

TPS Series

Low ESR



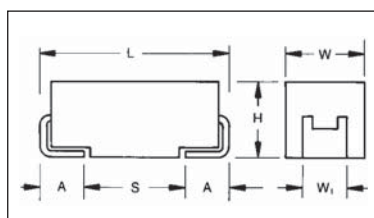
- Low ESR series of robust MnO₂ solid electrolyte capacitors
- CV range: 0.15-1500µF / 2.5-50V
- 14 case sizes available
- Power supply applications



CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L±0.20 (0.008)	W±0.20 (0.008) -0.10 (0.004)	H±0.20 (0.008) -0.10 (0.004)	W _t ±0.20 (0.008)	A±0.30 (0.012) -0.20 (0.008)	S Min.
A	1206	3216-18	3.20 (0.126)	1.60 (0.063)	1.60 (0.063)	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
B	1210	3528-21	3.50 (0.138)	2.80 (0.110)	1.90 (0.075)	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
C	2312	6032-28	6.00 (0.236)	3.20 (0.126)	2.6 (0.102)	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
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)
F	2312	6032-20	6.00 (0.236)	3.20 (0.126)	2.00 (0.079) max.	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
P	0805	2012-15	2.05 (0.081)	1.35 (0.053)	1.50 (0.059) max.	1.0±0.1 (0.039±0.004)	0.50 (0.020)	0.85 (0.033)
R	0805	2012-12	2.05 (0.081)	1.30 (0.051)	1.20 (0.047) max.	1.0±0.1 (0.039±0.004)	0.50 (0.020)	0.85 (0.033)
S	1206	3216-12	3.20 (0.126)	1.60 (0.063)	1.20 (0.047) max.	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
T	1210	3528-12	3.50 (0.138)	2.80 (0.110)	1.20 (0.047) max.	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
V	2924	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)	4.40 (0.173)
W	2312	6032-15	6.00 (0.236)	3.20 (0.126)	1.50 (0.059) max.	2.20 (0.087)	1.30 (0.051)	2.90 (0.114)
X	2917	7343-15	7.30 (0.287)	4.30 (0.169)	1.50 (0.059) max.	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)
Y	2917	7343-20	7.30 (0.287)	4.30 (0.169)	2.00 (0.079) max.	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)

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



For part marking see page 131

HOW TO ORDER

TPS	C	107	M	010	R	0100	—
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 016 = 16Vdc 020 = 20Vdc 025 = 25Vdc 035 = 35Vdc 050 = 50Vdc	Packaging R = Lead Free 7" Reel S = Lead Free 13" Reel A = Gold Plating 7" Reel B = Gold Plating 13" Reel H = Tin Lead 7" Reel (Contact Manufacturer) K = Tin Lead 13" Reel (Contact Manufacturer) H, K = Non RoHS	ESR in mΩ	Additional characters may be added for special requirements V = Dry pack Option (selected codes only)

TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C									
Capacitance Range:	0.15 µF to 1500 µF									
Capacitance Tolerance:	±10%; ±20%									
Rated Voltage (V _R)	≤ +85°C:	2.5	4	6.3	10	16	20	25	35	50
Category Voltage (V _C)	≤ +125°C:	1.7	2.7	4	7	10	13	17	23	33
Surge Voltage (V _S)	≤ +85°C:	3.3	5.2	8	13	20	26	32	46	65
Surge Voltage (V _S)	≤ +125°C:	2.2	3.4	5	8	13	16	20	28	40
Temperature Range:	-55°C to +125°C									
Environmental Classification:	55/125/56 (IEC 68-2)									
Reliability:	1% per 1000 hours at 85°C, V _R with 0.1Ω/V series impedance, 60% confidence level									
Termination Finished:	Sn Plating (standard), Gold and SnPb Plating upon request									
	Meets requirements of AEC-Q200									

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)	16V (C)	20V (D)	25V (E)	35V (V)	50V (T)
0.15	154									A(9000)
0.22	224								A(6000)	A(7000)
0.33	334								A(6000)	
0.47	474							A(7000)	A(6000) B(4000)	C(2300)
0.68	684							A(6000)	A(6000)	
1	105				R(9000)		A(3000), R(6000) S(6000), T(2000)	R(2500,4000)	A(3000) B(2000)	C(2500)
1.5	155							A(3000) B(1800)	B(2500)	C(1500,2000)
2.2	225			R(7000)	A(1800)	A(1800,3500) T(2000)	A(3000)	B(900,1200,2500)	A(1500), B(750, 1500,2000), C(1000)	D(1200)
3.3	335				T(1500)	A(3500)	A(2500) B(1300)	A(1000,1500) B(750,1500,2000)	B(1000) C(700)	D(800)
4.7	475			S(4000)	A(1400) R(3000,5000)	A(2000) B(800,1500)	A(1800) B(750,1000)	B(700,900,1500)	B(700,1500) C(600), D(700)	D(300,500,700)
6.8	685			A(1800)	A(1800) T(1800)	A(1500) B(600,1200)	A(1000) B(600,1000) C(700)	B(700) C(500,600,700)	C(350) D(150,400,500)	D(200, 300, 500,600)
10	106		R(3000)	A(1500) R(1000,1500,3000) T(1000)	A(900,1800) P(2000) ^M T(1000,2000)	B(500,800), C(500) T(800,1000) W(500,600)	B(500,1000) C(500,700) W(500)	B(1800) C(300,500)	D(125,300) E(200), Y(250)	E(250,300, 400,500)
15	156			A(700,1500)	A(1000) B(450,600) T(1200)	B(500,800)	B(500) C(400,450)	C(220,300) D(100,300)	C(350,450) D(100,300) Y(250)	E(250) V(250)
22	226			A(500,900) B(375,600) S(900)	A(900) B(400,500,700) C(300), T(800)	B(400,600) C(150,250,300,375) W(500)	B(400,600) C(100,150,400) D(200,300)	C(275,400) D(100,200,300)	D(125,200,300,400) E(125,200,300) Y(200)	
33	336			A(600) B(250,350,450,600) T(800)	A(700) B(250,425,500,650) C(150,375,500) W(350)	B(350,500) C(100,150,225,300) D(200), W(140,175, 250,400,500) Y(300,400)	C(300) D(100,200)	D(100,200,300) E(100,175, 200,300) Y(200)	D(200,300) E(100,250,300) V(200)	
47	476		A(500)	A(800) B(250,350,500) C(300), T(1200)	B(250,350,500,650) C(200,350) D(100) W(125,150,250)	C(110,350) D(80,100,150,200) W(200) X(180), Y(250)	D(75,100,200) E(70,125,150, 200,250)	D(125,150,250) E(80,100,125)	E(200,250) V(150,200)	
68	686			B(250,350,500) C(150,200) W(110,125,250)	B(600) C(80,100,200,300) D(100,150), W(100,150) Y(100,200)	C(125,200) D(70,100,150) F(200), X(150) Y(150,200,250)	D(70,150, 200,300) E(125,150,200)	E(125,200) V(80,95,150,200)	V(150,200) ^M	
100	107	B(200)	B(200,250, 350,500) W(100)	B(250,400) C(75,150) W(100,150) Y(100)	B(400) ^M C(75,100,150,200) D(50,65,80,100,125, 150), E(125) W(150) X(85,150,200) Y(100,150,200)	C(200) D(60,100,125,150) E(55,100,125,150) F(150,200) ^M Y(100,150,200)	D(85,100,150) E(100,150,200) V(60,85,100,200)	V(100)		
150	157	B(150)	B(250) C(70,80)	C(50,90,150,200,250) D(50,125), Y(40,50)	D(50,85,100), E(100) F(200), X(100) ^M Y(100,150,200)	D(60,85,100,125,150) E(100), V(45,75) Y(200) ^M	V(80)			
220	227	B(150, 200,600) D(45)	D(40,50,100) Y(40,50,75)	C(70,100,125,250) D(50,100,125) E(100), F(200) Y(100,150)	D(40,50,100,150) E(50,60,70,100, 125,150) Y(100,150,200)	E(100,150) V(50,75,100,150)				
330	337	Y(40)	C(100) D(35,45,100) F(200) X(100)	C(80,100) D(45,50,70,100) E(50,100,125,150) V(100), Y(100,150)	D(50,65,100,150) E(40,50,60,100) V(40,60,100)					
470	477	D(35) F(200) Y(100)	D(45,100) E(35,45,100)	D(45,60,100,200) E(45,50,60,100,200) V(40,55,100), Y(150)	E(45,50,60,100,200) V(40,60,100)					
680	687	D(35,50) E(35,50) Y(100)	D(45,60,100) E(40,60,100)	E(45,60,100) V(35,40,50)						
1000	108	E(30,40) Y(100) ^M	E(40,60) V(25,35,40,50)	E(100) ^M , V(40,50) ^M						
1500	158	D(100) E(50) V(30,40) ^M	E(50,75) V(50,75) ^M							

Released codes ^(M tolerance only)

Engineering samples - please contact manufacturer

*Codes under development - subject to change

ESR limits quoted in brackets (milliohms)

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

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
TPSC476*010#0200	C	47	10	4.7	6	200	1	0.742	0.667	0.297	0.148	0.133	0.059
TPSC476*010#0350	C	47	10	4.7	6	350	1	0.561	0.505	0.224	0.196	0.177	0.078
TPSD476*010#0100	D	47	10	4.7	6	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSW476*010#0125	W	47	10	4.7	6	125	1	0.849	0.764	0.339	0.106	0.095	0.042
TPSW476*010#0150	W	47	10	4.7	6	150	1	0.775	0.697	0.310	0.116	0.105	0.046
TPSW476*010#0250	W	47	10	4.7	6	250	1	0.600	0.540	0.240	0.150	0.135	0.060
TPSB686*010#0600	B	68	10	6.8	8	600	1	0.376	0.339	0.151	0.226	0.203	0.090
TPSC686*010#0080	C	68	10	6.8	6	80	1	1.173	1.055	0.469	0.094	0.084	0.038
TPSC686*010#0100	C	68	10	6.8	6	100	1	1.049	0.944	0.420	0.105	0.094	0.042
TPSC686*010#0200	C	68	10	6.8	6	200	1	0.742	0.667	0.297	0.148	0.133	0.059
TPSC686*010#0300	C	68	10	6.8	6	300	1	0.606	0.545	0.242	0.182	0.163	0.073
TPSD686*010#0100	D	68	10	6.8	6	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD686*010#0150	D	68	10	6.8	6	150	1	1.000	0.900	0.400	0.150	0.135	0.060
TPSY686*010#0100	Y	68	10	6.8	6	100	1 ¹⁾	1.118	1.006	0.447	0.112	0.101	0.045
TPSY686*010#0200	Y	68	10	6.8	6	200	1 ¹⁾	0.791	0.712	0.316	0.158	0.142	0.063
TPSW686*010#0100	W	68	10	6.8	6	100	1	0.949	0.854	0.379	0.095	0.085	0.038
TPSW686*010#0150	W	68	10	6.8	6	150	1	0.775	0.697	0.310	0.116	0.105	0.046
TPSB107M010#0400	B	100	10	10	8	400	1	0.461	0.415	0.184	0.184	0.166	0.074
TPSC107*010#0075	C	100	10	10	8	75	1	1.211	1.090	0.484	0.091	0.082	0.036
TPSC107*010#0100	C	100	10	10	8	100	1	1.049	0.944	0.420	0.105	0.094	0.042
TPSC107*010#0150	C	100	10	10	8	150	1	0.856	0.771	0.343	0.128	0.116	0.051
TPSC107*010#0200	C	100	10	10	8	200	1	0.742	0.667	0.297	0.148	0.133	0.059
TPSD107*010#0050	D	100	10	10	6	50	1	1.732	1.559	0.693	0.087	0.078	0.035
TPSD107*010#0065	D	100	10	10	6	65	1	1.519	1.367	0.608	0.099	0.089	0.039
TPSD107*010#0080	D	100	10	10	6	80	1	1.369	1.232	0.548	0.110	0.099	0.044
TPSD107*010#0100	D	100	10	10	6	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD107*010#0125	D	100	10	10	6	125	1	1.095	0.986	0.438	0.137	0.123	0.055
TPSD107*010#0150	D	100	10	10	6	150	1	1.000	0.900	0.400	0.150	0.135	0.060
TPSE107*010#0125	E	100	10	10	6	125	1 ¹⁾	1.149	1.034	0.460	0.144	0.129	0.057
TPSW107*010#0150	W	100	10	10	6	150	1	0.775	0.697	0.310	0.116	0.105	0.046
TPSX107*010#0085	X	100	10	10	8	85	1 ¹⁾	1.085	0.976	0.434	0.092	0.083	0.037
TPSX107*010#0150	X	100	10	10	8	150	1 ¹⁾	0.816	0.735	0.327	0.122	0.110	0.049
TPSX107*010#0200	X	100	10	10	8	200	1 ¹⁾	0.707	0.636	0.283	0.141	0.127	0.057
TPSY107*010#0100	Y	100	10	10	6	100	1 ¹⁾	1.118	1.006	0.447	0.112	0.101	0.045
TPSY107*010#0150	Y	100	10	10	6	150	1 ¹⁾	0.913	0.822	0.365	0.137	0.123	0.055
TPSY107*010#0200	Y	100	10	10	6	200	1 ¹⁾	0.791	0.712	0.316	0.158	0.142	0.063
TPSD157*010#0050	D	150	10	15	8	50	1	1.732	1.559	0.693	0.087	0.078	0.035
TPSD157*010#0085	D	150	10	15	8	85	1	1.328	1.196	0.531	0.113	0.102	0.045
TPSD157*010#0100	D	150	10	15	8	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSE157*010#0100	E	150	10	15	8	100	1 ¹⁾	1.285	1.156	0.514	0.128	0.116	0.051
TPSF157*010#0200	F	150	10	15	10	200	1	0.707	0.636	0.283	0.141	0.127	0.057
TPSX157M010#0100	X	150	10	15	6	100	1 ¹⁾	1.000	0.900	0.400	0.100	0.090	0.040
TPSY157*010#0100	Y	150	10	15	6	100	1 ¹⁾	1.118	1.006	0.447	0.112	0.101	0.045
TPSY157*010#0150	Y	150	10	15	6	150	1 ¹⁾	0.913	0.822	0.365	0.137	0.123	0.055
TPSY157*010#0200	Y	150	10	15	6	200	1 ¹⁾	0.791	0.712	0.316	0.158	0.142	0.063
TPSD227*010#0050	D	220	10	22	8	50	1	1.732	1.559	0.693	0.087	0.078	0.035
TPSD227*010#0100	D	220	10	22	8	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD227*010#0150	D	220	10	22	8	150	1	1.000	0.900	0.400	0.150	0.135	0.060
TPSE227*010#0050	E	220	10	22	8	50	1 ¹⁾	1.817	1.635	0.727	0.091	0.082	0.036
TPSE227*010#0060	E	220	10	22	8	60	1 ¹⁾	1.658	1.492	0.663	0.099	0.090	0.040
TPSE227*010#0070	E	220	10	22	8	70	1 ¹⁾	1.535	1.382	0.614	0.107	0.097	0.043
TPSE227*010#0100	E	220	10	22	8	100	1 ¹⁾	1.285	1.156	0.514	0.128	0.116	0.051
TPSE227*010#0125	E	220	10	22	8	125	1 ¹⁾	1.149	1.034	0.460	0.144	0.129	0.057
TPSE227*010#0150	E	220	10	22	8	150	1 ¹⁾	1.049	0.944	0.420	0.157	0.142	0.063
TPSY227*010#0100	Y	220	10	22	10	100	1 ¹⁾	1.118	1.006	0.447	0.112	0.101	0.045
TPSY227*010#0150	Y	220	10	22	10	150	1 ¹⁾	0.913	0.822	0.365	0.137	0.123	0.055
TPSY227*010#0200	Y	220	10	22	10	200	1 ¹⁾	0.791	0.712	0.316	0.158	0.142	0.063
TPSD337*010#0050	D	330	10	33	8	50	1	1.732	1.559	0.693	0.087	0.078	0.035
TPSD337*010#0065	D	330	10	33	8	65	1	1.519	1.367	0.608	0.099	0.089	0.039
TPSD337*010#0100	D	330	10	33	8	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD337*010#0150	D	330	10	33	8	150	1	1.000	0.900	0.400	0.150	0.135	0.060
TPSE337*010#0040	E	330	10	33	8	40	1 ¹⁾	2.031	1.828	0.812	0.081	0.073	0.032
TPSE337*010#0050	E	330	10	33	8	50	1 ¹⁾	1.817	1.635	0.727	0.091	0.082	0.036
TPSE337*010#0060	E	330	10	33	8	60	1 ¹⁾	1.658	1.492	0.663	0.099	0.090	0.040
TPSE337*010#0100	E	330	10	33	8	100	1 ¹⁾	1.285	1.156	0.514	0.128	0.116	0.051
TPSV337*010#0040	V	330	10	33	10	40	1 ¹⁾	2.500	2.250	1.000	0.100	0.090	0.040
TPSV337*010#0060	V	330	10	33	10	60	1 ¹⁾	2.041	1.837	0.816	0.122	0.110	0.049

¹⁾ Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 3.

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 124.

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.

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
TPSV337*010#0100	V	330	10	33	10	100	1 ¹⁾	1.581	1.423	0.632	0.158	0.142	0.063
TPSE477*010#0045	E	470	10	47	10	45	1 ¹⁾	1.915	1.723	0.766	0.086	0.078	0.034
TPSE477*010#0050	E	470	10	47	10	50	1 ¹⁾	1.817	1.635	0.727	0.091	0.082	0.036
TPSE477*010#0060	E	470	10	47	10	60	1 ¹⁾	1.658	1.492	0.663	0.099	0.090	0.040
TPSE477*010#0100	E	470	10	47	10	100	1 ¹⁾	1.285	1.156	0.514	0.128	0.116	0.051
TPSE477*010#0200	E	470	10	47	10	200	1 ¹⁾	0.908	0.817	0.363	0.182	0.163	0.073
TPSV477*010#0040	V	470	10	47	10	40	1 ¹⁾	2.500	2.250	1.000	0.100	0.090	0.040
TPSV477*010#0060	V	470	10	47	10	60	1 ¹⁾	2.041	1.837	0.816	0.122	0.110	0.049
TPSV477*010#0100	V	470	10	47	10	100	1 ¹⁾	1.581	1.423	0.632	0.158	0.142	0.063
16 Volt @ 85°C (10 Volt @ 125°C)													
TPSA225*016#1800	A	2.2	16	0.5	6	1800	1	0.204	0.184	0.082	0.367	0.331	0.147
TPSA225*016#3500	A	2.2	16	0.5	6	3500	1	0.146	0.132	0.059	0.512	0.461	0.205
TPST225*016#2000	T	2.2	16	0.5	6	2000	1	0.200	0.180	0.080	0.400	0.360	0.160
TPSA335*016#3500	A	3.3	16	0.5	6	3500	1	0.146	0.132	0.059	0.512	0.461	0.205
TPSA475*016#2000	A	4.7	16	0.8	6	2000	1	0.194	0.174	0.077	0.387	0.349	0.155
TPSB475*016#0800	B	4.7	16	0.8	6	800	1	0.326	0.293	0.130	0.261	0.235	0.104
TPSB475*016#1500	B	4.7	16	0.8	6	1500	1	0.238	0.214	0.095	0.357	0.321	0.143
TPSA685*016#1500	A	6.8	16	1.1	6	1500	1	0.224	0.201	0.089	0.335	0.302	0.134
TPSB685*016#0600	B	6.8	16	1.1	6	600	1	0.376	0.339	0.151	0.226	0.203	0.090
TPSB685*016#1200	B	6.8	16	1.1	6	1200	1	0.266	0.240	0.106	0.319	0.287	0.128
TPSB106*016#0500	B	10	16	1.6	6	500	1	0.412	0.371	0.165	0.206	0.186	0.082
TPSB106*016#0800	B	10	16	1.6	6	800	1	0.326	0.293	0.130	0.261	0.235	0.104
TPSC106*016#0500	C	10	16	1.6	6	500	1	0.469	0.422	0.188	0.235	0.211	0.094
TPST106*016#0800	T	10	16	1.6	8	800	1	0.316	0.285	0.126	0.253	0.228	0.101
TPST106*016#1000	T	10	16	1.6	8	1000	1	0.283	0.255	0.113	0.283	0.255	0.113
TPSW106*016#0500	W	10	16	1.6	6	500	1	0.424	0.382	0.170	0.212	0.191	0.085
TPSW106*016#0600	W	10	16	1.6	6	600	1	0.387	0.349	0.155	0.232	0.209	0.093
TPSB156*016#0500	B	15	16	2.4	6	500	1	0.412	0.371	0.165	0.206	0.186	0.082
TPSB156*016#0800	B	15	16	2.4	6	800	1	0.326	0.293	0.130	0.261	0.235	0.104
TPSB226*016#0400	B	22	16	3.5	6	400	1	0.461	0.415	0.184	0.184	0.166	0.074
TPSB226*016#0600	B	22	16	3.5	6	600	1	0.376	0.339	0.151	0.226	0.203	0.090
TPSC226*016#0150	C	22	16	3.5	6	150	1	0.856	0.771	0.343	0.128	0.116	0.051
TPSC226*016#0250	C	22	16	3.5	6	250	1	0.663	0.597	0.265	0.166	0.149	0.066
TPSC226*016#0300	C	22	16	3.5	6	300	1	0.606	0.545	0.242	0.182	0.163	0.073
TPSC226*016#0375	C	22	16	3.5	6	375	1	0.542	0.487	0.217	0.203	0.183	0.081
TPSW226*016#0500	W	22	16	3.5	6	500	1	0.424	0.382	0.170	0.212	0.191	0.085
TPSB336*016#0350	B	33	16	5.3	8	350	1	0.493	0.444	0.197	0.172	0.155	0.069
TPSB336*016#0500	B	33	16	5.3	8	500	1	0.412	0.371	0.165	0.206	0.186	0.082
TPSC336*016#0100	C	33	16	5.3	6	100	1	1.049	0.944	0.420	0.105	0.094	0.042
TPSC336*016#0150	C	33	16	5.3	6	150	1	0.856	0.771	0.343	0.128	0.116	0.051
TPSC336*016#0225	C	33	16	5.3	6	225	1	0.699	0.629	0.280	0.157	0.142	0.063
TPSC336*016#0300	C	33	16	5.3	6	300	1	0.606	0.545	0.242	0.182	0.163	0.073
TPSD336*016#0200	D	33	16	5.3	6	200	1	0.866	0.779	0.346	0.173	0.156	0.069
TPSW336*016#0140	W	33	16	5.3	6	140	1	0.802	0.722	0.321	0.112	0.101	0.045
TPSW336*016#0175	W	33	16	5.3	6	175	1	0.717	0.645	0.287	0.125	0.113	0.050
TPSW336*016#0250	W	33	16	5.3	6	250	1	0.600	0.540	0.240	0.150	0.135	0.060
TPSW336*016#0400	W	33	16	5.3	6	400	1	0.474	0.427	0.190	0.190	0.171	0.076
TPSW336*016#0500	W	33	16	5.3	6	500	1	0.424	0.382	0.170	0.212	0.191	0.085
TPSY336*016#0300	Y	33	16	5.3	6	300	1 ¹⁾	0.645	0.581	0.258	0.194	0.174	0.077
TPSY336*016#0400	Y	33	16	5.3	6	400	1 ¹⁾	0.559	0.503	0.224	0.224	0.201	0.089
TPSC476*016#0110	C	47	16	7.5	6	110	1	1.000	0.900	0.400	0.110	0.099	0.044
TPSC476*016#0350	C	47	16	7.5	6	350	1	0.561	0.505	0.224	0.196	0.177	0.078
TPSD476*016#0080	D	47	16	7.5	6	80	1	1.369	1.232	0.548	0.110	0.099	0.044
TPSD476*016#0100	D	47	16	7.5	6	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD476*016#0150	D	47	16	7.5	6	150	1	1.000	0.900	0.400	0.150	0.135	0.060
TPSD476*016#0200	D	47	16	7.5	6	200	1	0.866	0.779	0.346	0.173	0.156	0.069
TPSW476*016#0200	W	47	16	7.5	6	200	1	0.671	0.604	0.268	0.134	0.121	0.054
TPSX476*016#0180	X	47	16	7.5	6	180	1 ¹⁾	0.745	0.671	0.298	0.134	0.121	0.054
TPSY476*016#0250	Y	47	16	7.5	6	250	1 ¹⁾	0.707	0.636	0.283	0.177	0.159	0.071
TPSC686*016#0125	C	68	16	10.9	6	125	1	0.938	0.844	0.375	0.117	0.106	0.047
TPSC686*016#0200	C	68	16	10.9	6	200	1	0.742	0.667	0.297	0.148	0.133	0.059
TPSD686*016#0070	D	68	16	10.9	6	70	1	1.464	1.317	0.586	0.102	0.092	0.041
TPSD686*016#0100	D	68	16	10.9	6	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD686*016#0150	D	68	16	10.9	6	150	1	1.000	0.900	0.400	0.150	0.135	0.060
TPSF686*016#0200	F	68	16	10.9	10	200	1	0.707	0.636	0.283	0.141	0.127	0.057
TPSX686*016#0150	X	68	16	10.9	8	150	1 ¹⁾	0.816	0.735	0.327	0.122	0.110	0.049
TPSY686*016#0150	Y	68	16	10.9	6	150	1 ¹⁾	0.913	0.822	0.365	0.137	0.123	0.055

¹⁾ Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 3.

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 124.

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.

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
TPSY686*016#0200	Y	68	16	10.9	6	200	1 ¹⁾	0.791	0.712	0.316	0.158	0.142	0.063
TPSY686*016#0250	Y	68	16	10.9	6	250	1 ¹⁾	0.707	0.636	0.283	0.177	0.159	0.071
TPSC107*016#0200	C	100	16	16	6	200	1	0.742	0.667	0.297	0.148	0.133	0.059
TPSD107*016#0060	D	100	16	16	6	60	1	1.581	1.423	0.632	0.095	0.085	0.038
TPSD107*016#0100	D	100	16	16	6	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD107*016#0125	D	100	16	16	6	125	1	1.095	0.986	0.438	0.137	0.123	0.055
TPSD107*016#0150	D	100	16	16	6	150	1	1.000	0.900	0.400	0.150	0.135	0.060
TPSE107*016#0055	E	100	16	16	6	55	1 ¹⁾	1.732	1.559	0.693	0.095	0.086	0.038
TPSE107*016#0100	E	100	16	16	6	100	1 ¹⁾	1.285	1.156	0.514	0.128	0.116	0.051
TPSE107*016#0125	E	100	16	16	6	125	1 ¹⁾	1.149	1.034	0.460	0.144	0.129	0.057
TPSE107*016#0150	E	100	16	16	6	150	1 ¹⁾	1.049	0.944	0.420	0.157	0.142	0.063
TPSF107*016#0150	F	100	16	16	10	150	1	0.816	0.735	0.327	0.122	0.110	0.049
TPSF107*016#0200	F	100	16	16	10	200	1	0.707	0.636	0.283	0.141	0.127	0.057
TPSY107*016#0100	Y	100	16	24	6	100	1 ¹⁾	1.118	1.006	0.447	0.112	0.101	0.045
TPSY107*016#0150	Y	100	16	16	8	150	1 ¹⁾	0.913	0.822	0.365	0.137	0.123	0.055
TPSY107*016#0200	Y	100	16	16	8	200	1 ¹⁾	0.791	0.712	0.316	0.158	0.142	0.063
TPSD157*016#0060	D	150	16	24	6	60	1	1.581	1.423	0.632	0.095	0.085	0.038
TPSD157*016#0085	D	150	16	24	6	85	1	1.328	1.196	0.531	0.113	0.102	0.045
TPSD157*016#0100	D	150	16	24	6	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD157*016#0125	D	150	16	24	6	125	1	1.095	0.986	0.438	0.137	0.123	0.055
TPSD157*016#0150	D	150	16	24	6	150	1	1.000	0.900	0.400	0.150	0.135	0.060
TPSE157*016#0100	E	150	16	24	6	100	1 ¹⁾	1.285	1.156	0.514	0.128	0.116	0.051
TPSV157*016#0045	V	150	16	24	8	45	1 ¹⁾	2.357	2.121	0.943	0.106	0.095	0.042
TPSV157*016#0075	V	150	16	24	8	75	1 ¹⁾	1.826	1.643	0.730	0.137	0.123	0.055
TPSY157*016#0200	Y	150	16	24	15	200	1 ¹⁾	0.791	0.712	0.316	0.158	0.142	0.063
TPSE227*016#0100	E	220	16	35.2	10	100	1 ¹⁾	1.285	1.156	0.514	0.128	0.116	0.051
TPSE227*016#0150	E	220	16	35.2	10	150	1 ¹⁾	1.049	0.944	0.420	0.157	0.142	0.063
TPSV227*016#0050	V	220	16	35.2	8	50	1 ¹⁾	2.236	2.012	0.894	0.112	0.101	0.045
TPSV227*016#0075	V	220	16	35.2	8	75	1 ¹⁾	1.826	1.643	0.730	0.137	0.123	0.055
TPSV227*016#0100	V	220	16	35.2	8	100	1 ¹⁾	1.581	1.423	0.632	0.158	0.142	0.063
TPSV227*016#0150	V	220	16	35.2	8	150	1 ¹⁾	1.291	1.162	0.516	0.194	0.174	0.077
20 Volt @ 85°C (13 Volt @ 125°C)													
TPSA105*020#3000	A	1	20	0.5	4	3000	1	0.158	0.142	0.063	0.474	0.427	0.190
TPSR105*020#6000	R	1	20	0.5	4	6000	1	0.096	0.086	0.038	0.574	0.517	0.230
TPSS105*020#6000	S	1	20	0.5	4	6000	1	0.104	0.094	0.042	0.624	0.562	0.250
TPST105*020#2000	T	1	20	0.5	4	2000	1	0.200	0.180	0.080	0.400	0.360	0.160
TPSA225*020#3000	A	2.2	20	0.5	6	3000	1	0.158	0.142	0.063	0.474	0.427	0.190
TPSA335*020#2500	A	3.3	20	0.7	6	2500	1	0.173	0.156	0.069	0.433	0.390	0.173
TPSB335*020#1300	B	3.3	20	0.7	6	1300	1	0.256	0.230	0.102	0.332	0.299	0.133
TPSA475*020#1800	A	4.7	20	0.9	6	1800	1	0.204	0.184	0.082	0.367	0.331	0.147
TPSB475*020#0750	B	4.7	20	0.9	6	750	1	0.337	0.303	0.135	0.252	0.227	0.101
TPSB475*020#1000	B	4.7	20	0.9	6	1000	1	0.292	0.262	0.117	0.292	0.262	0.117
TPSA685*020#1000	A	6.8	20	1.4	6	1000	1	0.274	0.246	0.110	0.274	0.246	0.110
TPSB685*020#0600	B	6.8	20	1.4	6	600	1	0.376	0.339	0.151	0.226	0.203	0.090
TPSB685*020#1000	B	6.8	20	1.4	6	1000	1	0.292	0.262	0.117	0.292	0.262	0.117
TPSC685*020#0700	C	6.8	20	1.4	6	700	1	0.396	0.357	0.159	0.277	0.250	0.111
TPSB106*020#0500	B	10	20	2	6	500	1	0.412	0.371	0.165	0.206	0.186	0.082
TPSB106*020#1000	B	10	20	2	6	1000	1	0.292	0.262	0.117	0.292	0.262	0.117
TPSC106*020#0500	C	10	20	2	6	500	1	0.469	0.422	0.188	0.235	0.211	0.094
TPSC106*020#0700	C	10	20	2	6	700	1	0.396	0.357	0.159	0.277	0.250	0.111
TPSW106*020#0500	W	10	20	2	6	500	1	0.424	0.382	0.170	0.212	0.191	0.085
TPSB156*020#0500	B	15	20	3	6	500	1	0.412	0.371	0.165	0.206	0.186	0.082
TPSC156*020#0400	C	15	20	3	6	400	1	0.524	0.472	0.210	0.210	0.189	0.084
TPSC156*020#0450	C	15	20	3	6	450	1	0.494	0.445	0.198	0.222	0.200	0.089
TPSB226*020#0400	B	22	20	4.4	6	400	1	0.461	0.415	0.184	0.184	0.166	0.074
TPSB226*020#0600	B	22	20	4.4	6	600	1	0.376	0.339	0.151	0.226	0.203	0.090
TPSC226*020#0100	C	22	20	4.4	6	100	1	1.049	0.944	0.420	0.105	0.094	0.042
TPSC226*020#0150	C	22	20	4.4	6	150	1	0.856	0.771	0.343	0.128	0.116	0.051
TPSC226*020#0400	C	22	20	4.4	6	400	1	0.524	0.472	0.210	0.210	0.189	0.084
TPSD226*020#0200	D	22	20	4.4	6	200	1	0.866	0.779	0.346	0.173	0.156	0.069
TPSD226*020#0300	D	22	20	4.4	6	300	1	0.707	0.636	0.283	0.212	0.191	0.085
TPSC336*020#0300	C	33	20	6.6	6	300	1	0.606	0.545	0.242	0.182	0.163	0.073
TPSD336*020#0100	D	33	20	6.6	6	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD336*020#0200	D	33	20	6.6	6	200	1	0.866	0.779	0.346	0.173	0.156	0.069
TPSD476*020#0075	D	47	20	9.4	6	75	1	1.414	1.273	0.566	0.106	0.095	0.042
TPSD476*020#0100	D	47	20	9.4	6	100	1	1.225	1.102	0.490	0.122	0.110	0.049
TPSD476*020#0200	D	47	20	9.4	6	200	1	0.866	0.779	0.346	0.173	0.156	0.069

¹⁾ Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 3.

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 124.

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.

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (μ F)	Rated Voltage (V)	DCL (μ A) Max.	DF % Max.	ESR Max. (m Ω) @100kHz	MSL	100kHz RMS Current (A)			100kHz RMS Voltage (V)		
								25°C	85°C	125°C	25°C	85°C	125°C
TPSC474*050#2300	C	0.47	50	0.5	4	2300	1	0.219	0.197	0.087	0.503	0.453	0.201
TPSC105*050#2500	C	1	50	0.5	4	2500	1	0.210	0.189	0.084	0.524	0.472	0.210
TPSC155*050#1500	C	1.5	50	0.8	6	1500	1	0.271	0.244	0.108	0.406	0.366	0.162
TPSC155*050#2000	C	1.5	50	0.8	6	2000	1	0.235	0.211	0.094	0.469	0.422	0.188
TPSD225*050#1200	D	2.2	50	1.1	6	1200	1	0.354	0.318	0.141	0.424	0.382	0.170
TPSD335*050#0800	D	3.3	50	1.7	6	800	1	0.433	0.390	0.173	0.346	0.312	0.139
TPSD475*050#0300	D	4.7	50	2.4	6	300	1	0.707	0.636	0.283	0.212	0.191	0.085
TPSD475*050#0500	D	4.7	50	2.4	6	500	1	0.548	0.493	0.219	0.274	0.246	0.110
TPSD475*050#0700	D	4.7	50	2.4	6	700	1	0.463	0.417	0.185	0.324	0.292	0.130
TPSD685*050#0200	D	6.8	50	3.4	6	200	1	0.866	0.779	0.346	0.173	0.156	0.069
TPSD685*050#0300	D	6.8	50	3.4	6	300	1	0.707	0.636	0.283	0.212	0.191	0.085
TPSD685*050#0500	D	6.8	50	3.4	6	500	1	0.548	0.493	0.219	0.274	0.246	0.110
TPSD685*050#0600	D	6.8	50	3.4	6	600	1	0.500	0.450	0.200	0.300	0.270	0.120
TPSE106*050#0250	E	10	50	5	6	250	1 ¹⁾	0.812	0.731	0.325	0.203	0.183	0.081
TPSE106*050#0300	E	10	50	5	6	300	1 ¹⁾	0.742	0.667	0.297	0.222	0.200	0.089
TPSE106*050#0400	E	10	50	5	6	400	1 ¹⁾	0.642	0.578	0.257	0.257	0.231	0.103
TPSE106*050#0500	E	10	50	5	6	500	1 ¹⁾	0.574	0.517	0.230	0.287	0.259	0.115
TPSE156*050#0250	E	15	50	7.5	6	250	1 ¹⁾	0.812	0.731	0.325	0.203	0.183	0.081
TPSV156*050#0250	V	15	50	7.5	6	250	1 ¹⁾	1.000	0.900	0.400	0.250	0.225	0.100

¹⁾ Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 3.

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 124.

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.