

# TPM Multianode

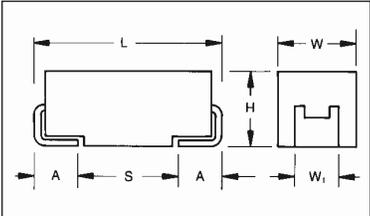
## Tantalum Ultra Low ESR Capacitor



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.

### 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 <sub>1</sub> ±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)
V	7361-38	7.30 (0.287)	6.10 (0.240)	3.45 ±0.30 (0.136 ±0.012)	3.10 (0.120)	1.40 (0.055)	1.80 (0.071)

W<sub>1</sub> dimension applies to the termination width for A dimensional area only.

For part marking see page 157

### HOW TO ORDER

**TPM**  
Type

**E**  
Case Size  
See table above

**108**  
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%

**004**  
Rated DC Voltage  
002=2.5Vdc  
004=4Vdc  
006=6.3Vdc  
010=10Vdc  
016=16Vdc  
020=20Vdc  
025=25Vdc  
035=35Vdc  
050=50Vdc

**R**  
Packaging  
R = 7" T/R  
Lead Free  
S = 13" T/R  
Lead Free

**0018**  
Maximum ESR in Milliohms  
See note below

**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:	10 μF to 1500 μF									
Capacitance Tolerance:	±10%, ±20%									
Rated Voltage (V <sub>R</sub> )	≤ +85°C:	2.5	4	6.3	10	16	20	25	35	50
Category Voltage (V <sub>C</sub> )	≤ +125°C:	1.7	2.7	4	7	10	13	17	23	33
Surge Voltage (V <sub>S</sub> )	≤ +85°C:	3.3	5.2	8	13	20	26	32	46	65
Surge Voltage (V <sub>S</sub> )	≤ +125°C:	2.2	3.4	5	8	13	16	20	28	40
Temperature Range:	-55°C to +125°C									
Reliability:	1% per 1000 hours at 85°C, V <sub>R</sub> with 0.1Ω/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 <sub>R</sub> ) to 85°C								
µF	Code	2.5V (e)	4V (G)	6.3V (J)	10V (A)	16V (C)	20V (D)	25V (E)	35V (V)	50V (T)
10	106									E(120)
15	156									E(75,100)
22	226								E(60,100)	E(75,100)
33	336								E(50,65)	
47	476								E(55,65)	
68	686							E(45,55)	V	
100	107						E(35,45)	E		
150	157					E(30,40)	E			
220	227					E(25,40)				
330	337				E(23,35)	E				
470	477			E(18,23,30)	E(23,30)					
680	687		E(18,23)	E(18,23), V(23)	E					
1000	108		E(18,23), V(18)	E						
1500	158	E(12,15,18)	E(15,18)							
2200	228	E(18,25)								

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

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	100kHz Ripple Current Ratings (A)			100kHz Ripple Voltage Ratings (V)		
							25°C	85°C	125°C	25°C	85°C	125°C
<b>2.5 Volt @ 85°C (1.7 Volt @ 125°C)</b>												
TPME158*002#0012	E	1500	2.5	38	6	12	4.743	4.269	1.897	0.057	0.051	0.023
TPME158*002#0015	E	1500	2.5	38	6	15	4.243	3.818	1.697	0.064	0.057	0.025
TPME158*002#0018	E	1500	2.5	38	6	18	3.873	3.486	1.549	0.070	0.063	0.028
<b>4 Volt @ 85°C (2.7 Volt @ 125°C)</b>												
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
TPMV108*004#0018	V	1000	4	40	6	18	3.979	3.581	1.592	0.072	0.064	0.029
TPME158*004#0015	E	1500	4	40	6	15	4.243	3.818	1.697	0.064	0.057	0.025
TPME158*004#0018	E	1500	4	40	6	18	3.873	3.486	1.549	0.070	0.063	0.028
<b>6.3 Volt @ 85°C (4 Volt @ 125°C)</b>												
TPME477*006#0018	E	470	6.3	28	6	18	3.873	3.486	1.549	0.070	0.063	0.028
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
TPMV687*006#0023	V	680	6.3	41	6	23	3.520	3.168	1.408	0.081	0.073	0.032
<b>10 Volt @ 85°C (7 Volt @ 125°C)</b>												
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
<b>16 Volt @ 85°C (10 Volt @ 125°C)</b>												
TPME157*016#0030	E	150	16	24	6	30	3.000	2.700	1.200	0.090	0.081	0.036
TPME157*016#0040	E	150	16	24	6	40	2.598	2.338	1.039	0.104	0.094	0.042
TPME227*016#0025	E	220	16	35	6	25	3.286	2.958	1.315	0.082	0.074	0.033
TPME227*016#0040	E	220	16	35	6	40	2.598	2.338	1.039	0.104	0.094	0.042
<b>20 Volt @ 85°C (13 Volt @ 125°C)</b>												
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
<b>25 Volt @ 85°C (17 Volt @ 125°C)</b>												
TPME686*025#0045	E	68	25	17	6	45	2.449	2.205	0.980	0.110	0.099	0.044
TPME686*025#0055	E	68	25	17	6	55	2.216	1.994	0.886	0.122	0.110	0.049
<b>35 Volt @ 85°C (23 Volt @ 125°C)</b>												
TPME226*335#0060	E	22	35	8	6	60	2.121	1.909	0.849	0.127	0.115	0.051
TPME226*035#0100	E	22	35	8	6	100	1.643	1.479	0.657	0.164	0.148	0.066
TPME336*035#0050	E	33	35	12	6	50	2.324	2.091	0.930	0.116	0.105	0.046
TPME336*035#0065	E	33	35	12	6	65	2.038	1.834	0.815	0.132	0.119	0.053
TPME476*035#0055	E	47	35	16	6	55	2.216	1.994	0.886	0.122	0.110	0.049
TPME476*035#0065	E	47	35	16	6	65	2.038	1.834	0.815	0.132	0.119	0.053
<b>50 Volt @ 85°C (33 Volt @ 125°C)</b>												
TPME106*050#0120	E	10	50	5	6	120	1.500	1.350	0.600	0.180	0.162	0.072
TPME156*050#0075	E	15	50	7.5	6	75	1.897	1.708	0.759	0.142	0.128	0.057
TPME156*050#0100	E	15	50	7.5	6	100	1.643	1.479	0.657	0.164	0.148	0.066
TPME226*050#0075	E	22	50	11	8	75	1.897	1.708	0.759	0.142	0.128	0.057
TPME226*050#0100	E	22	50	11	8	100	1.643	1.479	0.657	0.164	0.148	0.066

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

