME687*006#0018	E	680	6.3	41	6	18	3.873	3.486	1.549	0.070	0.063	0.028
TPME687*006#0023	E	680	6.3	41	6	23	3.426	3.084	1.370	0.079	0.071	0.032
10 Volt @ 85°C (6.6 Volt @ 125°C)												
TPME337*010#0023	E	330	10	33	6	23	3.426	3.084	1.370	0.079	0.071	0.032
TPME337*010#0035	E	330	10	33	6	35	2.777	2.500	1.111	0.097	0.087	0.039
TPME477M010#0023	E	470	10	47	6	23	3.426	3.084	1.370	0.079	0.071	0.032
TPME477M010#0030	E	470	10	47	6	30	3.000	2.700	1.200	0.090	0.081	0.036
16 Volt @ 85°C (10 Volt @ 125°C)												
TPME157*016#0035	E	150	16	24	6	35	2.777	2.500	1.111	0.097	0.087	0.039
TPME157*016#0040	E	150	16	24	6	40	2.598	2.338	1.039	0.104	0.094	0.042
TPME227*016#0040	E	220	16	35	6	40	2.598	2.338	1.039	0.104	0.094	0.042
20 Volt @ 85°C (13.2 Volt @ 125°C)												
TPME107*020#0035	E	100	20	20	6	35	2.777	2.500	1.111	0.097	0.087	0.039
TPME107*020#0045	E	100	20	20	6	45	2.449	2.205	0.980	0.110	0.099	0.044
25 Volt @ 85°C (17 Volt @ 125°C)												
TPME686*025#0055	E	68	25	17	6	55	2.216	1.994	0.886	0.122	0.110	0.049
35 Volt @ 85°C (23 Volt @ 125°C)												
TPME226*035#0100	E	22	35	7.7	6	100	1.643	1.479	0.657	0.164	0.148	0.066
TPME336*035#0065	E	33	35	12	6	65	2.038	1.834	0.815	0.132	0.119	0.053
TPME476*035#0065	E	47	35	16	6	65	2.038	1.834	0.815	0.132	0.119	0.053

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

* Insert K for ±10% and M for ±20% Capacitance Tolerance

TPM MULTIANODE CONSTRUCTION