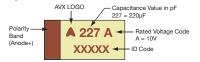
Low ESR



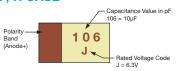


MARKING

A, B, C, D, E, F, S, T, V, W, X, Y CASE



P, R CASE



above

FEATURES

• Low ESR series of robust MnO₂ solid electrolyte capacitors

• CV range: 0.15-1500µF / 2.5-50V

• 14 case sizes available

APPLICATIONS

Power supply applications

LEAD-FREE





SnPb termination option is not RoHS compliant.

• General medium power DC/DC convertors

CASE DIMENSIONS: millimeters (inches)

Code	EIA	EIA	L±0.20	W+0.20 (0.008)	H+0.20 (0.008)	W₁±0.20	A+0.30 (0.012)	S Min.					
	Code	Metric	(800.0)	-0.10 (0.004)	-0.10 (0.004)	(0.008)	-0.20 (0.008)						
Α	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)					
В	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)					
С	2312	6032-28	6.00 (0.236)	3.20 (0.126)	2.60 (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)					
Р	0805	2012-15	2.05 (0.081)	1.35 (0.053)	1.50 (0.059) max.	1.00±0.10 (0.039±0.004)	0.50 (0.020)	0.85 (0.033)					
R	R 0805 2012-12 2.05 (0.081) 1.30 (0.051) 1.20 (0.047) max. 1.00 ±0.10 (0.039 ±0.004) 0.50 (0.020) 0.85 (0.020)												
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)					
Т	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)	3.55 (0.140)	3.10 (0.120)	1.30 (0.051)	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)					
Х	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)					
Υ	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)					
			W1 dimension a	applies to the termin	ation width for A dir	mensional area o	nly.						

HOW TO ORDER



pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)

M

Tolerance $K = \pm 10\%$ $M = \pm 20\%$ 010

Rated DC Voltage 002 = 2.5Vdc 004 = 4Vdc 006 = 6.3 Vdc010 = 10 Vdc

016 = 16 Vdc020 = 20 Vdc025 = 25 Vdc 025 = 25 Vdc 035 = 35 Vdc050 = 50 Vdc R

Packaging R = Pure Tin 7" Reel S = Pure Tin 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

0100

ESR in $m\Omega$

Additional characters may be added for special requirements

V = Dry pack Option (selected codes only)

TECHNICAL SPECIFICATIONS

Technical Data:		All te	chnical d	ata relate	to an am	bient ten	perature	of +25°C	;		
Capacitance Range:		0.15	μF to 15	00 μF							
Capacitance Tolerance:		±109	%; ±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	Т
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:		55/1	25/56 (IE	C 68-2)							
Reliability:		1% p	oer 1000	hours at 8	35°C, V _R v	with 0.1Ω	/V series	impedano	ce,		
	60% confidence level										
Termination Finished:		Sn F	Plating (sta	andard), C	old and	SnPb Pla	ting upon	request			
		For A	AEC-Q20	0 availabi	ity, please	e contact	AVX				





CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capa	citance				Rated \	Voltage DC (V _R) to	o 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)	A(7000)
0.47	474							A(7000)	A(6000) B(4000)	A(6500), B(6000) C(2300)
0.68	684							A(6000)	A(6000)	B(4000)
1.0	105				R(9000)	A(6200)	A(3000), R(6000) S(6000), T(2000)	A(4000) R(2500,4000)	A(3000) B(2000)	B(3000) C(2500)
1.5	155						A(3000)	A(3000) B(1800)	A(3000) B(2500)	C(1500,2000)
2.2	225			R(7000)	A(1800)	A(1800,3500) T(2000)	A(3000), B(1700)	A(2500) B(900,1200,2500)	A(1500), B(750, 1500,2000), C(1000)	C(1500) D(1200)
3.3	335			A(2100)	T(1500)	A(3500), B(2500)	A(2500) B(1300)	A(1000,1500) B(750,1500,2000)	B(1000) C(700)	C(1000) D(800)
4.7	475			S(4000)	A(1400), B(1400) R(3000,5000)	A(2000) B(800,1500)	A(1800) B(750,1000)	B(700,900,1500) C(700)	B(700,1500) C(600), D(700)	C(800) D(250,300, 500,700)
6.8	685			A(1800)	A(1800), B(1300) 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), B(1500) R(1000,1500,3000) T(1000)	A(900,1800), B(1000) P(2000)M, S(900) T(1000,2000)	A(1000), B(500,800) C(500), T(800,1000) W(500,600)	B(500,1000) C(500,700) W(250, 500)	B(1800) C(300,500) D(500)	C(600) D(125,300) E(200), Y(250)	D(500) E(250,300, 400,500)
15	156			A(700,1500)	A(1000) B(450,600), C(700) T(1200)	B(500,800) C(300,700)	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) C(500), S(900)	A(900) B(400,500,700) C(300), T(800)	B(400,600) C(150,250,300,375) D(700), 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(100,300) 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) X(200)	D(125,150,250) E(80,100,125) (Y250)	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) Y(200)	E(125,200) V(80,95,150,200)	V(150,200)	
100	107	B(200)	B(200,250, 350,500) W(100)	B(250,400) C(75,150), D(300) 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)	E(150) ^M , V(100)		
150	157	B(150)	B(250) C(70,80)	C(50,90,150,200,250) D(50,125), Y(40,50)	C(150), 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)	V(150) [™]		
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(75,100,150)	D(50,65,100,150) E(40,50,60,100) V(40,60,100)	E(200) ^M				
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							

Not recommended for new designs, higher voltage or smaller case size substitution are offered.

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.

Low ESR



TPSB107*002#0200 B 10 TPSB157*002#0150 B 22 TPSB227*002#0150 B 22 TPSB227*002#0200 B 22 TPSB227*002#0040 D 22 TPSD227*002#0045 D 22 TPSD27*002#0045 D 22 TPSD477*002#0035 D 43 TPSD477*002#0000 F 43 TPSD477*002#0000 F 43 TPSD477*002#0000 F 43 TPSD687*002#0050 D 66 TPSD687*002#0050 D 66 TPSE687*002#0050 E 66 TPSY687*002#0050 E 70 TPSD158*002#0030 E 10 TPSD158*002#0030 E 10 TPSP108*002#0030 E 10 TPSP108*002#0040 E 10 TPSP108*002#0040 E 10 TPSP108*002#0040 E 10 TPSP108*002#0040 D 15 TPSP158*002#0050 B 15 TPSP158*002#0050 B 16 TPSP158*002#0040 V 15 TPSP158*004#0050 B 16 TPSP108*004#0500 B 16 TPSP108*004#0050 B 16 TPSP108*004#0050 B 16 TPSP108*004#0050 B 16 TPSP108*004#0050 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD337*004#0050 D 22 TPSD337*004#0050 D 22 TPSD337*004#0050 D 22 TPSD337*004#0040 D 22 TPSD337*004#0040 D 23 TPSD337*004#0040 D 33 TPSD337*004#0040 D 33 TPSD337*004#0040 D 33 TPSD337*004#0040 D 66 TPSD687*004#0040 D 66 TPSE108*004#0040 D 66 TPSE108*004#0050 D 70 T	citance	Rated	Rated	Category	Category	DCL	DF	ESR	MOL	100kHz	z RMS Cur	rent (A)
TPSB157*002#0150 B 15 TPSB227*002#0150 B 22 TPSB227*002#0200 B 22 TPSB227*002#0040 B 22 TPSB227*002#0040 D 22 TPSY337*002#0040 Y 33 TPSD477*002#0035 D 43 TPSD477*002#0035 D 43 TPSP477*002#0035 D 43 TPSP477*002#0035 D 68 TPSD687*002#0035 D 68 TPSD687*002#0035 E 68 TPSE687*002#0050 E 75 TPSE108*002#0030 E 10 TPSE108*002#0030 E 10 TPSP108*002#0040 E 10 TPSY108M002#0040 D 15 TPSY158*002#0040 D 15 TPSP158*002#0040 D 15 TPSP158*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#040 D 22 TPSD27*004#0040 D 22 TPSD27*004#0040 D 22 TPSD27*004#0040 D 22 TPSD27*004#0050 D 22 TPSD337*004#0050 D 33 TPSD337*004#0005 D 33 TPSD337*004#0000 D 33 TPSD337*004	μF)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μA) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
TPSB157*002#0150 B 15 TPSB227*002#0150 B 22 TPSB227*002#0200 B 22 TPSB227*002#0040 B 22 TPSB227*002#0040 D 22 TPSY337*002#0040 Y 33 TPSD477*002#0035 D 43 TPSD477*002#0035 D 43 TPSP477*002#0035 D 43 TPSP477*002#0035 D 68 TPSD687*002#0035 D 68 TPSD687*002#0035 E 68 TPSE687*002#0050 E 75 TPSE108*002#0030 E 10 TPSE108*002#0030 E 10 TPSP108*002#0040 E 10 TPSY108M002#0040 D 15 TPSY158*002#0040 D 15 TPSP158*002#0040 D 15 TPSP158*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#040 D 22 TPSD27*004#0040 D 22 TPSD27*004#0040 D 22 TPSD27*004#0040 D 22 TPSD27*004#0050 D 22 TPSD337*004#0050 D 33 TPSD337*004#0005 D 33 TPSD337*004#0000 D 33 TPSD337*004					lt @ 85°C							
TPSB227*002#0150 B 22 TPSB227*002#0200 B 22 TPSB227*002#0600 B 22 TPSD227*002#0045 D 22 TPSD27*002#0045 D 22 TPSD477*002#0035 D 43 TPSD477*002#0035 D 43 TPSP477*002#0100 Y 47 TPSD687*002#0035 D 66 TPSC687*002#0035 D 66 TPSC687*002#0035 E 66 TPSC687*002#0035 E 66 TPSC687*002#0030 E 10 TPSY687*002#0100 Y 66 TPSC687*002#0030 E 10 TPSC188*002#0030 E 10 TPSC188*002#0030 E 10 TPSC188*002#0030 E 10 TPSC188*002#0030 V 15 TPSC188*002#0040 E 10 TPSC188*002#0040 V 10 TPSD158*002#0040 V 15 TPSC188*002#0040 V 15 TPSC188*004#0350 B 10 TPSC188*004#0040 D 22 TPSC188*004#0040 D 23 TPSC188*004#0040 D 23 TPSC188*004#0040 D 23 TPSC188*004#0040 D 33 TPSC188*004#0040 D 34 T	00	2.5	85	1.7	125	2.5	8	200	1	0.652	0.587	0.261
TPSB227*002#0200 B 22 TPSB227*002#0600 B 22 TPSB227*002#0600 B 22 TPSD227*002#0045 D 22 TPSY337*002#0040 Y 33 TPSD477*002#0035 D 41 TPSP477*002#0200 F 42 TPSY477*002#0200 F 43 TPSP687*002#0035 D 66 TPSD687*002#0035 D 66 TPSD687*002#0035 E 66 TPSE687*002#0035 E 66 TPSE687*002#0050 E 66 TPSF687*002#0050 E 10 TPSE108*002#0040 E 10 TPSF108*002#0040 E 10 TPSY108M002#0100 Y 10 TPSS158*002#0100 D 15 TPSE158*002#0050 E 15 TPSV158M002#0100 D 15 TPSE158*002#0050 E 15 TPSV158M002#0040 V 15 TPSE158*002#0050 B 16 TPSN158M002#0040 V 15 TPSS158*002#0050 B 16 TPSN17*004#0500 A 4 TPSB107*004#0500 B 16 TPSN17*004#0500 B 16 TPSN17*004#0050 D 22 TPSY227*004#0050 D 22 TPSY227*004#0050 D 22 TPSY227*004#0050 D 22 TPSN227*004#0050 D 22 TPSN237*004#0050 D 33 TPSD37*004#0060 D 66 TPSD887*004#0040	50	2.5	85	1.7	125	3	10	150	1	0.753	0.677	0.301
TPSB227*002#0600 B 22 TPSD227*002#0045 D 22 TPSY337*002#0040 Y 33 TPSD477*002#0035 D 43 TPSP477*002#0200 F 43 TPSY477*002#0100 Y 45 TPSY477*002#0100 Y 45 TPSD687*002#0050 D 66 TPSE687*002#0050 D 66 TPSE687*002#0050 E 66 TPSE687*002#0050 E 66 TPSY687*002#0100 Y 66 TPSY687*002#0100 Y 66 TPSY108*002#0100 Y 10 TPSD108*002#0100 Y 10 TPSD158*002#0100 T 10 TPSD158*002#0100 D 15 TPSE108*002#0040 E 10 TPSY108*002#0100 D 15 TPSE158*002#0040 U 15 TPSU158*002#0040 V 15 TPSU158*004#0050 B 10 TPSD15*004#0050 B 10 TPSD15*004#0050 B 10 TPSD15*004#0050 B 10 TPSD15*004#0040 D 22 TPSU27*004#0040 D 22 TPSU27*004#00	20	2.5	85	1.7	125	4.4	16	150	1	0.753	0.677	0.301
TPSD227*002#0045 D 22 TPSY337*002#0040 Y 33 TPSD477*002#0035 D 43 TPSF477*002#0100 F 43 TPSD687*002#0100 Y 43 TPSD687*002#0100 F 43 TPSD687*002#0035 D 66 TPSD687*002#0035 D 66 TPSD687*002#0035 D 66 TPSD687*002#0035 E 66 TPSE687*002#0030 E 10 TPSE687*002#0100 Y 66 TPSE687*002#0100 Y 66 TPSE687*002#0100 Y 66 TPSE108*002#0100 Y 10 TPSD108*002#0100 D 15 TPSE108*002#0100 D 15 TPSY108M002#0100 D 15 TPSY108M002#0100 D 15 TPSV158M002#0030 E 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSV158M002#0050 E 15 TPSV158M002#0040 V 15 TPSC157*004#0500 A 44 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSD17*004#0250 B 10 TPSD17*004#0100 W 10 TPSD17*004#0100 W 10 TPSD27*004#0040 D 22 TPSD27*004#0040 T 25 TPSD337*004#0040 F 33 TPSD337*004#0040 D 22 TPSD337*004#0040 D 33 TPSD477*004#0040 D 34 TPSE477*004#0040 D	20	2.5	85	1.7	125	4.4	16	200	1	0.652	0.587	0.261
TPSY337*002#0040 Y 33 TPSD477*002#0035 D 43 TPSD477*002#0200 F 43 TPSP477*002#0200 F 43 TPSY477*002#0100 Y 43 TPSD687*002#0035 D 66 TPSD687*002#0035 D 66 TPSE687*002#0050 E 66 TPSE687*002#0050 E 66 TPSE687*002#0050 E 66 TPSE687*002#0040 Y 60 TPSE108*002#0040 E 100 TPSE108*002#0040 E 100 TPSY108M002#0100 Y 100 TPSD158*002#0040 E 100 TPSY108M002#0100 D 155 TPSV158M002#0040 V 150 TPSN158M002#0040 D 20 TPSD157*004#0500 B 10 TPSN157*004#0500 B 10 TPSN157*004#0500 B 10 TPSN157*004#0070 C 10 TPSD157*004#0070 C 10 TPSD227*004#0040 D 20 TPSD27*004#0040 D 20 TPSD27*004#0040 D 20 TPSD27*004#0040 D 20 TPSD337*004#0040 D 20 TPSD337*004#0040 D 20 TPSD337*004#0040 D 20 TPSD337*004#0045 D 30 TPSD337*004#0040 D 30 TPSD337*004#0045 D 30 TPSD337*004#0045 D 30 TPSD337*004#0045 D 30 TPSD337*004#0040 D 30 TPSD477*004#0040 D 30 TPSD	20	2.5	85	1.7	125	4.4	16	600	1	0.376	0.339	0.151
TPSD477*002#0035 D 4: TPSF477*002#0200 F 4: TPSF477*002#0100 Y 4: TPSD687*002#0100 Y 4: TPSD687*002#0035 D 6: TPSE687*002#0050 D 6: TPSE687*002#0050 E 6: TPSE687*002#0050 E 6: TPSE687*002#0050 E 6: TPSE687*002#0050 E 6: TPSE687*002#0100 Y 6: TPSE108*002#0030 E 10: TPSE108*002#0040 E 10: TPSY108M002#0100 D 15: TPSY108M002#0100 D 15: TPSY158M002#0100 D 15: TPSV158M002#0040 V 15: TPSV158M002#0040 V 15: TPSN158M002#0040 D 16: TPSN107*004#0500 B 10: TPSN107*004#0500 B 10: TPSN107*004#0100 W 10: TPSN157*004#0040 D 22: TPSD27*004#0040 D 22: TPSD27*004#0040 D 22: TPSD227*004#0040 D 22: TPSD337*004#0040 D 22: TPSD337*004#0040 D 22: TPSD337*004#0040 D 22: TPSD337*004#0040 D 22: TPSD337*004#0045 D 3: TPSD337*004#0045 D 4: TPSD337*004#0045 D 4: TPSD337*004#0045 D 4: TPSD477*004#0045 D 4: TPSD477*004#0045 D 4: TPSD477*004#0045 D 4: TPSD477*004#0045 D 6: TPSD477*004#0040 E 6: TPSD687*004#0040 D 6: TPSD687*004#0040 E 6: TPSD687*004#0040 E 6: TPSD687*004#0040 D 6: TPSD687*004#0040 E 6: TPSD687*004#0040 E 6: TPSD687*004#0040 E 6: TPSD687*004#0040 D 6: TPSD687*004#0040 E 10: TPSD687*004#0040 E 1	20	2.5	85	1.7	125	5.5	8	45	1	1.826	1.643	0.730
TPSF477*002#0200 F 4: TPSY477*002#0100 Y 4: TPSD687*002#0035 D 6: TPSD687*002#0035 D 6: TPSE687*002#0035 E 6: TPSE687*002#0035 E 6: TPSE687*002#0030 E 10: TPSE108*002#0030 E 10: TPSE108*002#0100 Y 6: TPSE108*002#0040 E 10: TPSE108*002#0040 E 10: TPSE108*002#0040 E 10: TPSE108*002#0100 D 15: TPSE158*002#0050 E 15: TPSV158M002#0100 D 15: TPSE158*002#0050 E 15: TPSV158M002#0030 V 15: TPSV158M002#0030 V 15: TPSV158M002#0040 V 15: TPSR106*004#3000 R 1: TPSR106*004#3000 R 1: TPSR106*004#0500 A 4: TPSB107*004#0500 B 10: TPSD157*004#0050 B 10: TPSD157*004#0050 B 10: TPSD227*004#0070 C 10: TPSC157*004#0080 C 10: TPSD227*004#0040 D 20: TPSD227*004#0050 D 20: TPSD337*004#0040 T 20: TPSD337*004#0040 D 30: TPSD477*004#0040 D 30: TPSD477*004#0040 D 30: TPSD477*004#0040 D 6: TPSD477*004	30	2.5	85	1.7	125	8.2	8	40	11)	1.768	1.591	0.707
TPSY477*002#0100 Y 47 TPSD687*002#0035 D 68 TPSD687*002#0050 D 68 TPSE687*002#0050 E 68 TPSE687*002#0050 E 68 TPSE687*002#0050 E 68 TPSY687*002#0050 E 68 TPSY687*002#0030 E 10 TPSE108*002#0030 E 10 TPSE108*002#0040 E 10 TPSY108M002#0100 Y 10 TPSE158*002#0100 D 15 TPSE158*002#0100 D 15 TPSE158*002#0050 E 15 TPSV158M002#0030 V 15 TPSV158M002#0040 V 15 TPSY158M002#0040 V 15 TPSN158M002#0040 V 15 TPSN158M002#0040 V 15 TPSN106*004#3000 R 1 TPSN106*004#3000 R 1 TPSN106*004#3000 B 10 TPSN107*004#0250 B 10 TPSN107*004#0250 B 10 TPSN107*004#0250 B 10 TPSN107*004#0100 W 11 TPSN107*004#0100 W 11 TPSN157*004#0050 B 10 TPSD27*004#0040 D 22 TPSY27*004#0040 D 22 TPSY27*004#0040 D 22 TPSY27*004#0050 D 33 TPSD37*004#0050 D 33 TPSD37*004#0050 D 33 TPSD37*004#0050 D 33 TPSD37*004#0040 D 33 TPSD37*004#0045 D 33 TPSD	-70	2.5	85	1.7	125	11.6	8	35	1	2.070	1.863	0.828
TPSD687*002#0035 D 66 TPSD687*002#0035 D 66 TPSD687*002#0030 D 66 TPSE687*002#0030 E 66 TPSE687*002#0030 E 66 TPSY687*002#0100 Y 66 TPSE108*002#0100 Y 10 TPSE108*002#0040 E 10 TPSY108M002#0100 D 15 TPSY108M002#0100 D 15 TPSY158*002#0040 U 15 TPSY158M002#0040 V 15 TPSV158M002#0040 V 15 TPSS107*004#0500 B 10 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSD157*004#0050 B 10 TPSD157*004#0050 B 11 TPSC157*004#0070 C 15 TPSC157*004#0070 C 15 TPSC157*004#0040 D 22 TPSC27*004#0040 D 22 TPSC27*004#0040 D 22 TPSC27*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 T 25 TPSY227*004#0040 D 33 TPSD337*004#0040 D 33 TPSD418*004#0040 D 53 TPS	-70	2.5	85	1.7	125	11.8	12	200	1	0.707	0.636	0.283
TPSD687*002#0050 D 66 TPSE687*002#0035 E 66 TPSE687*002#0035 E 66 TPSY687*002#0030 E 10 TPSE108*002#0040 E 10 TPSE108*002#0040 E 10 TPSE108*002#0040 E 10 TPSE108*002#0100 T 10 TPSE158*002#0100 D 15 TPSE158*002#0100 D 15 TPSU158*002#0030 V 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSU158*002#0040 V 15 TPSU158*004#0350 B 10 TPSU10**004#0350 D 22 TPSU27**004#0040 D 22 TPSU22**004#0040 D 22 TPSU23**004#0040 D 22 TPSU23**004#0040 D 22 TPSU23**004#0040 D 22 TPSU33**004#0040 D 33 TPSU38**004#0040 D 33 TPSU38**004#0040 D 33 TPSU38**004#0040 D 33 TPSU38**004#0040 D 33	-70	2.5	85	1.7	125	11	12	100	11)	1.118	1.006	0.447
TPSD687*002#0050 D 66 TPSE687*002#0035 E 66 TPSE687*002#0035 E 66 TPSY687*002#0030 E 10 TPSE108*002#0040 E 10 TPSE108*002#0040 E 10 TPSE108*002#0040 E 10 TPSE108*002#0100 T 10 TPSE158*002#0100 D 15 TPSE158*002#0100 D 15 TPSU158*002#0030 V 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSU158*002#0040 V 15 TPSU158*004#0350 B 10 TPSU10**004#0350 D 22 TPSU27**004#0040 D 22 TPSU22**004#0040 D 22 TPSU23**004#0040 D 22 TPSU23**004#0040 D 22 TPSU23**004#0040 D 22 TPSU33**004#0040 D 33 TPSU38**004#0040 D 33 TPSU38**004#0040 D 33 TPSU38**004#0040 D 33 TPSU38**004#0040 D 33	80	2.5	85	1.7	125	17	16	35	1	2.070	1.863	0.828
TPSE687*002#0035 E 68 TPSE687*002#0050 E 68 TPSE687*002#0050 E 68 TPSE108*002#0030 E 10 TPSE108*002#0040 E 10 TPSE108*002#0040 E 10 TPSY108M002#0100 D 15 TPSE158*002#0100 D 15 TPSE158*002#050 E 15 TPSV158M002#0050 E 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSN158M002#0040 B 10 TPSN107*004#0500 B 10 TPSN107*004#0050 B 10 TPSN157*004#0050 B 10 TPSD227*004#0040 D 22 TPSD237*004#0040 D 22 TPSD337*004#0040 D 22 TPSN237*004#0040 D 22 TPSN337*004#0040 D 22 TPSN337*004#0040 D 22 TPSN337*004#0040 D 22 TPSD337*004#0045 D 33 TPSD337*004#0045 D 43 TPSD477*004#0045 D 66 TPSD477*004#0045 D 66 TPSD687*004#0040 E 66 TPSE687*004#0040 E 66 TPSE108*004#0040 E 66 TPSE108*004#0040 E 66 TPSE108*004#0040 E 10 TPSE108*004#0050 V 10 TPSE108*004#0050 V 10 TPSE158*004#0050 V 10 TPSE158*004#0075 E 15	80	2.5	85	1.7	125	17	16	50	1	1.732	1.559	0.693
TPSE687*002#0050 E 68 TPSY687*002#0100 Y 68 TPSY687*002#0100 Y 68 TPSE108*002#0030 E 10 TPSE108*002#0100 D 15 TPSE108*002#0100 D 15 TPSD158*002#0100 D 15 TPSE158*002#0050 E 15 TPSV158M002#0030 V 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSR106*004#3000 R 1 TPSR106*004#3000 R 1 TPSR106*004#0300 A 4 TPSB107*004#0200 B 10 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSD107*004#0500 B 10 TPSD107*004#0500 B 10 TPSD107*004#0500 B 10 TPSD107*004#0050 B 10 TPSD107*004#0050 B 10 TPSD27*004#0050 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 D 22 TPSD237*004#0050 D 22 TPSD27*004#0050 D 22 TPSD337*004#0050 D 22 TPSD337*004#0050 D 33 TPSD37*004#0050 D 33 TPSD37*004#0060 D 66 TPSD477*004#0045 D 66 TPSD477*004#0045 D 66 TPSD477*004#0045 D 66 TPSD477*004#0045 D 66 TPSD687*004#0040 E 66 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0050 V 10 TPSE158*004#0050 V 10	80	2.5	85	1.7	125	17	10	35	11)	2.171	1.954	0.868
TPSY687*002#0100 Y 68 TPSE108*002#0030 E 10 TPSE108*002#0040 E 10 TPSY108M002#0100 Y 10 TPSD158*002#0100 D 15 TPSE158*002#0100 D 15 TPSE158*002#0050 E 15 TPSV158M002#0030 V 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSN106*004#3000 R 1 TPSR106*004#3000 R 1 TPSR106*004#3000 B 10 TPSB107*004#0200 B 10 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSD107*004#0100 W 10 TPSD107*004#0100 W 10 TPSD107*004#0100 W 10 TPSD107*004#0050 D 22 TPSY27*004#0050 D 22 TPSY227*004#0050 D 22 TPSY237*004#0050 T 22 TPSY237*004#0050 D 22 TPSD337*004#0040 D 33 TPSD337*004#0040 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD477*004#0045 D 43 TPSD477*004#0045 D 66 TPSD687*004#0040 E 66 TPSE687*004#0040 E 66 TPSE687*004#0040 E 66 TPSE687*004#0040 E 66 TPSE108*004#0040 E 66 TPSE108*004#0040 E 100 TPSE108*004#0040 V 100 TPSE108*004#0040 V 100 TPSE108*004#0050 V 100 TPSE158*004#0050 V 100 TPSE158*004#0050 E 155 TPSE158*004#0050 E 155 TPSE158*004#0050 E 155	80	2.5	85	1.7	125	17	10	50	1 ¹⁾	1.817	1.635	0.727
TPSE108*002#0030 E 10 TPSE108*002#0100 Y 10 TPSE158*002#0100 D 15 TPSD158*002#0100 D 15 TPSE158*002#0050 E 15 TPSV158M002#0030 V 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSR106*004#3000 R 1 TPSR106*004#3000 R 1 TPSR106*004#0500 A 4 TPSB107*004#0500 B 10 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0400 W 10 TPSB157*004#0050 B 11 TPSC157*004#0040 D 22 TPSC157*004#0040 D 22 TPSC27*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 D 33 TPSD37*004#0050 T 22 TPSC337*004#0040 D 33 TPSD337*004#0045 D 33 TPSD337*004#0040 D 53 TPSE108*004#0040 E 50 TPSE108*004#0040 E 50 TPSE108*004#0040 E 50 TPSE108*004#0050 V 10 TPSE1	80	2.5	85	1.7	125	17	12	100	11)	1.118	1.006	0.447
TPSE108*002#0040 E 10 TPSY108M002#0100 Y 10 TPSD158*002#0100 D 15 TPSE158*002#0050 E 15 TPSV158M002#0030 V 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSR106*004#3000 R 1 TPSA476*004#0500 A 4 TPSB107*004#0250 B 10 TPSD107*004#0350 B 10 TPSD107*004#0050 B 10 TPSD107*004#0050 B 10 TPSD107*004#0050 D 22 TPSD27*004#0040 D 22 TPSC157*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD237*004#0050 D 22 TPSD337*004#0050 D 33 TPSD337*004#0045 D 43 TPSD477*004#0045 D 43 TPSD477*004#0045 D 43 TPSD477*004#0045 D 66 TPSE687*004#0040 E 66 TPSE108*004#0040 E 10 TPSE108*004#0050 V 10 TPSE158*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0050 E 15	000	2.5	85	1.7	125	25	14	30	11)	2.345	2.111	0.938
TPSY108M002#0100 Y 10 TPSD158*002#0100 D 15 TPSE158*002#0100 D 15 TPSE158*002#0050 E 15 TPSV158M002#0030 V 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSR106*004#3000 R 1 TPSA476*004#0500 A 4 TPSB107*004#0500 B 10 TPSB107*004#0250 B 10 TPSB107*004#0350 B 10 TPSD107*004#0350 B 10 TPSD107*004#0350 B 10 TPSD107*004#0350 B 10 TPSD107*004#0350 B 10 TPSD107*004#0050 D 10 TPSD157*004#0040 W 10 TPSD227*004#0040 D 22 TPSD237*004#0040 D 23 TPSD337*004#0040 T 23 TPSD337*004#0040 T 23 TPSD337*004#0040 D 33 TPSD337*004#0045 D 33 TPSD37*004#0045 D 43 TPSD477*004#0045 D 66 TPSE477*004#0045 D 66 TPSE687*004#0040 E 66 TPSE108*004#0040 E 10 TPSE158*004#0050 V 10 TPSE158*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0050 E 15	000	2.5	85	1.7	125	25	14	40	1 1)	2.031	1.828	0.812
TPSD158*002#0100 D 15 TPSE158*002#0050 E 15 TPSV158M002#0030 V 15 TPSV158M002#0040 V 15 TPSV158M002#0040 V 15 TPSR106*004#3000 R 1 TPSB107*004#0500 A 4 TPSB107*004#0200 B 10 TPSB107*004#0250 B 10 TPSB107*004#0350 B 10 TPSB107*004#0500 B 11 TPSD17*004#0500 B 11 TPSD17*004#0500 B 11 TPSD17*004#0500 B 11 TPSD17*004#0050 D 12 TPSC157*004#0040 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 D 22 TPSY227*004#0040 Y 22 TPSC337*004#0040 Y 22 TPSD337*004#0045 D 33 TPSD3		2.5	85	1.7	125	25	30	100	11)	1.118	1.006	0.447
TPSE158*002#0050 E 15 TPSV158M002#0030 V 15 TPSV158M002#0040 V 15 TPSN158M002#0040 V 15 TPSR106*004#3000 R 1 TPSA476*004#0500 A 4 TPSB107*004#0500 B 10 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSD107*004#0100 W 10 TPSD157*004#0100 W 10 TPSD157*004#0070 C 15 TPSC157*004#0070 C 15 TPSC157*004#0080 C 15 TPSD227*004#0080 C 15 TPSD227*004#0050 D 22 TPSD237*004#0050 D 22 TPSD337*004#0050 T 22 TPSD337*004#0050 T 22 TPSD337*004#0050 T 22 TPSD337*004#0050 D 33 TPSD37*004#0050 D 33 TPSD37*004#0050 D 33 TPSD37*004#0050 D 33 TPSD37*004#0050 D 33 TPSD477*004#0045 D 33 TPSD477*004#0045 D 33 TPSD477*004#0045 D 43 TPSD477*004#0045 D 63 TPSD687*004#0040 E 63 TPSE108*004#0040 E 10 TPSE108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0050 E 15		2.5	85	1.7	125	37.5	60	100	1	1.1125	1.102	0.447
TPSV158M002#0030				1.7	125			50	11)			
TPSV158M002#0040 V 15 TPSR106*004#3000 R 1 TPSA476*004#0500 A 4 TPSB107*004#0250 B 10 TPSB107*004#0250 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSB157*004#0100 W 11 TPSB157*004#0100 W 11 TPSD157*004#0070 C 15 TPSC157*004#0080 C 15 TPSC157*004#0080 C 15 TPSD227*004#0080 C 15 TPSD227*004#0080 D 22 TPSD227*004#0050 D 23 TPSD37*004#0090 D 33 TPSD37*004#0090 T 33 TPSD337*004#0090 D 33 TPSD37*004#0090 D 33 TPSD37*004#0090 D 33 TPSD477*004#0045 D 33 TPSD477*004#0045 D 43 TPSD477*004#0045 D 43 TPSD477*004#0045 D 43 TPSD477*004#0045 D 43 TPSD477*004#0040 D 43 TPSD477*004#0040 D 63 TPSD687*004#0040 D 63 TPSD6		2.5	85 85	1.7	125	37.5 30	20	30	11)	1.817 2.887	1.635 2.598	0.727
TPSR106*004#3000 R 1 TPSA476*004#0500 A 4 TPSB107*004#0200 B 10 TPSB107*004#0250 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSB157*004#0500 B 10 TPSC157*004#0070 C 11 TPSC157*004#0070 C 11 TPSC157*004#0080 C 11 TPSC27*004#0040 D 22 TPSD227*004#0040 C 12 TPSD227*004#0040 D 22 TPSD337*004#0040 T 22 TPSC337*004#0050 D 23 TPSD337*004#0050 D 23 TPSD337*004#0050 D 24 TPSC337*004#0050 D 25 TPSD337*004#0050 D 26 TPSD337*004#0050 D 33 TPSD337*004#0050 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD37*004#0045 D 33 TPSD37*004#0045 D 33 TPSD477*004#0045 D 43 TPSD477*004#0045 D 43 TPSD477*004#0045 D 43 TPSD477*004#0045 D 63 TPSD477*004#0045 D 63 TPSD477*004#0040 D 63 TPSD687*004#0040 D 63 TPSD6									11)			1.155
TPSA476*004#0500 A 4 TPSB107*004#0200 B 10 TPSB107*004#0250 B 10 TPSB107*004#0350 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSB157*004#0500 B 11 TPSW107*004#0100 W 10 TPSB157*004#0070 C 11 TPSC157*004#0070 C 11 TPSC157*004#0080 C 11 TPSD227*004#0080 C 12 TPSD227*004#0040 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 TPSD227*004#0050 Y 22 TPSD227*004#0050 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0050 D 33 TPSD337*004#0040 D 33 TPSD337*004#0040 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD37*004#0045 D 33 TPSD477*004#0045 D 43 TPSD477*004#0045 D 63 TPSD477*004#0040 E 63 TPSD687*004#0040 E 63 TPSD687*004#0040 E 63 TPSD687*004#0040 E 63 TPSD687*004#0040 E 63 TPSE108*004#0040 E 10 TPSE108*004#0050 V 10 TPSE158*004#0050 V 10 TPSE158*004#0050 E 155 TPSE158*004#0050 E 155 TPSE158*004#0050 E 155	500	2.5	85	1.7	125	30	20	40	1"	2.500	2.250	1.000
TPSA476*004#0500 A 4 TPSB107*004#0200 B 10 TPSB107*004#0250 B 10 TPSB107*004#0350 B 10 TPSB107*004#0500 B 10 TPSB107*004#0500 B 10 TPSB157*004#0500 B 11 TPSW107*004#0100 W 10 TPSB157*004#0070 C 11 TPSC157*004#0070 C 11 TPSC157*004#0080 C 11 TPSD227*004#0080 C 12 TPSD227*004#0040 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 TPSD227*004#0050 Y 22 TPSD227*004#0050 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0050 D 33 TPSD337*004#0040 D 33 TPSD337*004#0040 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD37*004#0045 D 33 TPSD477*004#0045 D 43 TPSD477*004#0045 D 63 TPSD477*004#0040 E 63 TPSD687*004#0040 E 63 TPSD687*004#0040 E 63 TPSD687*004#0040 E 63 TPSD687*004#0040 E 63 TPSE108*004#0040 E 10 TPSE108*004#0050 V 10 TPSE158*004#0050 V 10 TPSE158*004#0050 E 155 TPSE158*004#0050 E 155 TPSE158*004#0050 E 155	10		0.5		@ 85°C	0.5		0000	-	0.405	0.400	0.054
TPSB107*004#0200 B 10 TPSB107*004#0250 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0300 B 10 TPSB107*004#0100 W 11 TPSB157*004#0100 W 11 TPSB157*004#0250 B 15 TPSC157*004#0250 B 15 TPSC157*004#0040 C 15 TPSC27*004#0040 D 22 TPSC27*004#0040 D 22 TPSC27*004#0040 D 22 TPSC27*004#0040 C 15 TPSD227*004#0050 T 22 TPSC27*004#0050 T 22 TPSC37*004#0050 T 22 TPSC37*004#0050 T 22 TPSC337*004#0050 T 22 TPSC337*004#00050 D 33 TPSC337*004#0000 D 33 TPSC337*004#0000 D 43 TPSC477*004#0045 D 43 TPSC477*004#0045 D 43 TPSC477*004#0045 D 43 TPSC477*004#0045 D 63 TPSC687*004#0040 D 63 TPSC687*004#0040 D 63 TPSC687*004#0040 D 63 TPSC687*004#0040 E 10 TPSC108*004#0040 E 10 TPSC108*004#0040 V 10 TPSC108*004#0040 V 10 TPSC108*004#0050 V 10 TPSC158*004#0050 E 155 TPSC158*004#0050 E 155 TPSC158*004#0050 E 155	10	4	85	2.7	125	0.5	6	3000		0.135	0.122	0.054
TPSB107*004#0250 B 10 TPSB107*004#0350 B 10 TPSB107*004#0350 B 10 TPSB107*004#0500 B 10 TPSW107*004#0100 W 10 TPSW157*004#0250 B 11 TPSC157*004#0250 B 11 TPSC157*004#0070 C 11 TPSC157*004#0070 C 11 TPSC27*004#0080 C 11 TPSD227*004#0080 D 22 TPSD227*004#0010 D 22 TPSD227*004#0050 T 22 TPSY227*004#0050 Y 22 TPSY227*004#0075 Y 22 TPSY227*004#0075 Y 22 TPSY227*004#0075 Y 22 TPSY227*004#0075 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0040 D 33 TPSD337*004#0045 D 33 TPSD37*004#0045 D 33 TPSD37*004#0045 D 33 TPSD37*004#0045 D 43 TPSC477*004#0045 D 43 TPSC477*004#0045 D 43 TPSC477*004#0045 D 43 TPSC477*004#0045 D 63 TPSC477*004#0045 D 63 TPSC477*004#0045 D 63 TPSC477*004#0040 D 63 TPSC	47	4	85	2.7	125	1.9	8	500	1	0.387	0.349	0.155
TPSB107*004#0350 B 10 TPSB107*004#0100 W 10 TPSB157*004#0100 W 10 TPSB157*004#0250 B 15 TPSC157*004#0250 B 15 TPSC157*004#0070 C 15 TPSC157*004#0080 C 15 TPSC27*004#0080 C 15 TPSD227*004#0040 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 TPSC27*004#0050 Y 22 TPSC37*004#0050 Y 22 TPSC37*004#0050 Y 22 TPSC37*004#0050 TPSC37*004#0050 D 33 TPSD337*004#0050 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD37*004#0045 D 33 TPSD37*004#0045 D 33 TPSD37*004#0045 D 33 TPSD477*004#0045 D 43 TPSC477*004#0045 D 43 TPSC477*004#0045 D 66 TPSC477*004#0045 E 43 TPSC477*004#0045 E 43 TPSC477*004#0045 D 66 TPSC687*004#0040 E 10 TPSC108*004#0040 E	00	4	85	2.7	125	4	8	200	1	0.652	0.587	0.261
TPSB107*004#0500 B 10 TPSW107*004#0100 W 10 TPSB157*004#0250 B 15 TPSC157*004#0070 C 15 TPSC157*004#0080 C 15 TPSC157*004#0080 C 15 TPSC27*004#0080 D 22 TPSC27*004#0080 D 22 TPSC27*004#0080 Y 22 TPSC27*004#0075 Y 22 TPSC37*004#0075 Y 22 TPSC37*004#0075 D 33 TPSC37*004#0075 D 33 TPSC37*004#00045 D 33 TPSC37*004#00045 D 33 TPSC37*004#0000 F 33 TPSC47*004#0045 D 43 TPSC47*004#0045 D 43 TPSC47*004#0045 D 63 TPSC47*004#0045 D 63 TPSC47*004#0045 D 63 TPSC47*004#0040 E 63 TPSC687*004#0040 E 10 TPSC108*004#0040 E 10 TPSC108*004#0040 E 10 TPSC108*004#0040 E 10 TPSC108*004#0040 V 10 TPSC108*004#0040 V 10 TPSC108*004#0050 V 10 TPSC158*004#0050 E 15 TPSC158*004#0050 E 15 TPSC158*004#0050 E 15	00	4	85	2.7	125	4	8	250	1	0.583	0.525	0.233
TPSW107*004#0100 W 10 TPSB157*004#0250 B 15 TPSC157*004#0070 C 15 TPSC157*004#0080 C 15 TPSD227*004#0040 D 22 TPSD227*004#0050 D 22 TPSD227*004#0040 Y 22 TPSY227*004#0040 Y 22 TPSY227*004#0040 Y 22 TPSY227*004#0040 Y 22 TPSY227*004#0075 Y 22 TPSC337*004#0100 C 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD477*004#0045 D 43 TPSD477*004#0045 D 43 TPSE477*004#0045 E 43 TPSD687*004#0045 D 63 TPSD687*004#0045 D 63 TPSD687*004#0040 E 63 TPSD687*004#0040 E 63 <td< td=""><td>00</td><td>4</td><td>85</td><td>2.7</td><td>125</td><td>4</td><td>8</td><td>350</td><td>1</td><td>0.493</td><td>0.444</td><td>0.197</td></td<>	00	4	85	2.7	125	4	8	350	1	0.493	0.444	0.197
TPSB157*004#0250 B 15 TPSC157*004#0070 C 15 TPSC157*004#0080 C 15 TPSD227*004#0040 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 D 22 TPSD227*004#0050 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0050 Y 22 TPSD337*004#0050 D 33 TPSD337*004#0100 C 33 TPSD337*004#0100 D 33 TPSA337*004#0100 X 33 TPSD477*004#0045 D 47 TPSD477*004#0045 E 47 TPSE477*004#0045 E 47 TPSD687*004#0045 D 68 TPSD687*004#0045 D 68 TPSD687*004#0060 D 68 TPSD687*004#0060 D 68 <td< td=""><td>00</td><td>4</td><td>85</td><td>2.7</td><td>125</td><td>4</td><td>8</td><td>500</td><td>1</td><td>0.412</td><td>0.371</td><td>0.165</td></td<>	00	4	85	2.7	125	4	8	500	1	0.412	0.371	0.165
TPSC157*004#0070 C 15 TPSC157*004#0080 C 15 TPSD227*004#0040 D 25 TPSD227*004#0050 D 25 TPSD227*004#0100 D 25 TPSD227*004#0100 D 25 TPSC227*004#0040 Y 25 TPSC227*004#0050 Y 25 TPSC227*004#0075 Y 25 TPSC337*004#0075 D 35 TPSD337*004#0075 D 35 TPSD337*004#0045 D 35 TPSD337*004#0045 D 35 TPSD337*004#0040 D 35 TPSD337*004#0040 D 35 TPSD337*004#0100 D 35 TPSD337*004#0100 D 45 TPSC477*004#0100 D 47 TPSC477*004#0100 D 47 TPSC477*004#0100 D 47 TPSC477*004#0100 D 46 TPSC477*004#0100 D 66 TPSC687*004#0045 D 66 TPSC687*004#0040 D 75 TPSC108*004#0040 D 75 TPSC108*004#0040 D 75 TPSC108*004#0050 V 10 TPSC158*004#0050 D 15 TPSC158*004#0050 D 15 TPSC158*004#0050 D 15 TPSC158*004#0050 D 15	00	4	85	2.7	125	4	6	100	1	0.949	0.854	0.379
TPSC157*004#0070 C 11 TPSC157*004#0080 C 11 TPSD227*004#0040 D 22 TPSD227*004#0050 D 22 TPSD227*004#0100 D 22 TPSY227*004#0040 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0075 Y 22 TPSY227*004#0075 Y 22 TPSY337*004#0035 D 33 TPSD337*004#0045 D 43 TPSD347*004#0045 D 44 TPSE477*004#0100 D 47 TPSE477*004#0100 D 47 TPSE477*004#0100 D 47 TPSE477*004#0100 D 68 TPSD687*004#0045 D 68 TPSD687*004#0040 D 68 TPSD687*004#0040 D 68 TPSD687*004#0040 D 68 TPSD687*004#0040 D 68 TPSE687*004#0040 D 68 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 C 10 TPSE108*004#0040 C 10 TPSE108*004#0040 C 10 TPSE108*004#0040 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 V 10 TPSE158*004#0050 E 155 TPSE158*004#0050 E 155	50	4	85	2.7	125	6	10	250	1	0.583	0.525	0.233
TPSC157*004#0080 C 19 TPSD227*004#0040 D 22 TPSD227*004#0040 D 22 TPSD227*004#0100 D 22 TPSD227*004#0100 D 22 TPSY227*004#0040 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0075 Y 22 TPSY227*004#0075 Y 22 TPSY337*004#0075 D 33 TPSD337*004#0045 D 33 TPSD337*004#0045 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD37*004#0100 D 43 TPSE477*004#0100 D 43 TPSE477*004#0100 D 43 TPSE477*004#0100 D 43 TPSE477*004#0100 D 63 TPSD687*004#0045 E 43 TPSE477*004#0100 E 63 TPSD687*004#0040 E 63 TPSD687*004#0040 D 63 TPSD687*004#0040 E 63 TPSE687*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSY108*004#0040 V 10 TPSY108*004#0050 V 10 TPSY108*004#0050 V 10 TPSY108*004#0050 E 15 TPSE158*004#0050 E 15	50	4	85	2.7	125	6	6	70	1	1.254	1.128	0.501
TPSD227*004#0040 D 22 TPSD227*004#0100 D 22 TPSD227*004#0100 D 22 TPSD227*004#0100 D 22 TPSY227*004#0040 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0075 Y 22 TPSC337*004#0075 D 33 TPSD337*004#0035 D 33 TPSD337*004#0045 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 42 TPSC47*004#0035 E 42 TPSC47*004#0035 E 43 TPSD477*004#0100 D 43 TPSD477*004#0100 D 43 TPSE477*004#0045 D 66 TPSE477*004#0040 E 67 TPSD687*004#0040 E 66 TPSD687*004#0040 D 66 TPSE687*004#0040 E 10 TPSE108*004#0040 E 10 TPSE158*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0050 E 15	50	4	85	2.7	125	6	6	80	1	1.173	1.055	0.469
TPSD227*004#0050 D 22 TPSD227*004#0100 D 22 TPSY227*004#0040 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0075 Y 22 TPSC337*004#0100 C 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPST337*004#0200 F 33 TPST37*004#0100 X 33 TPSD477*004#0100 D 43 TPSE477*004#0045 D 43 TPSE477*004#0045 E 43 TPSE477*004#0045 E 43 TPSE687*004#0045 D 66 TPSD687*004#0045 D 66 TPSD687*004#0040 E 66 TPSE687*004#0060 D 66 TPSE687*004#0040 E 66 TPSE108*004#0040 E 10 TPSV108*004#0040 E 10	20	4	85	2.7	125	8.8	8	40	1	1.936	1.743	0.775
TPSD227*004#0100 D 22 TPSY227*004#0040 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0075 Y 22 TPSC337*004#0100 C 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD477*004#0045 D 43 TPSD477*004#0045 D 43 TPSD477*004#0045 E 43 TPSE477*004#0045 E 43 TPSE477*004#0045 D 63 TPSE477*004#0045 D 63 TPSE687*004#0045 D 63 TPSD687*004#0045 D 63 TPSD687*004#0040 E 63 TPSE687*004#0040 E 63 TPSE687*004#0040 E 63 TPSE108*004#0040 E 10 TPSV108*004#0040 E 10 TPSV108*004#0040 V 10 <td< td=""><td></td><td>4</td><td>85</td><td>2.7</td><td>125</td><td>8.8</td><td>8</td><td>50</td><td>1</td><td>1.732</td><td>1.559</td><td>0.693</td></td<>		4	85	2.7	125	8.8	8	50	1	1.732	1.559	0.693
TPSY227*004#0040 Y 22 TPSY227*004#0050 Y 22 TPSY227*004#0075 Y 22 TPSY227*004#0075 Y 22 TPSC337*004#0100 C 33 TPSD337*004#0035 D 33 TPSD337*004#0045 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD37*004#0100 D 43 TPSD477*004#0100 D 43 TPSD477*004#0100 D 43 TPSD477*004#0100 D 43 TPSD477*004#0100 D 43 TPSE477*004#0100 D 63 TPSD687*004#0045 E 43 TPSE477*004#0100 E 63 TPSD687*004#0040 D 63 TPSD687*004#0040 D 63 TPSD687*004#0040 E 63 TPSE687*004#0040 E 63 TPSE687*004#0040 E 63 TPSE687*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 TPSE108*004#0040 TPSE108*004#0040 TPSE108*004#0040 E 10 TPSU108*004#0040 E 10 TPSU108*004#0050 TPSU108*004#0050 V 10 TPSU108*004#0050 E 15 TPSE158*004#0050 E 15		4	85	2.7	125	8.8	8	100	1	1.225	1.102	0.490
TPSY227*004#0050 Y 22 TPSY227*004#0075 Y 22 TPSC337*004#0100 C 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPST337*004#0100 D 33 TPST37*004#0100 T 33 TPST37*004#0100 D 43 TPSD477*004#0045 D 43 TPSD477*004#0045 D 43 TPSD477*004#0100 D 43 TPSD477*004#0100 D 63 TPSE477*004#0100 D 63 TPSE477*004#0045 E 43 TPSD687*004#0100 E 63 TPSE687*004#0100 D 63 TPSD687*004#0100 D 63 TPSD687*004#0100 D 63 TPSD687*004#0100 D 63 TPSD687*004#0100 D 63 TPSE687*004#0100 D 63 TPSE687*004#0100 E 63 TPSE687*004#0100 E 63 TPSE687*004#0100 E 63 TPSE687*004#0060 E 10 TPSE108*004#0060 E 10 TPSU108*004#0060 E 10 TPSU108*004#0050 V 10 TPSU108*004#0050 V 10 TPSU108*004#0050 E 15 TPSE158*004#0050 E 15		4		2.7				40	11)			
TPSY227*004#0075 Y 22 TPSC337*004#0100 C 33 TPSD337*004#0100 D 33 TPST337*004#0100 X 33 TPSD477*004#0100 D 47 TPSD477*004#0100 D 47 TPSD477*004#0100 D 47 TPSD477*004#0100 D 47 TPSD477*004#0100 E 47 TPSD687*004#0100 E 47 TPSD687*004#0100 D 66 TPSD687*004#0100 D 66 TPSD687*004#0100 D 66 TPSD687*004#0100 D 66 TPSE687*004#0100 E 66 TPSE687*004#0100 E 66 TPSE687*004#0100 E 66 TPSE687*004#0040 E 66 TPSE687*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSU108*004#0040 E 10 TPSU108*004#0050 V 10 TPSU108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0050 E 15			85		125	8.8	8		11)	1.768	1.591	0.707
TPSC337*004#0100 C 3: TPSD337*004#0035 D 3: TPSD337*004#0045 D 3: TPSD337*004#0100 D 3: TPSD337*004#0100 D 3: TPSD337*004#0100 D 3: TPSD477*004#0100 D 4: TPSD477*004#0100 D 4: TPSD477*004#0100 D 4: TPSD477*004#0100 D 4: TPSE477*004#0045 E 4: TPSE477*004#0045 E 4: TPSD687*004#0045 D 6: TPSD687*004#0045 D 6: TPSD687*004#0040 D 6: TPSD687*004#0040 D 6: TPSE687*004#0040 E 6: TPSE687*004#0040 E 6: TPSE687*004#0040 E 6: TPSE687*004#0040 E 10: TPSE108*004#0040 E 10: TPSE108*004#0040 E 10: TPSE108*004#0040 E 10: TPSU108*004#0040 E 10: TPSU108*004#0050 V 10: TPSU108*004#0050 V 10: TPSE158*004#0050 E 15: TPSE158*004#0050 E 15:		4	85	2.7	125	8.8	8	50		1.581	1.423	0.632
TPSD337*004#0035 D 33 TPSD337*004#0100 D 33 TPSD337*004#0100 D 33 TPSF337*004#0200 F 33 TPSX337*004#0100 X 33 TPSD477*004#0100 D 43 TPSD477*004#0100 D 43 TPSE477*004#0045 E 43 TPSE477*004#0045 E 43 TPSE477*004#0045 D 66 TPSD687*004#0045 D 66 TPSD687*004#0040 E 66 TPSD687*004#0040 E 66 TPSE687*004#0040 E 66 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSV108*004#0040 E 10 TPSV108*004#0040 V 10 TPSV108*004#0040 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 V 10 <td< td=""><td></td><td>4</td><td>85</td><td>2.7</td><td>125</td><td>8.8</td><td>8</td><td>75</td><td>11)</td><td>1.291</td><td>1.162</td><td>0.516</td></td<>		4	85	2.7	125	8.8	8	75	11)	1.291	1.162	0.516
TPSD337*004#0045 D 33 TPSD337*004#0100 D 33 TPSF337*0004#0200 F 33 TPSX337*004#0100 X 33 TPSD477*004#0045 D 47 TPSD477*004#0045 E 47 TPSE477*004#0045 E 47 TPSE477*004#0045 E 47 TPSD687*004#0040 E 47 TPSD687*004#0040 D 68 TPSD687*004#0060 D 68 TPSE687*004#0060 E 68 TPSE687*004#0060 E 68 TPSE687*004#0060 E 68 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSV108*004#0040 E 10 TPSV108*004#0040 V 10 TPSV108*004#0040 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 V 10 <t< td=""><td></td><td>4</td><td>85</td><td>2.7</td><td>125</td><td>13.2</td><td>8</td><td>100</td><td>1</td><td>1.049</td><td>0.944</td><td>0.420</td></t<>		4	85	2.7	125	13.2	8	100	1	1.049	0.944	0.420
TPSD337*004#0100 D 33 TPSF337*004#0100 F 33 TPSF337*004#0100 X 33 TPSD477*004#0100 D 43 TPSD477*004#0100 D 43 TPSD477*004#0100 D 43 TPSE477*004#0100 E 43 TPSE477*004#0100 E 43 TPSE477*004#0100 E 43 TPSE477*004#0100 D 63 TPSD687*004#0040 D 63 TPSD687*004#0060 D 63 TPSD687*004#0060 E 63 TPSE687*004#0060 E 63 TPSE687*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSU108*004#0040 D 10 TPSU108*004#0050 D 10 TPSU108*004#0050 D 10 TPSE158*004#0050 D 15 TPSE158*004#0050 D 15	30	4	85	2.7	125	13.2	8	35	1	2.070	1.863	0.828
TPSF337*004#0200 F 33 TPSX337*004#0100 X 33 TPSD477*004#0045 D 47 TPSD477*004#0100 D 47 TPSD477*004#0100 D 47 TPSE477*004#0045 E 47 TPSE477*004#0045 E 47 TPSE477*004#0100 E 47 TPSE477*004#0100 D 68 TPSE687*004#0060 D 68 TPSD687*004#0100 D 68 TPSE687*004#0060 E 68 TPSE687*004#0100 E 68 TPSE687*004#0060 E 10 TPSE687*004#0060 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSV108*004#0040 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 E 15 TPSE158*004#0050 E 15 TPSE158*004#0050 E 15	30	4	85	2.7	125	13.2	8	45	1	1.826	1.643	0.730
TPSX337*004#0100 X TPSD477*004#0045 D 4; TPSD477*004#0100 D 4; TPSD477*004#0100 D 4; TPSE477*004#035 E 4; TPSE477*004#0100 E 4; TPSE477*004#0100 E 4; TPSE687*004#0100 D 6; TPSD687*004#0100 D 6; TPSD687*004#0100 D 6; TPSE687*004#0100 D 6; TPSE687*004#0040 E 6; TPSE687*004#0040 E 10; TPSE108*004#0040 E 10; TPSE108*004#0040 E 10; TPSY108*004#0040 E 10; TPSV108*004#0040 V 10; TPSV108*004#0040 V 10; TPSV108*004#0050 V 10; TPSU108*004#0050 E 15; TPSE158*004#0050 E 15; TPSE158*004#0050 E 15;	30	4	85	2.7	125	13.2	8	100	11	1.225	1.102	0.490
TPSD477*004#0045 D 4: TPSD477*004#0100 D 4: TPSE477*004#0100 D 4: TPSE477*004#0035 E 4: TPSE477*004#0045 E 4: TPSE477*004#0100 E 4: TPSD687*004#0045 D 6: TPSD687*004#0040 D 6: TPSD687*004#0040 E 6: TPSE687*004#0040 E 6: TPSE687*004#0040 E 6: TPSE687*004#0040 E 10: TPSE108*004#0040 E 10: TPSE108*004#0040 E 10: TPSE108*004#0040 E 10: TPSU108*004#0040 E 10: TPSV108*004#0040 U 10: TPSV108*004#0040 V 10: TPSV108*004#0050 V 10: TPSU108*004#0050 E 15: TPSE158*004#0050 E 15: TPSE158*004#0050 E 15:	30	4	85	2.7	125	13.2	10	200	1	0.707	0.636	0.283
TPSD477*004#0100 D 4: TPSE477*004#0035 E 4: TPSE477*004#0045 E 4: TPSE477*004#0100 E 4: TPSD687*004#0045 D 6: TPSD687*004#0045 D 6: TPSD687*004#0060 D 6: TPSD687*004#0060 D 6: TPSE687*004#0040 E 6: TPSE687*004#0040 E 6: TPSE687*004#0040 E 6: TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSU108*004#0040 E 10 TPSV108*004#0040 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 E 15 TPSE158*004#0050 E 15 TPSE158*004#0050 E 15	30	4	85	2.7	125	13.2	8	100	1 ¹⁾	1.000	0.900	0.400
TPSE477*004#0035 E 4: TPSE477*004#0100 E 4: TPSE477*004#0100 E 4: TPSE477*004#0100 E 4: TPSD687*004#0045 D 68 TPSD687*004#0060 D 68 TPSD687*004#0060 E 68 TPSE687*004#0060 E 68 TPSE687*004#0100 E 68 TPSE687*004#0100 E 68 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSV108*004#0040 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 E 15 TPSE158*004#0050 E 15 TPSE158*004#0050 E 15	-70	4	85	2.7	125	18.8	12	45	1	1.826	1.643	0.730
TPSE477*004#0045 E 4: TPSE477*004#0100 E 4: TPSD687*004#0045 D 66 TPSD687*004#0060 D 66 TPSD687*004#0060 D 66 TPSE687*004#0060 E 66 TPSE687*004#0060 E 66 TPSE687*004#0060 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSU108*004#0050 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 E 15 TPSU108*004#0050 E 15 TPSE158*004#0050 E 15	-70	4	85	2.7	125	18.8	12	100	1	1.225	1.102	0.490
TPSE477*004#0045 E 4: TPSE477*004#0100 E 4: TPSD687*004#0045 D 66 TPSD687*004#0060 D 66 TPSD687*004#0100 E 66 TPSE687*004#0100 E 66 TPSE687*004#0060 E 66 TPSE687*004#0060 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0050 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 E 15 TPSU108*004#0050 E 15 TPSU108*004#0050 E 15	-70	4	85	2.7	125	18.8	10	35	1 ¹⁾	2.171	1.954	0.868
TPSE477*004#0100 E 4: TPSD687*004#0045 D 66 TPSD687*004#0060 D 66 TPSD687*004#0100 D 66 TPSE687*004#0040 E 66 TPSE687*004#0060 E 66 TPSE687*004#0100 E 66 TPSE687*004#0060 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSV108*004#0050 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 E 15 TPSU108*004#0050 E 15 TPSU108*004#0050 E 15	-70	4	85	2.7	125	18.8	10	45	1 1)	1.915	1.723	0.766
TPSD687*004#0045 D 68 TPSD687*004#0100 D 68 TPSD687*004#0100 D 68 TPSE687*004#0040 E 68 TPSE687*004#0100 E 68 TPSE687*004#0100 E 79 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSU108*004#0050 V 10 TPSU108*004#0050 V 10 TPSU108*004#0050 V 10 TPSU108*004#0050 E 15 TPSE158*004#0050 E 15 TPSE158*004#0050 E 15	-70	4	85	2.7	125	18.8	10	100	1 1)	1.285	1.156	0.514
TPSD687*004#0060 D 68 TPSD687*004#0100 D 68 TPSE687*004#0040 E 68 TPSE687*004#0060 E 68 TPSE687*004#0100 E 68 TPSE687*004#0040 E 10 TPSE108*004#0040 E 10 TPSE108*004#0040 E 10 TPSV108*004#0060 E 10 TPSV108*004#0035 V 10 TPSV108*004#0035 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0075 E 15	80	4	85	2.7	125	27.2	14	45	1	1.826	1.643	0.730
TPSD687*004#0100 D 68 TPSE687*004#0040 E 68 TPSE687*004#0060 E 68 TPSE687*004#0100 E 68 TPSE108*004#0100 E 10 TPSE108*004#0060 E 10 TPSV108*004#0060 E 10 TPSV108*004#0035 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 E 15 TPSE158*004#0050 E 15	80	4	85	2.7	125	27.2	14	60	1	1.581	1.423	0.632
TPSE687*004#0040 E 68 TPSE687*004#0060 E 68 TPSE687*004#0100 E 68 TPSE108*004#0040 E 10 TPSE108*004#0060 E 10 TPSV108*004#0025 V 10 TPSV108*004#0035 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 E 15 TPSE158*004#0050 E 15 TPSE158*004#0075 E 15	80	4	85	2.7	125	27.2	14	100	1	1.225	1.102	0.490
TPSE687*004#0060 E 68 TPSE687*004#0100 E 68 TPSE108*004#0040 E 10 TPSE108*004#0060 E 10 TPSV108*004#0025 V 10 TPSV108*004#0035 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSV108*004#0050 E 15 TPSE158*004#0050 E 15	80	4	85	2.7	125	27.2	10	40	11)	2.031	1.828	0.812
TPSE687*004#0100 E 68 TPSE108*004#0040 E 10 TPSE108*004#0060 E 10 TPSV108*004#0025 V 10 TPSV108*004#0035 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0075 E 15	80 80	4	85	2.7	125	27.2	10	60	11)	1.658	1.492	0.663
TPSE108*004#0040 E 10 TPSE108*004#0060 E 10 TPSV108*004#0025 V 10 TPSV108*004#0035 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0075 E 15	80	4	85	2.7	125	27.2	10	100	11)	1.285	1.156	0.514
TPSE108*004#0060 E 10 TPSV108*004#0025 V 10 TPSV108*004#0035 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0075 E 15		4	85	2.7	125	40	14	40	11)	2.031	1.828	
TPSV108*004#0025 V 10 TPSV108*004#0035 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0075 E 15		4				40			11)			0.812
TPSV108*004#0035 V 10 TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0075 E 15			85	2.7	125		14	60		1.658	1.492	0.663
TPSV108*004#0040 V 10 TPSV108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0075 E 15		4	85	2.7	125	40	16	25	11)	3.162	2.846	1.265
TPSV108*004#0050 V 10 TPSE158*004#0050 E 15 TPSE158*004#0075 E 15		4	85	2.7	125	40	16	35	11)	2.673	2.405	1.069
TPSE158*004#0050 E 15 TPSE158*004#0075 E 15	000	4	85	2.7	125	40	16	40	11)	2.500	2.250	1.000
TPSE158*004#0075 E 15	000	4	85	2.7	125	40	16	50	11)	2.236	2.012	0.894
	500	4	85	2.7	125	60	30	50	1 ¹⁾	1.817	1.635	0.727
TDC//1E0M00/400E0 1/ 15	500	4	85	2.7	125	60	30	75	11)	1.483	1.335	0.593
TPSV158 <mark>M</mark> 004#0050 V 15	500	4	85	2.7	125	60	30	50	1 ¹⁾	2.236	2.012	0.894
	500	4	85	2.7	125	60	30	75	11)	1.826	1.643	0.730
			, 30		It @ 85°C							0.700
TPSR225*006#7000 R 2	2.2	6.3	85	4	125	0.5	6	7000	1	0.089	0.080	0.035
	3.3	6.3	85	4	125	0.5	6	2100	1	0.189	0.170	0.076
	1.7	6.3	85	4	125	0.5	6	4000	1	0.127	0.175	0.070

Low ESR



AVX	Case	Capacitance	Rated	Rated	Category	_ Category	DCL	DF	ESR		100kH	z RMS Cur	rent (A)
Part No.	Size	(μF)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μΑ) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
TPSA685*006#1800	Α	6.8	6.3	85	4	125	0.5	6	1800	1	0.204	0.184	0.082
TPSA106*006#1500	A	10	6.3	85	4	125	0.6	6	1500		0.224	0.201	0.089
TPSB106*006#1500	В	10	6.3	85	4	125	0.6	6	1500	1	0.238	0.214	0.095
TPSR106*006#1000 TPSR106*006#1500	R	10	6.3	85 85	4	125 125	0.6	8	1000	1	0.235	0.211	0.094
TPSR106*006#3000	R	10	6.3	85	4	125	0.6	8	3000	1	0.135	0.172	0.077
TPST106*006#1000	T	10	6.3	85	4	125	0.6	6	1000	1	0.183	0.255	0.004
TPSA156*006#0700	À	15	6.3	85	4	125	0.9	6	700	1	0.327	0.295	0.131
TPSA156*006#1500	Α	15	6.3	85	4	125	0.9	6	1500	1	0.224	0.201	0.089
TPSA226*006#0500	Α	22	6.3	85	4	125	1.4	6	500	11	0.387	0.349	0.155
TPSA226*006#0900	A	22	6.3	85	4	125	1.4	6	900	1	0.289	0.260	0.115
TPSB226*006#0375	B	22 22	6.3	85	4	125 125	1.4	6	375 600	1	0.476	0.428	0.190
TPSB226*006#0600 TPSC226*006#0500	C	22	6.3 6.3	85 85	4	125	1.4	6	500	1	0.376	0.339	0.151
TPSS226*006#0900	S	22	6.3	85	4	125	1.3	10	900	1	0.269	0.242	0.107
TPSA336*006#0600	A	33	6.3	85	4	125	2.1	8	600	1	0.354	0.318	0.141
TPSB336*006#0250	В	33	6.3	85	4	125	2.1	6	250	1	0.583	0.525	0.233
TPSB336*006#0350	В	33	6.3	85	4	125	2.1	6	350	1	0.493	0.444	0.197
TPSB336*006#0450	В	33	6.3	85	4	125	2.1	6	450		0.435	0.391	0.174
TPSB336*006#0600	B	33	6.3	85 85	4	125 125	2.1	6 10	600	1	0.376	0.339	0.151
TPST336*006#0800 TPSA476*006#0800	A	33 47	6.3	85	4	125	2.1	10	800 800	1	0.316	0.285	0.126
TPSB476*006#0250	В	47	6.3	85	4	125	3	6	250	1	0.583	0.525	0.122
TPSB476*006#0350	В	47	6.3	85	4	125	3	6	350	1	0.493	0.444	0.197
TPSB476*006#0500	В	47	6.3	85	4	125	3	6	500	1	0.412	0.371	0.165
TPSC476*006#0300	С	47	6.3	85	4	125	3	6	300	1	0.606	0.545	0.242
TPST476*006#1200	T	47	6.3	85	4	125	2.8	10	1200		0.258	0.232	0.103
TPSB686*006#0250	В	68	6.3	85	4	125	4	8	250	1	0.583	0.525	0.233
TPSB686*006#0350 TPSB686*006#0500	B	68 68	6.3 6.3	85 85	4	125 125	4	8	350 500	<u>1</u> 1	0.493	0.444	0.197
TPSC686*006#0150	C	68	6.3	85	4	125	4.3	6	150	1	0.412	0.371	0.103
TPSC686*006#0200	C	68	6.3	85	4	125	4.3	6	200	1	0.742	0.667	0.297
TPSW686*006#0110	W	68	6.3	85	4	125	4.3	6	110	1	0.905	0.814	0.362
TPSW686*006#0125	W	68	6.3	85	4	125	4.3	6	125	1	0.849	0.764	0.339
TPSW686*006#0250	W	68	6.3	85	4	125	4.3	6	250		0.600	0.540	0.240
TPSB107*006#0250	B	100	6.3	85	4	125	6.3	10	250	1	0.583	0.525	0.233
TPSB107*006#0400 TPSC107*006#0075	C	100	6.3 6.3	85 85	4	125 125	6.3 6.3	10 6	400 75	1	0.461 1.211	0.415 1.090	0.184
TPSC107*006#0150	C	100	6.3	85	4	125	6.3	6	150	1	0.856	0.771	0.343
TPSD107*006#0300	D	100	6.3	85	4	125	6.3	6	300	1	0.707	0.636	0.283
TPSW107*006#0100	W	100	6.3	85	4	125	6.3	6	100	1	0.949	0.854	0.379
TPSW107*006#0150	W	100	6.3	85	4	125	6.3	6	150	1	0.775	0.697	0.310
TPSY107*006#0100	Y	100	6.3	85	4	125	6.3	6	100	11)	1.118	1.006	0.447
TPSC157*006#0050	C	150 150	6.3	85	4	125 125	9.5 9.5	6	50	1	1.483	1.335	0.593
TPSC157*006#0090 TPSC157*006#0150	C	150	6.3 6.3	85 85	4	125	9.5	6	90 150	1	1.106 0.856	0.995	0.442
TPSC157*006#0200	C	150	6.3	85	4	125	9.5	6	200	1	0.742	0.667	0.297
TPSC157*006#0250	Č	150	6.3	85	4	125	9.5	6	250	1	0.663	0.597	0.265
TPSD157*006#0050	D	150	6.3	85	4	125	9.5	6	50	1	1.732	1.559	0.693
TPSD157*006#0125	D	150	6.3	85	4	125	9.5	6	125	1	1.095	0.986	0.438
TPSY157*006#0040	Y	150	6.3	85	4	125	9.5	6	40	11)	1.768	1.591	0.707
TPSY157*006#0050 TPSC227*006#0070	C	150 220	6.3	85 85	4	125 125	9.5 13.9	6	50 70	1 ¹⁾	1.581 1.254	1.423 1.128	0.632
TPSC227*006#0070	C	220	6.3	85	4	125	13.9	8	100	1	1.049	0.944	0.501
TPSC227*006#0105	C	220	6.3	85	4	125	13.9	8	125	1	0.938	0.844	0.420
TPSC227*006#0250	C	220	6.3	85	4	125	13.9	8	250	1	0.663	0.597	0.265
TPSD227*006#0050	D	220	6.3	85	4	125	13.9	8	50	1	1.732	1.559	0.693
TPSD227*006#0100	D	220	6.3	85	4	125	13.9	8	100	1	1.225	1.102	0.490
TPSD227*006#0125	D	220	6.3	85	4	125	13.9	8	125	1	1.095	0.986	0.438
TPSE227*006#0100 TPSF227*006#0200	E F	220	6.3	85	4	125	13.9	8	100 200	1 ¹⁾	1.285	1.156	0.514
TPSF227*006#0200 TPSY227*006#0100	Y	220 220	6.3 6.3	85 85	4	125 125	13.2 13.9	10 8	100	11)	0.707 1.118	0.636 1.006	0.283
TPSY227*006#0150	Y	220	6.3	85	4	125	13.9	8	150	11)	0.913	0.822	0.365
TPSC337*006#0080	Ċ	330	6.3	85	4	125	19.8	12	80	1	1.173	1.055	0.469
TPSC337*006#0100	Č	330	6.3	85	4	125	19.8	12	100	1	1.049	0.944	0.420
TPSD337*006#0045	D	330	6.3	85	4	125	20.8	8	45	1	1.826	1.643	0.730
TPSD337*006#0050	D	330	6.3	85	4	125	20.8	8	50	1	1.732	1.559	0.693
TPSD337*006#0070	D	330	6.3	85	4	125	20.8	8	70	1	1.464	1.317	0.586
TPSD337*006#0100 TPSE337*006#0050	D E	330 330	6.3	85 85	4	125 125	20.8	8	100	1 1 ¹⁾	1.225	1.102	0.490
TPSE337*006#0050	E	330	6.3	85 85	4	125	20.8	8	50 100	11)	1.817	1.635 1.156	0.727
11 02001 000#0100			0.0	00	т	120	20.0		100		1.200	1.100	0.017

Low ESR



AVX	Case	Capacitance	Rated Voltage	Rated Temperature	Category	Category	DCL	DF %	ESR Max. (mΩ)	MSL	100kHz	z RMS Cur	rent (A)
Part No.	Size	΄ (μ F)	(V)	(°C)	Voltage (V)	Temperature (°C)	(μΑ) Max.	Max.	@ 100kHz	IVISL	25°C	85°C	125°C
TPSE337*006#0125	Е	330	6.3	85	4	125	20.8	8	125	1 ¹⁾	1.149	1.034	0.460
TPSE337*006#0150	Е	330	6.3	85	4	125	20.8	8	150	11)	1.049	0.944	0.420
TPSV337*006#0100	V	330	6.3	85	4	125	20.8	8	100	11)	1.581	1.423	0.632
TPSY337*006#0075	Y	330	6.3	85	4	125	20.8	12	75	11)	1.291	1.162	0.516
TPSY337*006#0100	Y	330	6.3	85	4	125	20.8	12 12	100	1 ¹⁾	1.118	1.006	0.447
TPSY337*006#0150 TPSD477*006#0045	D	330 470	6.3	85	4	125 125	20.8 28	12	150 45	1	0.913	0.822 1.643	0.365
TPSD477 006#0045	D	470	6.3 6.3	85 85	4	125	28	12	60	1	1.581	1.423	0.730
TPSD477*006#0100	D	470	6.3	85	4	125	28	12	100	1	1.225	1.102	0.490
TPSD477*006#0200	D	470	6.3	85	4	125	28	12	200	1	0.866	0.779	0.346
TPSE477*006#0045	Ē	470	6.3	85	4	125	28	10	45	1 1)	1.915	1.723	0.766
TPSE477*006#0050	Е	470	6.3	85	4	125	28	10	50	11)	1.817	1.635	0.727
TPSE477*006#0060	Е	470	6.3	85	4	125	28	10	60	11)	1.658	1.492	0.663
TPSE477*006#0100	E	470	6.3	85	4	125	28	10	100	11)	1.285	1.156	0.514
TPSE477*006#0200	Е	470	6.3	85	4	125	28	10	200	11)	0.908	0.817	0.363
TPSV477*006#0040	V	470	6.3	85	4	125	28	10	40	1 ¹⁾	2.500	2.250	1.000
TPSV477*006#0055	V	470	6.3	85	4	125	28	10	55	11)	2.132	1.919	0.853
TPSV477*006#0100	V	470 470	6.3	85	4	125	28	10 20	100	1 ¹⁾	1.581	1.423	0.632
TPSY477*006#0150 TPSE687*006#0045	Y	680	6,3	85	4	125	28.2		150	11)	0.913	0.822	0.365
TPSE687*006#0045	E	680	6.3 6.3	85 85	4	125 125	42.8 42.8	10	45 60	11)	1.915 1.658	1.723 1.492	0.766
TPSE687*006#0100	E	680	6.3	85	4	125	42.8	10	100	11)	1.285	1.492	0.514
TPSV687*006#0100	V	680	6.3	85	4	125	42.8	14	35	11)	2.673	2.405	1.069
TPSV687*006#0040	V	680	6.3	85	4	125	42.8	10	40	1 1)	2.500	2.250	1.000
TPSV687*006#0050	V	680	6.3	85	4	125	42.8	10	50	1 1)	2.236	2.012	0.894
TPSE108M006#0100	Ė	1000	6.3	85	4	125	60	20	100	1 1)	1.285	1.156	0.514
TPSV108M006#0040	V	1000	6.3	85	4	125	60	16	40	11)	2.500	2.250	1.000
TPSV108M006#0050	V	1000	6.3	85	4	125	60	16	50	11)	2.236	2.012	0.894
					10 Vo	t @ 85°C							
TPSR105*010#9000	R	11	10	85	7	125	0.5	4	9000	1	0.078	0.070	0.031
TPSA225*010#1800	A	2.2	10	85	7	125	0.5	6	1800		0.204	0.184	0.082
TPST335*010#1500	T	3.3	10	85	7	125	0.5	6	1500	1	0.231	0.208	0.092
TPSA475*010#1400	B	4.7	10	85 85	7	125 125	0.5	6	1400	1	0.231	0.208	0.093
TPSB475*010#1400 TPSR475*010#3000	R	4.7	10	85	7	125	0.5	6	3000	1	0.246	0.222	0.054
TPSR475*010#5000	R	4.7	10	85	7	125	0.5	6	5000	1	0.105	0.094	0.034
TPSA685*010#1800	A	6.8	10	85	7	125	0.7	6	1800	1	0.204	0.184	0.082
TPSB685*010#1300	В	6.8	10	85	7	125	0.7	6	1300	1	0.256	0.230	0.102
TPST685*010#1800	Т	6.8	10	85	7	125	0.7	6	1800	1	0.211	0.190	0.084
TPSA106*010#0900	Α	10	10	85	7	125	1	6	900	1	0.289	0.260	0.115
TPSA106*010#1800	Α	10	10	85	7	125	1	6	1800	1	0.204	0.184	0.082
TPSB106*010#1000	В	10	10	85	7	125	1	6	1000	1	0.292	0.262	0.117
TPSP106M010#2000	Р	10	10	85	7	125	1	8	2000		0.173	0.156	0.069
TPSS106*010#0900	S	10	10	85	7	125	1	8	900	1	0.269	0.242	0.107
TPST106*010#1000	T	10 10	10 10	85 85	7	125 125	1 1	6	1000	1	0.283	0.255	0.113
TPST106*010#2000 TPSA156*010#1000	A	15	10	85	7	125	1.5	6	1000	1	0.200	0.180	0.080
TPSB156*010#0450	В	15	10	85	7	125	1.5	6	450	1	0.435	0.240	0.174
TPSB156*010#0600	В	15	10	85	7	125	1.5	6	600	1	0.376	0.339	0.174
TPSC156*010#0700	C	15	10	85	7	125	1.5	6	700	1	0.396	0.357	0.159
TPST156*010#1200	T	15	10	85	7	125	1.5	8	1200	1	0.258	0.232	0.103
TPSA226*010#0900	Α	22	10	85	7	125	2.2	8	900	1	0.289	0.260	0.115
TPSB226*010#0400	В	22	10	85	7	125	2.2	6	400	1	0.461	0.415	0.184
TPSB226*010#0500	В	22	10	85	7	125	2.2	6	500	1	0.412	0.371	0.165
TPSB226*010#0700	В	22	10	85	7	125	2.2	6	700	11	0.348	0.314	0.139
TPSC226*010#0300	C	22	10	85	7	125	2.2	6	300	1	0.606	0.545	0.242
TPST226*010#0800	T	22	10	85	7	125	2.2	8	800		0.316	0.285	0.126
TPSA336*010#0700	A	33	10	85	7	125	3.3	8	700	1	0.327	0.295	0.131
TPSB336*010#0250 TPSB336*010#0425	B	33	10 10	85 85	7	125 125	3.3	6	250 425	1	0.583	0.525	0.233
TPSB336*010#0425	В	33	10	85	7	125	3.3	6	500	1	0.447	0.402	0.179
TPSB336*010#0650	В	33	10	85	7	125	3.3	6	650	1	0.412	0.371	0.165
TPSC336*010#0150	C	33	10	85	7	125	3.3	6	150	1	0.856	0.323	0.343
TPSC336*010#0375	C	33	10	85	7	125	3.3	6	375	1	0.542	0.487	0.217
TPSC336*010#0500	Č	33	10	85	7	125	3.3	6	500	1	0.469	0.422	0.188
TPSW336*010#0350	W	33	10	85	7	125	3.3	6	350	1	0.507	0.456	0.203
TPSB476*010#0250	В	47	10	85	7	125	4.7	8	250	1	0.583	0.525	0.233
TPSB476*010#0350	В	47	10	85	7	125	4.7	8	350	1	0.493	0.444	0.197
TPSB476*010#0500	В	47	10	85	7	125	4.7	8	500	1	0.412	0.371	0.165
TPSB476*010#0650	В	47	10	85	7	125	4.7	8	650	1	0.362	0.325	0.145
TPSC476*010#0200	С	47	10	85 85	7	125	4.7	6	200		0.742	0.667	0.297
TPSC476*010#0350	l C	47	10			125	4.7	6	350	1		0.505	

Low ESR



PSP-0478-0100-1000 D	AVX	Case	Capacitance	Rated	Rated	Category	Category	DCL	DF	ESR	140:	100kHz	RMS Cur	rent (A)
TRISLAPE (1910) 100											MSL	25°C	85°C	125°C
TESPART/01001020	PSD476*010#0100	D	47								1	1.225	1.102	0.490
IFFSMAPFCH019289 W 47 10 85 7 126 4.7 6 150 1 0.676 0.897 0.840						7	125		6		1			0.283
FROM														0.339
IPSPRESEQUINDINGS						7								0.310
PROCESSON 1908 C						7								0.240
PROCESSO 1997 10						,								0.151
PROCESSO 190,000 C 68														0.469
IPSCB86*010F0300 C 68						· ·								0.420
TRSDB66*01040100 D B 68 10 86 7 125 6.8 6 100 1 1.226 1.102 0 1 PSY666*01040100 V 88 10 86 7 125 6.8 6.8 6 100 1 1.000 0.000 D PSY666*01040100 V 88 10 86 7 125 6.8 6 100 1 1.000 0.000 D PSY666*01040100 V 88 10 86 7 125 6.8 6 100 1 0.0791 0.712 0 1 1.000 0.000 D PSY666*01040100 W 88 10 86 7 125 6.8 6 100 1 0.0791 0.712 0 1 1.000 0.000 D PSY666*01040100 W 88 10 86 7 125 6.8 6 100 1 0.0949 0.884 0 0 1 0.000 D PSY666*01040100 W 88 10 86 7 125 6.8 6 100 1 0.0715 0.095 0 1 0.000 D PSY666*01040100 W 88 10 86 7 125 6.8 6 100 1 0.0949 0.884 0 1 0.000 D PSY666*01040100 C 1 0.000 D PSY666*01040100 D D PSY666*0104000 D D D D D D D D D D D D D D D D D														0.297
PRSCREG**C10F0100 D 68						7						0.000		0.242
PSYSERO*CIDENTOOO Y 68						7			_					0.490
TESYMERGY 1.0						· ·								0.447
FIRSWIGEO**100**100**100**10**10**10**10**10**10						-								0.316
FRSWIGNO W						· ·								0.379
F8B107/W010W0100075														0.310
IPSCIDT/01040076						7								0.184
PRSC107*01040105						7					1			0.484
FRSC107*01040200						7					1			0.420
TRSC107*010#0050						7								0.343
TRSDID(7*01040065 D 100						7					_1			0.297
FFSDI07'010H0065		_			85	7	125						1.559	0.693
TRSDID7*01040080	PSD107*010#0065	D	100	10	85	7	125	10	6	65	1	1.519	1.367	0.608
IFSDIO/**OID#0150	PSD107*010#0080	D				7				80	1	1.369	1.232	0.548
IFSEID07*010#0150	PSD107*010#0100					7	125				1	1.225	1.102	0.490
IFSEID7*010#0125	PSD107*010#0125					7				125	1	1.095		0.438
IFSWI07*010#0150	PSD107*010#0150					<u> </u>	125		6			1.000	0.900	0.400
TFSKI07*010#0085						7								0.460
IFSKI07'010#0150						7								0.310
FFSK107*010#0200						,								0.434
TPSY107*010#0100														0.327
TFSY107*010#0150						· ·								0.283
IFSY1107*010#0200														0.447
IFSC157**010#0150						7								0.365
IFSD157*010#0050 D 150 10 85 7 125 15 8 50 1 1.732 1.559 0 IFSD157*010#0385 D 150 10 85 7 125 15 8 85 1 1.328 1.196 0 IFSD157*010#0100 D 150 10 85 7 125 15 8 85 1 1.328 1.196 0 IFSD157*010#0100 E 150 10 85 7 125 15 8 100 1 1.225 1.102 0 IFSF157*010#0100 F 150 10 85 7 125 15 8 100 1 1.225 1.102 0 IFSF157*010#0100 F 150 10 85 7 125 15 8 100 1 1.285 1.156 0 IFSF157*010#0100 X 150 10 85 7 125 15 6 100 1 1.100 0.900 0 IFSY157*010#0100 Y 150 10 85 7 125 15 6 100 1 1.118 1.006 0 IFSY157*010#0150 Y 150 10 85 7 125 15 6 100 1 1.118 1.006 0 IFSY157*010#0150 Y 150 10 85 7 125 15 6 100 1 0.913 0.822 0 IFSY157*010#0000 D 220 10 85 7 125 15 6 200 1 0.791 0.712 0 IFSD227*010#0000 D 220 10 85 7 125 22 8 40 1 1.936 1.743 0 IFSD227*010#0050 D 220 10 85 7 125 22 8 50 1 1.732 1.559 0 IFSD227*010#0050 D 220 10 85 7 125 22 8 50 1 1.732 1.559 0 IFSE227*010#0150 D 220 10 85 7 125 22 8 50 1 1.732 1.559 0 IFSE227*010#0150 D 220 10 85 7 125 22 8 50 1 1.300 0.900 0 IFSE227*010#0150 D 220 10 85 7 125 22 8 50 1 1.301 1.635 1.302 0 IFSE227*010#0150 E 220 10 85 7 125 22 8 50 1 1.300 0.900 0 IFSE227*010#0150 D 220 10 85 7 125 22 8 50 1 1.300 0.900 0 IFSE227*010#0150 E 220 10 85 7 125 22 8 50 1 1.300 0.900 0 IFSE227*010#0150 E 220 10 85 7 125 22 8 50 1 1.300 0.900 0 IFSE227*010#0150 E 220 10 85 7 125 22 8 50 1 1.300 0 IFSE227*010#0150 E 220 10 85 7 125 22 8 50 1 1.300 0 IFSE227*010#0150 E 220 10 85 7						7								0.316
TPSD157*010#0085 D 150 10 85 7 125 15 8 85 1 1.328 1.196 0 TPSD157*010#0100 D 150 10 85 7 125 15 8 100 1 1.225 1.102 0 TPSE157*010#0100 E 150 10 85 7 125 15 8 100 1 1.225 1.156 0 0 TPSE157*010#0200 F 150 10 85 7 125 15 8 100 1 0.707 0.636 0 TPSS157*010#0100 X 150 10 85 7 125 15 6 100 1 0.707 0.636 0 TPSS157*010#0100 Y 150 10 85 7 125 15 6 100 1 0.108 0.900 0 TPSY157*010#0100 Y 150 10 85 7 125 15 6 100 1 0.118 1.006 0 TPSY157*010#0100 Y 150 10 85 7 125 15 6 100 1 0.118 1.026 0 TPSY157*010#0020 Y 150 10 85 7 125 15 6 150 1 0.913 0.822 0 TPSY157*010#0040 D 220 10 85 7 125 15 6 200 1 0.791 0.712 0 TPSD227*010#0040 D 220 10 85 7 125 22 8 40 1 1.936 1.743 0 TPSD227*010#0050 D 220 10 85 7 125 22 8 50 1 1.732 1.559 0 TPSD227*010#0100 D 220 10 85 7 125 22 8 50 1 1.732 1.559 0 TPSD227*010#0100 D 220 10 85 7 125 22 8 50 1 1.000 0.900 0 TPSE227*010#0050 E 220 10 85 7 125 22 8 50 1 1.000 0.900 0 TPSE227*010#0050 E 220 10 85 7 125 22 8 50 1 1.118 1.026 1 TPSE227*010#0050 E 220 10 85 7 125 22 8 50 1 1.118 1.026 1 TPSE227*010#0050 E 220 10 85 7 125 22 8 50 1 1.118 1.026 1 TPSE227*010#0100 E 220 10 85 7 125 22 8 50 1 1.118 1.026 1 TPSE227*010#0100 E 220 10 85 7 125 22 8 50 1 1.118 1.026 1 TPSE227*010#0100 E 220 10 85 7 125 22 8 50 1 1.118 1.026 1 TPSE227*010#0100 E 220 10 85 7 125 22 8 150 1 1.034 1 1.034 1 1.034 1 1.034 1 1.034 1 1.034 1 1.034 1 1.034 1 1.034 1 1.034 1 1.034 1 1.03						,								0.343
TPSD157*010#0100						-								0.531
TPSE157*010#0100						· ·								0.490
TPSF157*010#0200														0.490
IFPSX157M010#0100						7								0.283
TPSY157*010#0100						7								0.400
TPSY157*010#0150						· ·								0.447
TPSY157*010#00200														0.365
TPSD227*010#0040						7								0.316
TPSD227*010#0050 D 220 10 85 7 125 22 8 50 1 1.732 1.559 0 TPSD227*010#0100 D 220 10 85 7 125 22 8 100 1 1.225 1.102 0 TPSD227*010#0150 D 220 10 85 7 125 22 8 150 1 1.000 0.900 0 TPSE227*010#0050 E 220 10 85 7 125 22 8 50 1 1.817 1.635 0 TPSE227*010#0060 E 220 10 85 7 125 22 8 60 1 1.658 1.492 0 TPSE227*010#0070 E 220 10 85 7 125 22 8 60 1 1.658 1.492 0 TPSE227*010#0100 E 220 10 85 7 125 22 8 70 1 1.285 1.382 0 TPSE227*010#0100 E 220 10 85 7 125 22 8 100 1 1.285 1.382 0 TPSE227*010#0100 E 220 10 85 7 125 22 8 100 1 1.285 1.382 0 TPSE227*010#0105 E 220 10 85 7 125 22 8 150 1 1.494 1.034 0 TPSE227*010#0150 E 220 10 85 7 125 22 8 150 1 1.049 0.944 0 TPSY227*010#0150 Y 220 10 85 7 125 22 8 150 1 0.913 0.822 0 TPSY227*010#0150 Y 220 10 85 7 125 22 10 100 1 1.118 1.066 0 TPSY227*010#0200 Y 220 10 85 7 125 22 10 100 1 0.791 0.712 0 TPSD337*010#0065 D 330 10 85 7 125 33 8 50 1 1.732 1.559 0 TPSD337*010#0065 D 330 10 85 7 125 33 8 50 1 1.732 1.559 0 TPSD337*010#0060 E 330 10 85 7 125 33 8 50 1 1.817 1.635 0 TPSD337*010#0060 E 330 10 85 7 125 33 8 50 1 1.817 1.635 0 TPSD337*010#0060 E 330 10 85 7 125 33 8 50 1 1.817 1.635 0 TPSD337*010#0060 E 330 10 85 7 125 33 8 50 1 1.817 1.635 0 TPSD337*010#0060 E 330 10 85 7 125 33 8 50 1 1.817 1.635 0 TPSD337*010#0060 E 330 10 85 7 125 33 8 50 1 1.817 1.635 0 TPSD337*010#0060 E 330 10 85 7 125 33 8 50 1 1.817 1.635 0 TPSD337*010#0060 E 330 10														0.775
TPSD227*010#0100	PSD227*010#0050					7								0.693
TPSE227*010#0060 E 220 10 85 7 125 22 8 60 1		D		10		7					1			0.490
TPSE227*010#0060 E 220 10 85 7 125 22 8 60 1	PSD227*010#0150	D	220	10	85	7	125	22	8	150	1	1.000	0.900	0.400
TPSE227*010#0070	PSE227*010#0050	Е	220	10	85	7		22	8	50	11)	1.817	1.635	0.727
TPSE227*010#0100 E 220 10 85 7 125 22 8 100 1 ¹⁰ 1.285 1.156 0 TPSE227*010#0125 E 220 10 85 7 125 22 8 125 1 ¹⁰ 1.149 1.034 0 TPSE227*010#0150 E 220 10 85 7 125 22 8 150 1 ¹⁰ 1.049 0.944 0 TPSY227*010#0100 Y 220 10 85 7 125 22 10 100 1 ¹⁰ 1.118 1.006 0 TPSY227*010#0150 Y 220 10 85 7 125 22 10 150 1 ¹⁰ 0.913 0.822 0 TPSY227*010#0200 Y 220 10 85 7 125 22 10 150 1 ¹⁰ 0.791 0.712 0 TPSY227*010#0200 Y 220 10 85 7 125 22 10 200 1 ¹⁰ 0.791 0.712 0 TPSD337*010#0050 D 330 10 85 7 125 33 8 50 1 1.732 1.559 0 TPSD337*010#000 D 330 10 85 7 125 33 8 150 1 1.225 1.102 0 TPSD337*010#0100 D 330 10 85 7 125 33 8 150 1 1.225 1.102 0 TPSE337*010#0150 D 330 10 85 7 125 33 8 150 1 1.000 0.900 0 TPSE337*010#0160 D 330 10 85 7 125 33 8 150 1 1.000 0.900 0 TPSE337*010#0040 E 330 10 85 7 125 33 8 50 1 1.000 0.900 0 TPSE337*010#0040 E 330 10 85 7 125 33 8 60 1 1.000 0.900 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 1 1.000 0.900 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 1 ¹⁰ 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 1 ¹⁰ 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 1 ¹⁰ 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 100 1 ¹⁰ 1.285 1.156 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 10 40 1 ¹⁰ 2.500 2.250 1 TPSV337*010#0060 V 330 10 85 7 125 33 10 40 1 ¹⁰ 2.500 2.250 1 TPSV337*010#0060 V 330 10 85 7 125 33 10 60 1 ¹⁰ 1.817 1.837 0 TPSV337*010#0060 V 330 10 85 7 125 33 10 10 10 1 ¹⁰ 1.581 1.423 0 TPSV337*010#0060 V 330 10 85 7 125 33 10 10 10 1 ¹⁰ 1.581 1.423 0 TPSV337*010#0060 V 330 10 85 7 125 33 10 10 10 1 ¹⁰ 1.581 1.423 0 TPSV337*010#0060 V 330 10 85 7 125 33 10 10 10 1 ¹⁰ 1.581 1.423 0 TPSV337*010#0060 V 330 10 85 7 125 33 10 10 10 1 ¹⁰ 1.581 1.423 0	PSE227*010#0060	E	220	10	85	7	125	22	8	60	11)	1.658	1.492	0.663
TPSE227*010#0125 E 220 10 85 7 125 22 8 125 10 1.149 1.034 0 TPSE227*010#0150 E 220 10 85 7 125 22 8 150 10 1.049 0.944 0 TPSY227*010#0150 Y 220 10 85 7 125 22 10 100 10 1.118 1.006 0 TPSY227*010#0150 Y 220 10 85 7 125 22 10 150 10 0.913 0.822 0 TPSY227*010#0200 Y 220 10 85 7 125 22 10 200 10 0.913 0.822 0 TPSD337*010#0050 D 330 10 85 7 125 33 8 50 1 1.732 1.559 0 TPSD337*010#0065 D 330 10 85	PSE227*010#0070	Е	220	10	85	7	125		8	70	11)	1.535	1.382	0.614
TPSE227*010#0150 E 220 10 85 7 125 22 8 150 10 1.049 0.944 0 TPSY227*010#0100 Y 220 10 85 7 125 22 10 100 10 10 0.913 0.822 0 TPSY227*010#0200 Y 220 10 85 7 125 22 10 150 10 0.913 0.822 0 TPSY227*010#0200 Y 220 10 85 7 125 22 10 200 10 0.913 0.822 0 TPSY237*010#0200 Y 220 10 85 7 125 22 10 200 10 0.913 0.822 0 TPSD337*010#0050 D 330 10 85 7 125 33 8 50 1 1.732 1.559 0 TPSD337*010#0065 D 330 10 85 7 125 33 8 65 1 1.519 1.367 0 TPSD337*010#0100 D 330 10 85 7 125 33 8 100 1 1.225 1.102 0 TPSD337*010#0150 D 330 10 85 7 125 33 8 150 1 1.000 0.900 0 TPSE337*010#040 E 330 10 85 7 125 33 8 40 10 1 2.031 1.828 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 10 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 10 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 10 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 10 10 10 1.225 1.156 0 TPSE337*010#0040 V 330 10 85 7 125 33 8 10 40 10 2.500 2.250 1 TPSE337*010#0040 V 330 10 85 7 125 33 10 40 10 1.285 1.156 0 TPSE337*010#0040 V 330 10 85 7 125 33 10 60 10 2.041 1.837 0 TPSE337*010#0060 V 330 10 85 7 125 33 10 60 10 2.041 1.837 0 TPSE337*010#0060 V 330 10 85 7 125 33 10 60 10 2.041 1.837 0 TPSE337*010#0060 V 330 10 85 7 125 33 10 10 100 10 1.581 1.423 0 TPSE337*010#0040 V 330 10 85 7 125 33 10 100 10 10 10 1.581 1.423 0	PSE227*010#0100		220							100		1.285	1.156	0.514
TPSY227*010#0100 Y 220 10 85 7 125 22 10 100 150 1 ¹⁰ 0.913 0.822 0 TPSY227*010#0150 Y 220 10 85 7 125 22 10 150 1 ¹⁰ 0.913 0.822 0 TPSY227*010#0200 Y 220 10 85 7 125 22 10 200 1 ¹⁰ 0.791 0.712 0 TPSD337*010#0050 D 330 10 85 7 125 33 8 50 1 1.732 1.559 0 TPSD337*010#0065 D 330 10 85 7 125 33 8 65 1 1.519 1.367 0 TPSD337*010#0100 D 330 10 85 7 125 33 8 100 1 1.225 1.102 0 TPSD337*010#0150 D 330 10 85 7 125 33 8 150 1 1.000 0.900 0 TPSE337*010#0150 D 330 10 85 7 125 33 8 150 1 1.000 0.900 0 TPSE337*010#0040 E 330 10 85 7 125 33 8 40 1 ¹⁰ 2.031 1.828 0 TPSE337*010#0050 E 330 10 85 7 125 33 8 50 1 ¹⁰ 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 1 ¹⁰ 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 1 ¹⁰ 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 100 1 ¹⁰ 1.285 1.156 0 TPSE337*010#0040 V 330 10 85 7 125 33 8 10 40 1 ¹⁰ 2.500 2.250 1 TPSV337*010#0040 V 330 10 85 7 125 33 10 40 1 ¹⁰ 2.500 2.250 1 TPSV337*010#0060 V 330 10 85 7 125 33 10 60 1 ¹⁰ 2.041 1.837 0 TPSV337*010#0060 V 330 10 85 7 125 33 10 10 10 1 ¹⁰ 1.581 1.423 0 TPSV337*010#0060 V 330 10 85 7 125 33 10 10 10 1 ¹⁰ 1.581 1.423 0 TPSV337*010#0060 V 330 10 85 7 125 33 10 100 1 ¹⁰ 1.581 1.423 0 TPSV337*010#0040 V 330 10 85 7 125 33 10 100 1 ¹⁰ 1.581 1.423 0								22						0.460
TPSY227*010#0150 Y 220 10 85 7 125 22 10 150 1° 0.913 0.822 0 TPSY227*010#0200 Y 220 10 85 7 125 22 10 200 1° 0.791 0.712 0 TPSD337*010#0050 D 330 10 85 7 125 33 8 50 1 1.732 1.559 0 TPSD337*010#0065 D 330 10 85 7 125 33 8 65 1 1.519 1.367 0 TPSD337*010#0100 D 330 10 85 7 125 33 8 100 1 1.225 1.100 0 TPSD337*010#0150 D 330 10 85 7 125 33 8 150 1 1.000 0 0 0 0 0 0 0 0 0 0														0.420
TPSY227*010#0200 Y 220 10 85 7 125 22 10 200 1° 0.791 0.712 0 TPSD337*010#0050 D 330 10 85 7 125 33 8 50 1 1.732 1.559 0 TPSD337*010#0065 D 330 10 85 7 125 33 8 65 1 1.519 1.367 0 TPSD337*010#0100 D 330 10 85 7 125 33 8 100 1 1.225 1.102 0 TPSD337*010#0150 D 330 10 85 7 125 33 8 150 1 1.200 0.900 0 0 0.900 0 0 1 1.225 1.102 0 1 1.225 1.102 0 0 1 1.225 1.102 0 1 1.225 1.102 0 1 1.2														0.447
TPSD337*010#0050 D 330 10 85 7 125 33 8 50 1 1.732 1.559 0 TPSD337*010#0065 D 330 10 85 7 125 33 8 65 1 1.519 1.367 0 TPSD337*010#0100 D 330 10 85 7 125 33 8 100 1 1.225 1.102 0 TPSD337*010#0040 E 330 10 85 7 125 33 8 150 1 1.000 0.900 0 TPSE337*010#0040 E 330 10 85 7 125 33 8 40 1° 2.031 1.828 0 TPSE337*010#0050 E 330 10 85 7 125 33 8 50 1° 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7														0.365
TPSD337*010#0065 D 330 10 85 7 125 33 8 65 1 1.519 1.367 0 TPSD337*010#0100 D 330 10 85 7 125 33 8 100 1 1.225 1.102 0 TPSD337*010#0150 D 330 10 85 7 125 33 8 150 1 1.000 0.900 0 TPSE337*010#0040 E 330 10 85 7 125 33 8 40 10 2.031 1.828 0 TPSE337*010#0050 E 330 10 85 7 125 33 8 50 10 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 10 1.658 1.492 0 TPSE337*010#0040 V 330 10 85 7														0.316
TPSD337*010#0100 D 330 10 85 7 125 33 8 100 1 1.225 1.102 0 TPSD337*010#0150 D 330 10 85 7 125 33 8 150 1 1.000 0.900 0 TPSE337*010#0040 E 330 10 85 7 125 33 8 40 1° 2.031 1.828 0 TPSE337*010#0050 E 330 10 85 7 125 33 8 50 1° 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 1° 1.817 1.635 0 TPSE337*010#0000 E 330 10 85 7 125 33 8 60 1° 1.658 1.492 0 TPSV337*010#0040 V 330 10 85 7														0.693
TPSD337*010#0150 D 330 10 85 7 125 33 8 150 1 1.000 0.900 0 TPSE337*010#0040 E 330 10 85 7 125 33 8 40 1° 2.031 1.828 0 TPSE337*010#0050 E 330 10 85 7 125 33 8 50 1° 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 1° 1.817 1.635 0 TPSE337*010#0000 E 330 10 85 7 125 33 8 100 1° 1.285 1.156 0 TPSV337*010#0040 V 330 10 85 7 125 33 10 40 1° 2.500 2.250 1 TPSV337*010#0060 V 330 10 85 7 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>33</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.608</td>								33						0.608
TPSE337*010#0040 E 330 10 85 7 125 33 8 40 10 2.031 1.828 0 TPSE337*010#0050 E 330 10 85 7 125 33 8 50 10 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 10 1.658 1.492 0 TPSE337*010#0100 E 330 10 85 7 125 33 8 100 10 1.285 1.156 0 TPSV337*010#0040 V 330 10 85 7 125 33 10 40 10 2.500 2.250 1 TPSV337*010#0060 V 330 10 85 7 125 33 10 60 10 2.041 1.837 TPSV337*010#0000 V 330 10 85 7 125<								33						0.490
TPSE337*010#0050 E 330 10 85 7 125 33 8 50 10 1.817 1.635 0 TPSE337*010#0060 E 330 10 85 7 125 33 8 60 10 1.658 1.492 0 TPSE337*010#0100 E 330 10 85 7 125 33 8 100 10 1.285 1.156 0 TPSV337*010#0040 V 330 10 85 7 125 33 10 40 10 2.500 2.250 1 TPSV337*010#0060 V 330 10 85 7 125 33 10 60 10 2.041 1.837 TPSV337*010#0100 V 330 10 85 7 125 33 10 100 10 1.581 1.423 0 TPSE477*010#0045 E 470 10 85 7 12														0.400
TPSE337*010#0060 E 330 10 85 7 125 33 8 60 10 1.658 1.492 0 TPSE337*010#0100 E 330 10 85 7 125 33 8 100 10 1.285 1.156 0 TPSV337*010#0040 V 330 10 85 7 125 33 10 40 10 2.500 2.250 1 TPSV337*010#0060 V 330 10 85 7 125 33 10 60 10 2.041 1.837 TPSV337*010#0100 V 330 10 85 7 125 33 10 100 10 1.581 1.423 0 TPSE477*010#0045 E 470 10 85 7 125 47 10 45 10 1.915 1.723 0														0.812
TPSE337*010#0100 E 330 10 85 7 125 33 8 100 1¹¹ 1.285 1.156 0 TPSV337*010#0040 V 330 10 85 7 125 33 10 40 1¹¹ 2.500 2.250 1 TPSV337*010#0060 V 330 10 85 7 125 33 10 60 1¹¹ 2.041 1.837 0 TPSV337*010#0100 V 330 10 85 7 125 33 10 100 1¹¹ 1.581 1.423 0 TPSE477*010#0045 E 470 10 85 7 125 47 10 45 1¹¹ 1.915 1.723 0								33						0.727
TPSV337*010#0040 V 330 10 85 7 125 33 10 40 1¹¹ 2.500 2.250 1 TPSV337*010#0060 V 330 10 85 7 125 33 10 60 1¹¹ 2.041 1.837 0 TPSV337*010#0100 V 330 10 85 7 125 33 10 100 1¹¹ 1.581 1.423 0 TPSE477*010#0045 E 470 10 85 7 125 47 10 45 1¹¹ 1.915 1.723 0														0.663
TPSV337*010#0060 V 330 10 85 7 125 33 10 60 1¹¹ 2.041 1.837 0 TPSV337*010#0100 V 330 10 85 7 125 33 10 100 1¹¹ 1.581 1.423 0 TPSE477*010#0045 E 470 10 85 7 125 47 10 45 1¹¹ 1.915 1.723 0														0.514
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$														1.000
TPSE477*010#0045 E 470 10 85 7 125 47 10 45 1 ¹⁾ 1.915 1.723 0														0.816
														0.632
TPSE477*010#0050 E 470 10 85 7 125 47 10 50 11 1.817 1.635 0														0.766 0.727

Low ESR



AVX	Case	Capacitance	Rated	Rated	Category	Category	DCL	DF %	ESR Max (m0)	Mei		RMS Cur	rent (A)
Part No.	Size	(μ F)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μΑ) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
TPSE477*010#0060	Е	470	10	85	7	125	47	10	60	1 ¹⁾	1.658	1.492	0.663
TPSE477*010#0100	E	470	10	85	7	125	47	10	100	11)	1.285	1.156	0.514
TPSE477*010#0200	Е	470	10	85	7	125	47	10	200	1 ¹⁾	0.908	0.817	0.363
PSV477*010#0040	V	470	10	85	7	125	47	10	40	11)	2.500	2.250	1.000
TPSV477*010#0060	V	470	10	85	7	125	47	10	60	11)	2.041	1.837	0.816
TPSV477*010#0100	V	470	10	85	7	125	47	10	100	1 ¹⁾	1.581	1.423	0.632
TPSA105*016#6200	Ι Λ	1	16	85		t @ 85°C	0.5	4	6200	-1	0.110	0.099	0.044
TPSA105 016#6200 TPSA225*016#1800	A	2.2	16	85	10	125	0.5	6	1800	1	0.110	0.099	0.044
TPSA225*016#3500	A	2.2	16	85	10	125	0.5	6	3500	1	0.204	0.132	0.059
TPST225*016#2000	T	2.2	16	85	10	125	0.5	6	2000	1	0.200	0.132	0.039
TPSA335*016#3500	A	3.3	16	85	10	125	0.5	6	3500	1	0.146	0.132	0.059
TPSB335*016#2500	В	3.3	16	85	10	125	0.5	6	2500	1	0.184	0.166	0.074
TPSA475*016#2000	A	4.7	16	85	10	125	0.8	6	2000	1	0.194	0.174	0.077
TPSB475*016#0800	В	4.7	16	85	10	125	0.8	6	800	1	0.326	0.293	0.130
ΓPSB475*016#1500	В	4.7	16	85	10	125	0.8	6	1500	1	0.238	0.214	0.095
ΓPSA685*016#1500	Α	6.8	16	85	10	125	1.1	6	1500	1	0.224	0.201	0.089
TPSB685*016#0600	В	6.8	16	85	10	125	1.1	6	600	1	0.376	0.339	0.151
TPSB685*016#1200	В	6.8	16	85	10	125	1.1	6	1200	1	0.266	0.240	0.106
TPSA106*016#1000	Α	10	16	85	10	125	1.6	6	1000	1	0.274	0.246	0.110
ΓPSB106*016#0500	В	10	16	85	10	125	1.6	6	500	1	0.412	0.371	0.165
FPSB106*016#0800	В	10	16	85	10	125	1.6	6	800	1	0.326	0.293	0.130
PSC106*016#0500	C	10	16	85	10	125	1.6	6	500	1	0.469	0.422	0.188
TPST106*016#0800	T	10	16	85	10	125	1.6	8	800	1	0.316	0.285	0.126
TPST106*016#1000	T	10	16	85	10	125	1.6	8	1000		0.283	0.255	0.113
FPSW106*016#0500	W	10	16	85	10	125	1.6	6	500	1	0.424	0.382	0.170
TPSW106*016#0600	W	10	16	85	10	125	1.6	6	600	1	0.387	0.349	0.155
TPSB156*016#0500	B	15 15	16 16	85	10	125	2.4	6	500 800	1	0.412	0.371	0.165
TPSB156*016#0800 TPSC156*016#0300	C	15	16	85 85	10	125 125	2.4	6	300	1	0.326	0.293	0.130
TPSC156*016#0700	C	15	16	85	10	125	2.4	6	700	1	0.396	0.343	0.242
TPSB226*016#0400	В	22	16	85	10	125	3.5	6	400	1	0.390	0.337	0.139
TPSB226*016#0600	В	22	16	85	10	125	3.5	6	600	1	0.401	0.339	0.151
TPSC226*016#0150	C	22	16	85	10	125	3.5	6	150	1	0.856	0.771	0.343
TPSC226*016#0250	C	22	16	85	10	125	3.5	6	250	1	0.663	0.597	0.265
TPSC226*016#0300	Č	22	16	85	10	125	3.5	6	300	1	0.606	0.545	0.242
TPSC226*016#0375	C	22	16	85	10	125	3.5	6	375	1	0.542	0.487	0.217
ΓPSD226*016#0700	D	22	16	85	10	125	3.5	6	700	1	0.463	0.417	0.185
PSW226*016#0500	W	22	16	85	10	125	3.5	6	500	1	0.424	0.382	0.170
TPSB336*016#0350	В	33	16	85	10	125	5.3	8	350	1	0.493	0.444	0.197
TPSB336*016#0500	В	33	16	85	10	125	5.3	8	500	1	0.412	0.371	0.165
TPSC336*016#0100	С	33	16	85	10	125	5.3	6	100	1	1.049	0.944	0.420
FPSC336*016#0150	С	33	16	85	10	125	5.3	6	150	1	0.856	0.771	0.343
FPSC336*016#0225	C	33	16	85	10	125	5.3	6	225	1	0.699	0.629	0.280
TPSC336*016#0300	С	33	16	85	10	125	5.3	6	300	1	0.606	0.545	0.242
FPSD336*016#0200	D	33	16	85	10	125	5.3	6	200	1	0.866	0.779	0.346
PSW336*016#0140	W	33	16	85	10	125	5.3	6	140	11	0.802	0.722	0.321
PSW336*016#0175	W	33	16	85	10	125	5.3	6	175	1	0.717	0.645	0.287
FPSW336*016#0250	W	33	16	85	10	125	5.3	6	250	1	0.600	0.540	0.240
PSW336*016#0400 PSW336*016#0500	W	33	16 16	85 85	10	125 125	5.3 5.3	6	500	1	0.474		0.190
TPSY336*016#0300	Y	33	16	85	10	125	5.3	6	300	11)	0.424	0.382	0.170
TPSY336*016#0400	Y	33	16	85	10	125	5.3	6	400	11)	0.559	0.503	0.238
TPSC476*016#0110	C	47	16	85	10	125	7.5	6	110	1	1.000	0.900	0.400
TPSC476*016#0350	C	47	16	85	10	125	7.5	6	350	1	0.561	0.505	0.224
TPSD476*016#0080	D	47	16	85	10	125	7.5	6	80	1	1.369	1.232	0.548
TPSD476*016#0100	D	47	16	85	10	125	7.5	6	100	1	1.225	1.102	0.490
TPSD476*016#0150	D	47	16	85	10	125	7.5	6	150	1	1.000	0.900	0.400
ΓPSD476*016#0200	D	47	16	85	10	125	7.5	6	200	1	0.866	0.779	0.346
PSW476*016#0200	W	47	16	85	10	125	7.5	6	200	1	0.671	0.604	0.268
TPSX476*016#0180	X	47	16	85	10	125	7.5	6	180	1 ¹⁾	0.745	0.671	0.298
TPSY476*016#0250	Υ	47	16	85	10	125	7.5	6	250	11)	0.707	0.636	0.283
TPSC686*016#0125	С	68	16	85	10	125	10.9	6	125	1	0.938	0.844	0.375
FPSC686*016#0200	С	68	16	85	10	125	10.9	6	200	1	0.742	0.667	0.297
FPSD686*016#0070	D	68	16	85	10	125	10.9	6	70	1	1.464	1.317	0.586
FPSD686*016#0100	D	68	16	85	10	125	10.9	6	100	1	1.225	1.102	0.490
TPSD686*016#0150	D	68	16	85	10	125	10.9	6	150	1	1.000	0.900	0.400
TPSF686*016#0200	F	68	16	85	10	125	10.9	10	200	11	0.707	0.636	0.283
TPSX686*016#0150	Х	68	16	85	10	125	10.9	8	150	1 ¹⁾	0.816	0.735	0.327
TPSY686*016#0150	Υ	68	16	85	10	125	10.9	6	150	11)	0.913	0.822	0.365
TPSY686*016#0200	Υ	68	16	85	10	125	10.9	6	200	11)	0.791	0.712	0.316
TPSY686*016#0250	Υ	68	16	85	10	125	10.9	6	250	11)	0.707	0.636	0.283

Low ESR



AVX	Case	Capacitance	Rated	Rated	Category	_ Category	DCL	DF	ESR		100kHz	z RMS Curi	rent (A)
Part No.	Size	(μF)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μΑ) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
TPSC107*016#0200	C	100	16	85	10	125	16	8	200	1	0.742	0.667	0.297
TPSD107*016#0060 TPSD107*016#0100	D	100	16 16	85 85	10	125 125	16 16	6	100	1	1.581	1.423	0.632
TPSD107 010#0100	D	100	16	85	10	125	16	6	125	1	1.095	0.986	0.438
TPSD107*016#0150	D	100	16	85	10	125	16	6	150	1	1.000	0.900	0.400
TPSE107*016#0055	Е	100	16	85	10	125	16	6	55	11)	1.732	1.559	0.693
TPSE107*016#0100	E	100	16	85	10	125	16	6	100	11)	1.285	1.156	0.514
TPSE107*016#0125 TPSE107*016#0150	E	100	16 16	85 85	10	125 125	16 16	6	125 150	1 ¹⁾	1.149	1.034 0.944	0.460
TPSF107 010#0150	F	100	16	85	10	125	16	10	150	1	0.816	0.735	0.420
TPSF107M016#0200	F	100	16	85	10	125	16	10	200	1	0.707	0.636	0.283
TPSY107*016#0100	Υ	100	16	85	10	125	16	8	100	11)	1.118	1.006	0.447
TPSY107*016#0150	Y	100	16	85	10	125	16	8	150	11)	0.913	0.822	0.365
TPSY107*016#0200 TPSD157*016#0060	Y D	100 150	16 16	85 85	10	125 125	16 24	8	200 60	1 ¹⁾	0.791	0.712 1.423	0.316
TPSD157 016#0000	D	150	16	85	10	125	24	6	85	1	1.328	1.196	0.632
TPSD157*016#0100	D	150	16	85	10	125	24	6	100	1	1.225	1.102	0.490
TPSD157*016#0125	D	150	16	85	10	125	24	6	125	1	1.095	0.986	0.438
TPSD157*016#0150	D	150	16	85	10	125	23	8	150	1	1.000	0.900	0.400
TPSE157*016#0100	E V	150 150	16 16	85 85	10	125 125	24 24	6 8	100 45	1 ¹⁾	1.285	1.156	0.514
TPSV157*016#0045 TPSV157*016#0075	V	150	16	85	10	125	24	8	75	11)	2.357 1.826	2.121 1.643	0.943
TPSY157 010#0075	Y	150	16	85	10	125	24	15	200	11)	0.791	0.712	0.730
TPSE227*016#0100	Е	220	16	85	10	125	35.2	10	100	11)	1.285	1.156	0.514
TPSE227*016#0150	E	220	16	85	10	125	35.2	10	150	11)	1.049	0.944	0.420
TPSV227*016#0050	V	220	16	85	10	125	35.2	8	50	1 ¹⁾	2.236	2.012	0.894
TPSV227*016#0075 TPSV227*016#0100	V	220 220	16 16	85 85	10	125 125	35.2 35.2	8	75 100	11)	1.826	1.643 1.423	0.730
TPSV227*016#0150	V	220	16	85	10	125	35.2	8	150	11)	1.291	1.162	0.516
TPSE337M016#0200	Ė	330	16	85	10	125	52.8	30	200	1 ¹⁾	0.908	0.817	0.363
						t @ 85°C							
TPSA105*020#3000	A	1	20	85	13	125	0.5	4	3000	1	0.158	0.142	0.063
TPSR105*020#6000 TPSS105*020#6000	R	1	20 20	85 85	13 13	125 125	0.5	4	6000	1	0.096	0.086	0.038
TPST105*020#0000	T	1	20	85	13	125	0.5	4	2000	1	0.104	0.180	0.042
TPSA155*020#3000	A	1.5	20	85	13	125	0.5	6	3000	1	0.158	0.142	0.063
TPSA225*020#3000	Α	2.2	20	85	13	125	0.5	6	3000	1	0.158	0.142	0.063
TPSB225*020#1700	В	2.2	20	85	13	125	0.5	6	1700	1	0.224	0.201	0.089
TPSA335*020#2500 TPSB335*020#1300	A B	3.3	20 20	85 85	13 13	125 125	0.7	6	2500 1300	1	0.173	0.156	0.069
TPSA475*020#1800	A	4.7	20	85	13	125	0.7	6	1800	1	0.204	0.230	0.102
TPSB475*020#0750	В	4.7	20	85	13	125	0.9	6	750	1	0.337	0.303	0.135
TPSB475*020#1000	В	4.7	20	85	13	125	0.9	6	1000	1	0.292	0.262	0.117
TPSA685*020#1000	A	6.8	20	85	13	125	1.4	6	1000	1	0.274	0.246	0.110
TPSB685*020#0600 TPSB685*020#1000	B	6.8 6.8	20 20	85 85	13 13	125 125	1.4	6	1000	1	0.376	0.339	0.151
TPSC685*020#0700	C	6.8	20	85	13	125	1.4	6	700	1	0.396	0.202	0.117
TPSB106*020#0500	В	10	20	85	13	125	2	6	500	1	0.412	0.371	0.165
TPSB106*020#1000	В	10	20	85	13	125	2	6	1000	1	0.292	0.262	0.117
TPSC106*020#0500	C	10	20	85	13	125	2	6	500	1	0.469		0.188
TPSC106*020#0700 TPSW106*020#0250	C	10 10	20 20	85 85	13	125 125	2	6	700 250	1	0.396	0.357	0.159
TPSW106 020#0250 TPSW106*020#0500	W	10	20	85	13	125	2	6	500	1	0.600	0.340	0.240
TPSB156*020#0500	В	15	20	85	13	125	3	6	500	1	0.412	0.371	0.165
TPSC156*020#0400	С	15	20	85	13	125	3	6	400	1	0.524	0.472	0.210
TPSC156*020#0450	C	15	20	85	13	125	3	6	450	1	0.494	0.445	0.198
TPSB226*020#0400 TPSB226*020#0600	ВВ	22 22	20 20	85 85	13 13	125 125	4.4	6	400 600	1	0.461	0.415	0.184
TPSC226*020#0000	C	22	20	85	13	125	4.4	6	100	1	1.049	0.339	0.131
TPSC226*020#0150	C	22	20	85	13	125	4.4	6	150	1	0.856	0.771	0.343
TPSC226*020#0400	С	22	20	85	13	125	4.4	6	400	1	0.524	0.472	0.210
TPSD226*020#0200	D	22	20	85	13	125	4.4	6	200	1	0.866	0.779	0.346
TPSD226*020#0300 TPSC336*020#0300	D C	22 33	20 20	85	13 13	125	4.4 6.6	6	300	1	0.707	0.636	0.283
TPSC336*020#0300 TPSD336*020#0100	D	33	20	85 85	13	125 125	6.6	6	300 100	1	0.606 1.225	0.545 1.102	0.242
TPSD336*020#0200	D	33	20	85	13	125	6.6	6	200	1	0.866	0.779	0.430
TPSD476*020#0075	D	47	20	85	13	125	9.4	6	75	1	1.414	1.273	0.566
TPSD476*020#0100	D	47	20	85	13	125	9.4	6	100	1	1.225	1.102	0.490
TPSD476*020#0200	D	47	20	85	13	125	9.4	6	200	1 11)	0.866	0.779	0.346
TPSE476*020#0070 TPSE476*020#0125	E	47 47	20 20	85 85	13	125 125	9.4	6	70 125	1 ¹⁾	1.535	1.382 1.034	0.614
11 3147 0 020#0120		4/	20		10	120	5.4		120	1.1	1.148	1.004	0.400

Low ESR



Part No. See 169	AVX	Case	Capacitance	Rated	Rated	Category	_ Category	DCL	DF	ESR		100kHz	z RMS Curi	rent (A)
FREERFORQUICISO E											MSL	25°C	85°C	125°C
PSEAFFC02000200				20	85	13	125	9.4	6	150				
PREMERY 00 00 00														
PROBRETCO-00150 D 68 20 85 13 125 13.6 6 70 1 1.464 1.317 0.596									_					
PROBRETCO D 68 20 85 13 125 13.6 6 150 1 1.000 0.900 0.400 PROBRETCO 0.000 0.68 20 85 13 125 13.6 6 200 1 0.600 0.779 0.461 0.245														
PRODESPECTORION D														
PRESIDENCE Dec Presidence Dec Presidence Dec Presidence Dec Presidence Dec														
PRESERGO/DROIGED E														
PRESERGYCOUCOOD F		Е				13			6	125	11)	1.149		
PSYSIGNOMOSIA PSYSIGNOMOSI														
PSD107*020#0080														
PPSD107*C020001050				20										
PPSD107702000100														
TPSEI(107/020001600 E				20										
IPSEIDY/020040200														
FPSEIDY**CQC04QC000 E														
TPSVIDT**\(PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT*\(\text{PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT*\(\text{PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT**\(\text{PSVIDT*\(\text{P											11)			
TPSV107'02040200	TPSV107*020#0060	V	100	20	85	13	125		8	60	11)	2.041	1.837	0.816
TPSVID*702040200														
TFSN4747025#7000														
PSA474*025#0000														
IFSA48747025870000	1P5V157~020#0080	V	150	20	გე			30	β	80	11/	1.768	1.591	0.707
IPSA684**\02544\0000	TPSΔ474*025#7000	Δ	0.47	25	85			0.5	1	7000	1	0.104	U U03	0.041
IPSA105*025#2500 R				25							1			
IPSR105*025#4900				25										
IPSA 155**(025#31800)			1								1			
TPSB155*025#1500	TPSR105*025#4000	R	1		85		125	0.5	4	4000	1	0.117	0.106	0.047
TPSA25*025#0900														
TPSB225*025#1900														
TPSB25*025#1200				25										
TPSB2502549000			2.2											
TPSA335*025#1000														
TPSA335*025#1500														
TPSB335*025#1500				25										
TPSB335*025#1500											1			
TPSB475'025#0700	TPSB335*025#1500	В	3.3	25	85		125	0.8	6	1500	1	0.238	0.214	0.095
TPSB475°025#0900 B														
TPSB475°025#1500														
TPSC475'025#0700														
TPSB685'025#0700														
TPSC685*025#0600				25										
TPSC685'025#0600														
TPSC685*025#0700														
TPSB106*025#1800 B														
TPSC106*025#0300	TPSB106*025#1800	В	10	25	85	17	125	2.5		1800	1	0.217	0.196	0.087
TPSD106*025#0500 D														0.242
TPSC156*025#0220 C 15 25 85 17 125 3.8 6 220 1 0.707 0.636 0.283 TPSC156*025#0300 C 15 25 85 17 125 3.8 6 300 1 0.606 0.545 0.242 TPSD156*025#0300 D 15 25 85 17 125 3.8 6 100 1 1.225 1.102 0.490 TPSD156*025#0300 D 15 25 85 17 125 3.8 6 300 1 0.707 0.636 0.283 TPSC26*025#02075 C 22 25 85 17 125 5.5 6 275 1 0.632 0.569 0.253 TPSC226*025#0400 C 22 25 85 17 125 5.5 6 400 1 0.524 0.472 0.210 TPSD226*025#0200 D 22 25 <														
TPSC156*025#0300 C 15 25 85 17 125 3.8 6 300 1 0.606 0.545 0.242 TPSD156*025#0100 D 15 25 85 17 125 3.8 6 100 1 1.225 1.102 0.490 TPSD156*025#0300 D 15 25 85 17 125 3.8 6 300 1 0.707 0.636 0.283 TPSC226*025#0275 C 22 25 85 17 125 5.5 6 275 1 0.632 0.569 0.253 TPSC226*025#0400 C 22 25 85 17 125 5.5 6 400 1 0.524 0.472 0.210 TPSD226*025#0100 D 22 25 85 17 125 5.5 6 100 1 1.225 1.102 0.490 TPSD226*025#0200 D 33 25 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
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TPSD156*025#0300 D 15 25 85 17 125 3.8 6 300 1 0.707 0.636 0.283 TPSC226*025#0275 C 22 25 85 17 125 5.5 6 275 1 0.632 0.569 0.253 TPSC226*025#0400 C 22 25 85 17 125 5.5 6 400 1 0.524 0.472 0.210 TPSD226*025#0100 D 22 25 85 17 125 5.5 6 100 1 1.225 1.102 0.490 TPSD226*025#0200 D 22 25 85 17 125 5.5 6 200 1 0.866 0.779 0.346 TPSD226*025#0300 D 22 25 85 17 125 5.5 6 300 1 0.707 0.636 0.283 TPSD336*025#0100 D 33 25 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
TPSC226*025#0275 C 22 25 85 17 125 5.5 6 275 1 0.632 0.569 0.253 TPSC226*025#0400 C 22 25 85 17 125 5.5 6 400 1 0.524 0.472 0.210 TPSD226*025#0100 D 22 25 85 17 125 5.5 6 100 1 1.225 1.102 0.490 TPSD226*025#0200 D 22 25 85 17 125 5.5 6 200 1 0.866 0.779 0.346 TPSD226*025#0300 D 22 25 85 17 125 5.5 6 200 1 0.866 0.779 0.346 TPSD336*025#0100 D 33 25 85 17 125 8.3 6 100 1 1.225 1.102 0.490 TPSD336*025#0200 D 33 25 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
TPSC226*025#0400 C 22 25 85 17 125 5.5 6 400 1 0.524 0.472 0.210 TPSD226*025#0100 D 22 25 85 17 125 5.5 6 100 1 1.225 1.102 0.490 TPSD226*025#0200 D 22 25 85 17 125 5.5 6 200 1 0.866 0.779 0.346 TPSD226*025#0300 D 22 25 85 17 125 5.5 6 300 1 0.707 0.636 0.283 TPSD336*025#0100 D 33 25 85 17 125 8.3 6 100 1 1.225 1.102 0.490 TPSD336*025#0200 D 33 25 85 17 125 8.3 6 200 1 0.866 0.779 0.346 TPSD336*025#0200 D 33 25 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
TPSD226*025#0100 D 22 25 85 17 125 5.5 6 100 1 1.225 1.102 0.490 TPSD226*025#0200 D 22 25 85 17 125 5.5 6 200 1 0.866 0.779 0.346 TPSD236*025#0100 D 33 25 85 17 125 5.5 6 300 1 0.707 0.636 0.283 TPSD336*025#0100 D 33 25 85 17 125 8.3 6 100 1 1.225 1.102 0.490 TPSD336*025#0200 D 33 25 85 17 125 8.3 6 200 1 0.866 0.779 0.346 TPSD336*025#0300 D 33 25 85 17 125 8.3 6 200 1 0.866 0.779 0.346 TPSE336*025#0200 E 33 25 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
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TPSD336*025#0100 D 33 25 85 17 125 8.3 6 100 1 1.225 1.102 0.490 TPSD336*025#0200 D 33 25 85 17 125 8.3 6 200 1 0.866 0.779 0.346 TPSD336*025#0300 D 33 25 85 17 125 8.3 6 300 1 0.707 0.636 0.283 TPSE336*025#0100 E 33 25 85 17 125 8.3 6 100 1° 1.285 1.156 0.514 TPSE336*025#0175 E 33 25 85 17 125 8.3 6 175 1° 0.971 0.874 0.388 TPSE336*025#0200 E 33 25 85 17 125 8.3 6 200 1° 0.908 0.817 0.363 TPSE336*025#0200 Y 33 25														
TPSD336*025#0200 D 33 25 85 17 125 8.3 6 200 1 0.866 0.779 0.346 TPSD336*025#0300 D 33 25 85 17 125 8.3 6 300 1 0.707 0.636 0.283 TPSE336*025#0100 E 33 25 85 17 125 8.3 6 100 1° 1.285 1.156 0.514 TPSE336*025#0175 E 33 25 85 17 125 8.3 6 175 1° 0.971 0.874 0.388 TPSE336*025#0200 E 33 25 85 17 125 8.3 6 200 1° 0.908 0.817 0.363 TPSE336*025#0300 E 33 25 85 17 125 8.3 6 300 1° 0.794 0.667 0.297 TPSY336*025#0200 Y 33 25														
TPSD336*025#0300 D 33 25 85 17 125 8.3 6 300 1 0.707 0.636 0.283 TPSE336*025#0100 E 33 25 85 17 125 8.3 6 100 1° 1.285 1.156 0.514 TPSE336*025#0175 E 33 25 85 17 125 8.3 6 175 1° 0.971 0.874 0.388 TPSE336*025#0200 E 33 25 85 17 125 8.3 6 200 1° 0.908 0.817 0.363 TPSE336*025#0200 E 33 25 85 17 125 8.3 6 300 1° 0.742 0.667 0.297 TPSY336*025#0200 Y 33 25 85 17 125 8.3 6 200 1° 0.791 0.712 0.316 TPSD476*025#0125 D 47 25														
TPSE336*025#0100 E 33 25 85 17 125 8.3 6 100 1° 1.285 1.156 0.514 TPSE336*025#0175 E 33 25 85 17 125 8.3 6 175 1° 0.971 0.874 0.388 TPSE336*025#0200 E 33 25 85 17 125 8.3 6 200 1° 0.908 0.817 0.363 TPSE336*025#0200 Y 33 25 85 17 125 8.3 6 200 1° 0.742 0.667 0.297 TPSD476*025#0200 Y 33 25 85 17 125 8.3 6 200 1° 0.742 0.667 0.297 TPSD476*025#0125 D 47 25 85 17 125 11.8 6 125 1 1.095 0.986 0.438														
TPSE336*025#0175 E 33 25 85 17 125 8.3 6 175 1 1 0 0.971 0.874 0.388 TPSE336*025#0200 E 33 25 85 17 125 8.3 6 200 1 0 0.908 0.817 0.363 TPSE336*025#0300 E 33 25 85 17 125 8.3 6 300 1 0 0.742 0.667 0.297 TPSY336*025#0200 Y 33 25 85 17 125 8.3 6 200 1 0 0.791 0.712 0.316 TPSD476*025#0125 D 47 25 85 17 125 11.8 6 125 1 1.095 0.986 0.438														
TPSE336*025#0200 E 33 25 85 17 125 8.3 6 200 1 " 0.908 0.817 0.363 TPSE336*025#0300 E 33 25 85 17 125 8.3 6 300 1 " 0.742 0.667 0.297 TPSY336*025#0200 Y 33 25 85 17 125 8.3 6 200 1 " 0.791 0.712 0.316 TPSD476*025#0125 D 47 25 85 17 125 11.8 6 125 1 1.095 0.986 0.438														
TPSE336*025#0300 E 33 25 85 17 125 8.3 6 300 1 n 0.742 0.667 0.297 TPSY336*025#0200 Y 33 25 85 17 125 8.3 6 200 1 n 0.791 0.712 0.316 TPSD476*025#0125 D 47 25 85 17 125 11.8 6 125 1 1.095 0.986 0.438														
TPSY336*025#0200 Y 33 25 85 17 125 8.3 6 200 1 " 0.791 0.712 0.316 TPSD476*025#0125 D 47 25 85 17 125 11.8 6 125 1 1.095 0.986 0.438														
TPSD476*025#0125 D 47 25 85 17 125 11.8 6 125 1 1.095 0.986 0.438		Υ				17								0.316
TPSD476*025#0150 D 47 25 85 17 125 11.8 6 150 1 1.000 0.900 0.400	TPSD476*025#0125		47	25	85			11.8						0.438
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TPSD476*025#0150	D	47	25	85	17	125	11.8	6	150	1	1.000	0.900	0.400

Low ESR



AVX	Case	Capacitance	Rated	Rated	Category	Category	DCL	DF	ESR May (m0)	N402	100kHz	RMS Cur	rent (A)
Part No.	Size	(μF)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μΑ) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
TPSD476*025#0250	D	47	25	85	17	125	11.8	6	250	1	0.775	0.697	0.310
TPSE476*025#0080	Е	47	25	85	17	125	11.8	6	80	1 1)	1.436	1.293	0.574
TPSE476*025#0100	Е	47	25	85	17	125	11.8	6	100	11)	1.285	1.156	0.514
TPSE476*025#0125	E	47	25	85	17	125	11.8	6	125	11)	1.149	1.034	0.460
TPSY476*025#0250	Y E	47	25	85	17	125	11.8	6	250	1 ¹⁾	0.707	0.636	0.283
TPSE686*025#0125 TPSE686*025#0200	E	68 68	25 25	85 85	17 17	125 125	17 17	6	125 200	11)	1.149 0.908	1.034 0.817	0.460
TPSV686*025#0200	V	68	25	85	17	125	17	6	80	11)	1.768	1.591	0.707
TPSV686*025#0095	V	68	25	85	17	125	17	6	95	11)	1.622	1.460	0.649
TPSV686*025#0150	V	68	25	85	17	125	17	6	150	1 1)	1.291	1.162	0.516
TPSV686*025#0200	V	68	25	85	17	125	17	6	200	1 1)	1.118	1.006	0.447
TPSE107M025#0150	Ε	100	25	85	17	125	25	10	150	11)	1.049	0.944	0.420
TPSV107*025#0100	V	100	25	85	17	125	25	8	100	11)	1.581	1.423	0.632
TPSV157M025#0150	V	150	25	85	17	125	37.5	10	150	11)	1.291	1.162	0.516
TD0 4 00 4+00E #0000	^	0.00	0.5	0.5		t @ 85°C	0.5		1 0000		0.440	0.404	0.045
TPSA224*035#6000	A	0.22	35	85	23 23	125	0.5	4	6000	1	0.112	0.101	0.045
TPSA334*035#6000 TPSA474*035#6000	A	0.33	35 35	85 85	23	125 125	0.5	4	6000	1	0.112	0.101	0.045
TPSB474*035#4000	В	0.47	35	85	23	125	0.5	4	4000	1	0.112	0.101	0.043
TPSA684*035#6000	A	0.68	35	85	23	125	0.5	4	6000	1	0.140	0.101	0.035
TPSA105*035#3000	A	1	35	85	23	125	0.5	4	3000	1	0.158	0.142	0.063
TPSB105*035#2000	В	1	35	85	23	125	0.5	4	2000	1	0.206	0.186	0.082
TPSA155*035#3000	Α	1.5	35	85	23	125	0.5	6	3000	1	0.158	0.142	0.063
TPSB155*035#2500	В	1.5	35	85	23	125	0.5	6	2500	1	0.184	0.166	0.074
TPSA225*035#1500	Α	2.2	35	85	23	125	0.8	6	1500	1	0.224	0.201	0.089
TPSB225*035#0750	В	2.2	35	85	23	125	0.8	6	750	1	0.337	0.303	0.135
TPSB225*035#1500	В	2.2	35	85	23	125	0.8	6	1500		0.238	0.214	0.095
TPSB225*035#2000	В	2.2	35	85	23	125	0.8	6	2000	1	0.206	0.186	0.082
TPSC225*035#1000 TPSB335*035#1000	C B	2.2 3.3	35 35	85 85	23 23	125 125	0.8 1.2	6	1000	1	0.332	0.298	0.133
TPSC335*035#1000	C	3.3	35	85	23	125	1.2	6	700	1	0.292	0.262	0.117
TPSB475*035#0700	В	4.7	35	85	23	125	1.6	6	700	1	0.348	0.314	0.139
TPSB475*035#1500	В	4.7	35	85	23	125	1.6	6	1500	1	0.238	0.214	0.095
TPSC475*035#0600	C	4.7	35	85	23	125	1.6	6	600	1	0.428	0.385	0.171
TPSD475*035#0700	D	4.7	35	85	23	125	1.6	6	700	1	0.463	0.417	0.185
TPSC685*035#0350	С	6.8	35	85	23	125	2.4	6	350	1	0.561	0.505	0.224
TPSD685*035#0150	D	6.8	35	85	23	125	2.4	6	150	1	1.000	0.900	0.400
TPSD685*035#0400	D	6.8	35	85	23	125	2.4	6	400	1	0.612	0.551	0.245
TPSD685*035#0500	D	6.8	35	85	23	125	2.4	6	500		0.548	0.493	0.219
TPSC106*035#0600	C	10	35	85	23	125	3.5	6	600	1	0.428	0.385	0.171
TPSD106*035#0125 TPSD106*035#0300	D D	10 10	35 35	85 85	23	125 125	3.5 3.5	6	125 300	1	1.095	0.986	0.438
TPSE106*035#0200	E	10	35	85	23 23	125	3.5	6	200	1 ¹⁾	0.707	0.636 0.817	0.263
TPSY106*035#0250	Y	10	35	85	23	125	3.5	6	250	11)	0.908	0.636	0.283
TPSC156*035#0350	Ċ	15	35	85	23	125	5.3	6	350	1	0.561	0.505	0.224
TPSC156*035#0450	C	15	35	85	23	125	5.3	6	450	1	0.494	0.445	0.198
TPSD156*035#0100	D	15	35	85	23	125	5.3	6	100	1	1.225	1.102	0.490
TPSD156*035#0300	D	15	35	85	23	125	5.3	6	300	1	0.707	0.636	0.283
TPSY156*035#0250	Y	15	35	85	23	125	5.3	6	250	11)	0.707	0.636	0.283
TPSD226*035#0125	<u>D</u>	22	35	85	23	125	7.7	6	125	1	1.095	0.986	0.438
TPSD226*035#0200	D	22	35	85	23	125	7.7	6	200	1	0.866	0.779	0.346
TPSD226*035#0300 TPSD226*035#0400	D D	22	35	85	23	125	7.7	6	300 400	<u>1</u> 1	0.707	0.636	0.283
TPSD226*035#0400 TPSE226*035#0125	E	22 22	35 35	85 85	23	125 125	7.7	6	125	11)	0.612	0.551	0.245
TPSE226*035#0125	E	22	35	85	23	125	7.7	6	200	11)	0.908	0.817	0.460
TPSE226*035#0200	E	22	35	85	23	125	7.7	6	300	11)	0.908	0.667	0.303
TPSY226*035#0200	Y	22	35	85	23	125	7.7	6	200	11)	0.791	0.712	0.316
TPSD336*035#0200	Ď	33	35	85	23	125	11.6	6	200	1	0.866	0.779	0.346
TPSD336*035#0300	D	33	35	85	23	125	11.6	6	300	1	0.707	0.636	0.283
TPSE336*035#0100	Е	33	35	85	23	125	11.6	6	100	1 ¹⁾	1.285	1.156	0.514
TPSE336*035#0250	E	33	35	85	23	125	11.6	6	250	1 ¹⁾	0.812	0.731	0.325
TPSE336*035#0300	E	33	35	85	23	125	11.6	6	300	11)	0.742	0.667	0.297
TPSV336*035#0200	<u>V</u>	33	35	85	23	125	11.6	6	200	11)	1.118	1.006	0.447
TPSE476*035#0200	E	47	35	85	23	125	16.5	6	200	11)	0.908	0.817	0.363
TPSE476*035#0250	E V	47 47	35	85	23	125	16.5	6	250 150	1 ¹⁾	0.812	0.731	0.325
TPSV476*035#0150	V	47	35 35	85 85	23 23	125 125	16.5 16.5	6	200	11)	1.291	1.162	0.516
			35	85	23	125	23.8	6	150	11)	1.291	1.162	0.447
TPSV476*035#0200 TPSV686*035#0150	\/	l no											1 0.010
TPSV686*035#0150	V	68 68											0.447
	V	68	35	85	23	125 t @ 85°C	23.8	6	200	11)	1.118	1.006	0.447

Low ESR



RATINGS & PART NUMBER REFERENCE

AVX	Case	Capacitance	Rated	Rated	Category	_ Category	DCL	DF	ESR		100kHz	RMS Cur	rent (A)
Part No.	Size	(μF)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μΑ) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
TPSA224*050#7000	Α	0.22	50	85	33	125	0.5	4	7000	1	0.104	0.093	0.041
TPSA334*050#7000	Α	0.33	50	85	33	125	0.5	4	7000	1	0.104	0.093	0.041
TPSA474*050#6500	Α	0.47	50	85	33	125	0.5	4	6500	1	0.107	0.097	0.043
TPSB474*050#6000	В	0.47	50	85	33	125	0.5	4	6000	1	0.119	0.107	0.048
TPSC474*050#2300	С	0.47	50	85	33	125	0.5	4	2300	1	0.219	0.197	0.087
TPSB684*050#4000	В	0.68	50	85	33	125	0.5	4	4000	1	0.146	0.131	0.058
TPSB105*050#3000	В	1	50	85	33	125	0.5	6	3000	1	0.168	0.151	0.067
TPSC105*050#2500	С	1	50	85	33	125	0.5	4	2500	1	0.210	0.189	0.084
TPSC155*050#1500	С	1.5	50	85	33	125	0.8	6	1500	1	0.271	0.244	0.108
TPSC155*050#2000	С	1.5	50	85	33	125	0.8	6	2000	1	0.235	0.211	0.094
TPSC225*050#1500	С	2.2	50	85	33	125	1.1	8	1500	1	0.271	0.244	0.108
TPSD225*050#1200	D	2.2	50	85	33	125	1.1	6	1200	1	0.354	0.318	0.141
TPSC335*050#1000	С	3.3	50	85	33	125	1.6	6	1000	1	0.332	0.298	0.133
TPSD335*050#0800	D	3.3	50	85	33	125	1.7	6	800	1	0.433	0.390	0.173
TPSC475*050#0800	С	4.7	50	85	33	125	2.4	6	800	1	0.371	0.334	0.148
TPSD475*050#0250	D	4.7	50	85	33	125	2.4	6	250	1	0.775	0.697	0.310
TPSD475*050#0300	D	4.7	50	85	33	125	2.4	6	300	1	0.707	0.636	0.283
TPSD475*050#0500	D	4.7	50	85	33	125	2.4	6	500	1	0.548	0.493	0.219
TPSD475*050#0700	D	4.7	50	85	33	125	2.4	6	700	1	0.463	0.417	0.185
TPSD685*050#0200	D	6.8	50	85	33	125	3.4	6	200	1	0.866	0.779	0.346
TPSD685*050#0300	D	6.8	50	85	33	125	3.4	6	300	1	0.707	0.636	0.283
TPSD685*050#0500	D	6.8	50	85	33	125	3.4	6	500	1	0.548	0.493	0.219
TPSD685*050#0600	D	6.8	50	85	33	125	3.4	6	600	1	0.500	0.450	0.200
TPSD106*050#0500	D	10	50	85	33	125	5	6	500	1	0.548	0.493	0.219
TPSE106*050#0250	E	10	50	85	33	125	5	6	250	1 ¹⁾	0.812	0.731	0.325
TPSE106*050#0300	E	10	50	85	33	125	5	6	300	11)	0.742	0.667	0.297
TPSE106*050#0400	E	10	50	85	33	125	5	6	400	1 ¹⁾	0.642	0.578	0.257
TPSE106*050#0500	E	10	50	85	33	125	5	6	500	1 ¹⁾	0.574	0.517	0.230
TPSE156*050#0250	E	15	50	85	33	125	7.5	6	250	11)	0.812	0.731	0.325
TPSV156*050#0250	V	15	50	85	33	125	7.5	6	250	1 ¹⁾	1.000	0.900	0.400

^{119 -} Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 3.

For AEC-Q200 availability, please contact AVX.

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 ismeasured 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 216.

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.

QUALIFICATION TABLE

TEST			TPS series	(Temperature range	-55°C t	o +125°	C)					
IESI		Condition		Characteristics								
	Determine	after application of rated	d voltage for 2000	Visual examination	no visible damage							
		urs at 85±2°C and then le		DCL	1.5 x	initial lir	nit					
Endurance		perature. Also determine gory voltage for 2000 +48		ΔC/C	withi	n ±10%	of initial	value				
		ng 1-2 hours at room tem		DF	initial	limit						
	supply imp	pedance to be $\leq 0.1 \Omega/V$.		ESR	1.25	x initial l	imit					
				Visual examination	no vi	sible daı	mage					
		e after storage without a		DCL	1.5 x	initial lir	nit					
Humidity		C and 95±2% relative hud then recovery 1-2 hou		ΔC/C	within ±10% of initial value							
	temperatu			DF	1.2 x	initial lir	nit					
				ESR	1.25	x initial l	imit					
	Step	Temperature°C	Duration(min)		+20°C	-55°C	+20°C	+85°C	+125°C	+20°C		
Temperature	1	+20±2	15	DCL	IL*	n/a	IL*	10 x IL*	12.5 x IL*	IL*		
Stability	3	-55+0/-3 +20+2	15 15	ΔC/C	n/a	+0/-10%	±5%	+10/-0%	+12/-0%	±5%		
	4	+85+3/-0	15	DF	IL*	1.5 x IL*	IL*	1.5 x IL*	2 x IL*	IL*		
	5	+125+3/-0	15									
	6	+20±2	15	ESR	1.25 x IL*	2.5 x IL*	1.25 x IL*	1.25 x IL*	1.25 x IL*	1.25 x IL*		
		<u>oerature: 125°C+3/0°C</u> age: Category voltage a		Visual examination	no vi	sible daı	mage					
Surge	Surge vol	Itage: 1.3 x category v	oltage at 125°C	DCL	initial	limit						
Voltage		otection resistance 100 e resistance: 1000Ω	00±100Ω	ΔC/C	withi	n ±5% c	of initial v	/alue				
		of cycles: 1000x ration: 6 min; 30 sec c	harao	DF	initial	limit						
	Cycle dui	5 min 30 sec di		ESR	1.25	x initial l	imit					

*Initial Limit



Low ESR - Automotive Product Range

TPS AUTOMOTIVE RANGE CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capa	acitance			Rate	d Voltage DC (V _R) to	85°C		
μF	Code	6.3V (J)	10V (A)	16V (C)	20V (D)	25V (E)	35V (V)	50V (T)
0.15	154							
0.22	224							A(7000)
0.33	334						A(6000)	A(7000)
0.47	474					A(7000)	A(6000)	A(6500), B(6000)
0.68	684					A(6000)	A(6000)	B(4000)
1.0	105			A(6200)	A(3000)	A(4000)	A(3000), B(2000)	B(3000), C(2500)
1.5	155				A(3000)	A(3000)	A(3000), B(2500)	C(1500,2000)
2.2	225		A(1800)	A(1800,3500)	A(3000), B(1700)	A(2500), B(900,1200,2500)	B(750,1500,2000), C(1000)	C(1500), D(1200)
3.3	335	A(2100)		A(3500), B(2500)	A(2500), B(1300)	B(750,1500,2000)	B(1000), C(700)	C(1000), D(800)
4.7	475		A(1400), B(1400)	A(2000), B(800,1500)	A(1800), B(750,1000)	B(700,900), C(700)	B(700,1500), C(600), D(700)	C(800), D(250,500,700)
6.8	685		A(1800), B(1300)	A(1500), B(600,1200)	B(600,1000), C(700)	B(700), C(500,600,700)	C(350), D(400,500)	D(500,600)
10	106	A(1500), B(1500)	A(900,1800), B(1000)	A(1000), B(500,800), C(500)	B(500,1000), C(500,700)	C(300,500), D(500)	C(600), D(300)	D(500), E(250,300,400,500)
15	156	A(700,1500)	A(1000), B(450,600), C(700)	B(500,800) C(300,700)	B(500), C(400,450)	C(220,300), D(300)	D(300)	E(250)
22	226	A(500,900), B(375,600), C(500)	A(900), B(400,500,700), C(180,300)	B(400,600), C(300,375), D(500), D(700)	C(400), D(200,300)	C(275,400), D(200,300)	D(200,300,400), E(200,300)	
33	336	A(600), B(250,350,450,600)	B(250,425,500,650), C(375,500)	C(225,300), D(200)	C(300), D(160,200)	D(200,300)	E(250,300)	
47	476	B(250,350,500), C(300)	B(250,350,500,650), C(200,350), D(300)	C(350), D(200)	D(200)	D(125,150,250), E(125)		
68	686	B(250,350,500), C(150,200)	C(200,300), D(150)	C(200), D(150)	D(150,200,300), E(125,150,200)			
100	107	C(150), D(300)	C(150,200), D(100,125,150)	D(100,125,150), E(100,125,150)	E(100,150,200)			
150	157	C(150,200,250), D(125)	D(85,100), E(100)	E(100)				
220	227	D(100,125)	D(100,150), E(70,100,125,150)					
330	337	D(70,100), E(100,125,150)	E(50,60,100)					
470	477	D(45,60,100,200), E(45,50,60,100,200)						
680	687	E(45,60,100)						

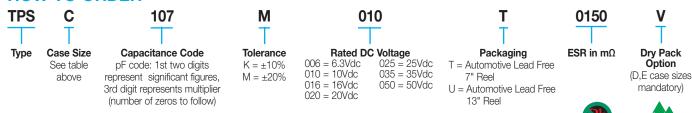
Not recommended for new designs, higher voltage or smaller case size substitution are offered.

Released codes

Engineering samples - please contact manufacturer

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

HOW TO ORDER



TECHNICAL SPECIFICATIONS

Technical Data: All technical data relate to an ambient temperature of +25°C Capacitance Range: $0.22 \mu F$ to $680 \mu F$ Capacitance Tolerance: ±10%; ±20% 25 35 50 Rated Voltage (V_B) ≤ +85°C: 6.3 20 10 16 Category Voltage (V_C) ≤ +125°C: 10 13 17 23 33 Surge Voltage (V_S) ≤ +85°C: 32 46 8 13 26 65 Surge Voltage (V_S) ≤ +125°C: 20 28 40 5 13 16 8 -55°C to +125°C Temperature Range: 55/125/56 (IEC 68-2)

 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

RoHS



Low ESR - Automotive Product Range

AVX	Case	Capacitance	Rated	Rated	Category	Category	DCL	DF	ESR	1401	100kHz	z RMS Cur	rent (A)
Part No.	Size	(μF)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μΑ) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
			(-)	()		t @ 85°C							
TPSA335*006T2100	Α	3.3	6.3	85	4	125	0.5	6	2100	1	0.189	0.170	0.076
TPSA106*006T1500	A	10	6.3	85	4	125	0.6	6	1500	1	0.224	0.201	0.089
TPSB106*006T1500	В	10	6.3	85	4	125	0.6	6	1500 700	1	0.238	0.214	0.095
TPSA156*006T0700 TPSA156*006T1500	A	15 15	6.3	85 85	4	125 125	0.9	6	1500	1	0.327	0.295	0.131
TPSA226*006T0500	A	22	6.3	85	4	125	1.4	6	500	1	0.387	0.349	0.003
TPSA226*006T0900	A	22	6.3	85	4	125	1.4	6	900	1	0.289	0.260	0.115
TPSB226*006T0375	В	22	6.3	85	4	125	1.4	6	375	1	0.476	0.428	0.190
TPSB226*006T0600	В	22	6.3	85	4	125	1.4	6	600	1	0.376	0.339	0.151
TPSC226*006T0500	С	22	6.3	85	4	125	1.4	6	500	1	0.469	0.422	0.188
TPSA336*006T0600	A	33	6.3	85	4	125	2.1	8	600	1	0.354	0.318	0.141
TPSB336*006T0250 TPSB336*006T0350	B	33	6.3	85 85	4	125 125	2.1	6	250 350	1	0.583	0.525	0.233
TPSB336*006T0450	В	33	6.3	85	4	125	2.1	6	450	1	0.435	0.391	0.197
TPSB336*006T0600	В	33	6.3	85	4	125	2.1	6	600	1	0.433	0.339	0.174
TPSB476*006T0250	В	47	6.3	85	4	125	3	6	250	1	0.583	0.525	0.233
TPSB476*006T0350	В	47	6.3	85	4	125	3	6	350	1	0.493	0.444	0.197
TPSB476*006T0500	В	47	6.3	85	4	125	3	6	500	1	0.412	0.371	0.165
TPSC476*006T0300	С	47	6.3	85	4	125	3	6	300	1	0.606	0.545	0.242
TPSB686*006T0250	В	68	6.3	85	4	125	4	8	250	1	0.583	0.525	0.233
TPSB686*006T0350	В	68	6.3	85	4	125	4	8	350	1	0.493	0.444	0.197
TPSB686*006T0500 TPSC686*006T0150	В	68 68	6.3	85 85	4	125 125	4.3	8	500 150	1	0.412	0.371	0.165
	C	68	6.3	85	4	125	4.3	6	200	1	0.856	0.667	0.343
TPSC686*006T0200 TPSC107*006T0150	C	100	6.3	85	4	125	6.3	6	150	1	0.742	0.007	0.297
TPSD107*006T0300V	D	100	6.3	85	4	125	6.3	6	300	3	0.707	0.636	0.283
TPSC157*006T0150	C	150	6.3	85	4	125	9.5	6	150	1	0.856	0.771	0.343
TPSC157*006T0200	C	150	6.3	85	4	125	9.5	6	200	1	0.742	0.667	0.297
TPSC157*006T0250	С	150	6.3	85	4	125	9.5	6	250	1	0.663	0.597	0.265
TPSD157*006T0125V	D	150	6.3	85	4	125	9.5	6	125	3	1.095	0.986	0.438
TPSD227*006T0100V	D	220	6.3	85	4	125	13.9	8	100	3	1.225	1.102	0.490
TPSD227*006T0125V	D	220 330	6.3	85	4	125 125	13.9 20.8	8	125 70	3	1.095	0.986	0.438
TPSD337*006T0070V TPSD337*006T0100V	D	330	6.3	85 85	4	125	20.8	8	100	3	1.464	1.317	0.586
TPSE337*006T0100V	E	330	6.3	85	4	125	20.8	8	100	3	1.285	1.156	0.430
TPSE337*006T0125V	E	330	6.3	85	4	125	20.8	8	125	3	1.149	1.034	0.460
TPSE337*006T0150V	E	330	6.3	85	4	125	20.8	8	150	3	1.049	0.944	0.420
TPSD477*006T0045V	D	470	6.3	85	4	125	28	12	45	3	1.826	1.643	0.730
TPSD477*006T0060V	D	470	6.3	85	4	125	28	12	60	3	1.581	1.423	0.632
TPSD477*006T0100V	D	470	6.3	85	4	125	28	12	100	3	1.225	1.102	0.490
TPSD477*006T0200V	D	470	6.3	85	4	125	28	12	200	3	0.866	0.779	0.346
TPSE477*006T0045V TPSE477*006T0050V	E	470 470	6.3	85	4	125	28 28	10	45 50	3	1.915	1.723	0.766
TPSE477*006T0050V	E	470	6.3 6.3	85 85	4	125 125	28	10	60	3	1.817	1.635 1.492	0.727
TPSE477*006T01000V	E	470	6.3	85	4	125	28	10	100	3	1.285	1.156	0.514
TPSE477*006T0200V	Ē	470	6.3	85	4	125	28	10	200	3	0.908	0.817	0.363
TPSE687*006T0045V	Ē	680	6.3	85	4	125	42.8	10	45	3	1.915	1.723	0.766
TPSE687*006T0060V	Ε	680	6.3	85	4	125	42.8	10	60	3	1.658	1.492	0.663
TPSE687*006T0100V	Е	680	6.3	85	4	125	42.8	10	100	3	1.285	1.156	0.514
TD0 4 00 5 t 0 1 0 T 1 0 0 0	1 ^	0.0	40	0.5	1	t @ 85°C	0.5		1000	-	0.004	0.404	0.000
TPSA225*010T1800	A	2.2	10	85	7	125	0.5	6	1800	1	0.204	0.184	0.082
TPSA475*010T1400 TPSB475*010T1400	A B	4.7	10	85 85	7	125 125	0.5	6	1400	1	0.231	0.208	0.093
TPSB475 01011400 TPSA685*010T1800	A	6.8	10	85	7	125	0.5	6	1800	1	0.246	0.222	0.099
TPSB685*010T1300	В	6.8	10	85	7	125	0.7	6	1300	1	0.256	0.184	0.102
TPSA106*010T0900	A	10	10	85	7	125	1	6	900	1	0.289	0.260	0.115
TPSA106*010T1800	A	10	10	85	7	125	1	6	1800	1	0.204	0.184	0.082
TPSB106*010T1000	В	10	10	85	7	125	1	6	1000	1	0.292	0.262	0.117
TPSA156*010T1000	Α	15	10	85	7	125	1.5	6	1000	1	0.274	0.246	0.110
TPSB156*010T0450	В	15	10	85	7	125	1.5	6	450	1	0.435	0.391	0.174
TPSB156*010T0600	В	15	10	85	7	125	1.5	6	600	1	0.376	0.339	0.151
TPSC156*010T0700 TPSA226*010T0900	C A	15 22	10	85 85	7	125 125	1.5 2.2	6 8	700 900	1	0.396	0.357	0.159
				85	7	125	2.2	6	400	1	0.269	0.260	0.113
TPSR226*010T0400		22	()			120					1 0.401	UFIU	
TPSB226*010T0400 TPSB226*010T0500	В	22	10			125	2.2	6	500	1	0.412	0.371	0.165
TPSB226*010T0400 TPSB226*010T0500 TPSB226*010T0700		22 22 22	10	85 85	7	125 125	2.2	6	500 700	1	0.412	0.371	0.165
TPSB226*010T0500	B B	22	10	85	7								
TPSB226*010T0500 TPSB226*010T0700 TPSC226*010T0180 TPSC226*010T0300	B B C C	22 22 22 22	10 10 10 10	85 85 85 85	7 7 7 7	125 125 125	2.2 2.2 2.2	6 6 6	700 180 300	1 1 1	0.348 0.782 0.606	0.314 0.704 0.545	0.139 0.313 0.242
TPSB226*010T0500 TPSB226*010T0700 TPSC226*010T0180	B B C	22 22 22	10 10 10	85 85 85	7 7 7	125 125	2.2	6 6	700 180	1	0.348 0.782	0.314 0.704	0.139 0.313



Low ESR - Automotive Product Range

AVX	Case	Capacitance	Rated	Rated	Category	Category	DCL	DF	ESR	MC	100kHz	RMS Cur	rent (A)
Part No.	Size	(μF)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μA) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
TPSB336*010T0500	В	33	10	85	7	125	3.3	6	500	1	0.412	0.371	0.165
TPSB336*010T0650	В	33	10	85	7	125	3.3	6	650	1	0.362	0.325	0.145
TPSC336*010T0375	С	33	10	85	7	125	3.3	6	375	1	0.542	0.487	0.217
TPSC336*010T0500	С	33	10	85	7	125	3.3	6	500	1	0.469	0.422	0.188
TPSB476*010T0250	В	47	10	85	7	125	4.7	8	250		0.583	0.525	0.233
TPSB476*010T0350	В	47	10	85	7	125	4.7	8	350	1	0.493	0.444	0.197
TPSB476*010T0500	В	47	10	85	7	125	4.7	8	500		0.412	0.371	0.165
TPSB476*010T0650	В	47	10	85	7	125	4.7	8	650	1	0.362	0.325	0.145
TPSC476*010T0200	C	47 47	10 10	85 85	7	125 125	4.7	6	200 350	1	0.742	0.667	0.297
TPSC476*010T0350 TPSD476*010T0300V	D	47	10	85	7	125	4.7	6	300	3	0.561	0.505 0.636	0.224
TPSC686*010T0200	C	68	10	85	7	125	6.8	6	200	1	0.742	0.667	0.297
TPSC686*010T0300	C	68	10	85	7	125	6.8	6	300	1	0.606	0.545	0.242
TPSD686*010T0150V	D	68	10	85	7	125	6.8	6	150	3	1.000	0.900	0.400
TPSC107*010T0150	С	100	10	85	7	125	10	8	150	1	0.856	0.771	0.343
TPSC107*010T0200	C	100	10	85	7	125	10	8	200	1	0.742	0.667	0.297
TPSD107*010T0100V	D	100	10	85	7	125	10	6	100	3	1.225	1.102	0.490
TPSD107*010T0125V	D	100	10	85	7	125	10	6	125	3	1.095	0.986	0.438
TPSD107*010T0150V	D	100	10	85	7	125	10	6	150	3	1.000	0.900	0.400
TPSD157*010T0085V	D	150	10	85	7	125	15	8	85	3	1.328	1.196	0.531
TPSD157*010T0100V	D	150	10	85	7	125	15	8	100	3	1.225	1.102	0.490
TPSE157*010T0100V	Е	150	10	85	7	125	15	8	100	3	1.285	1.156	0.514
TPSD227*010T0100V	D	220	10	85	7	125	22	8	100	3	1.225	1.102	0.490
TPSD227*010T0150V	D	220	10	85	7	125	22	8	150	3	1.000	0.900	0.400
TPSE227*010T0070V	E	220	10	85	7	125	22	8	70	3	1.535	1.382	0.614
TPSE227*010T0100V	E	220	10	85	7	125	22	8	100	3	1.285	1.156	0.514
TPSE227*010T0125V	E	220	10	85	7	125	22	8	125	3	1.149	1.034	0.460
TPSE227*010T0150V TPSE337*010T0050V	E	220 330	10	85	7	125	22 33	8	150	3	1.049	0.944	0.420
TPSE337*010T0050V	E	330	10	85 85	7	125 125	33	8	50 60	3	1.817	1.635 1.492	0.727
TPSE337*010T01000V	E	330	10	85	7	125	33	8	100	3	1.285	1.156	0.663
1F3L337 01010100V	<u> </u>	330	10	00	16 Vol	t @ 85°C	00	0	100	J	1.200	1.130	0.514
TPSA105*016T6200	Α	1.0	16	85	10 10	125	0.5	4	6200	1	0.110	0.099	0.044
TPSA225*016T1800	Α	2.2	16	85	10	125	0.5	6	1800	1	0.204	0.184	0.082
TPSA225*016T3500	A	2.2	16	85	10	125	0.5	6	3500	1	0.146	0.132	0.059
TPSA335*016T3500	Α	3.3	16	85	10	125	0.5	6	3500	1	0.146	0.132	0.059
TPSB335*016T2500	В	3.3	16	85	10	125	0.5	6	2500	1	0.184	0.166	0.074
TPSA475*016T2000	Α	4.7	16	85	10	125	0.8	6	2000	1	0.194	0.174	0.077
TPSB475*016T0800	В	4.7	16	85	10	125	0.8	6	800	1	0.326	0.293	0.130
TPSB475*016T1500	В	4.7	16	85	10	125	0.8	6	1500	1	0.238	0.214	0.095
TPSA685*016T1500	Α	6.8	16	85	10	125	1.1	6	1500	11	0.224	0.201	0.089
TPSB685*016T0600	В	6.8	16	85	10	125	1.1	6	600	11	0.376	0.339	0.151
TPSB685*016T1200	В	6.8	16	85	10	125	1.1	6	1200		0.266	0.240	0.106
TPSA106*016T1000	A	10	16	85	10	125	1.6	6	1000	1	0.274	0.246	0.110
TPSB106*016T0500	В	10 10	16 16	85	10	125	1.6	6	500	1	0.412	0.371	0.165
TPSB106*016T0800 TPSC106*016T0500	B	10	16	85 85	10	125 125	1.6 1.6	6	800 500	1	0.326	0.293	0.130
TPSB156*016T0500	В	15	16	85	10	125	2.4	6	500	1	0.412	0.422	0.165
TPSB156*016T0800	В	15	16	85	10	125	2.4	6	800	1	0.326	0.293	0.130
TPSC156*016T0300	C	15	16	85	10	125	2.4	6	300	1	0.606	0.545	0.130
TPSC156*016T0700	C	15	16	85	10	125	2.4	6	700	1	0.396	0.357	0.159
TPSB226*016T0400	В	22	16	85	10	125	3.5	6	400	1	0.461	0.415	0.184
TPSB226*016T0600	В	22	16	85	10	125	3.5	6	600	1	0.376	0.339	0.151
TPSC226*016T0300	С	22	16	85	10	125	3.5	6	300	1	0.606	0.545	0.242
TPSC226*016T0375	C	22	16	85	10	125	3.5	6	375	1	0.542	0.487	0.217
TPSD226*016T0500V	D	22	16	85	10	125	3.5	6	500	3	0.548	0.493	0.219
TPSD226*016T0700V	D	22	16	85	10	125	3.5	6	700	3	0.463	0.417	0.185
TPSC336*016T0225	С	33	16	85	10	125	5.3	6	225	1	0.699	0.629	0.280
TPSC336*016T0300	С	33	16	85	10	125	5.3	6	300	1	0.606	0.545	0.242
TPSD336*016T0200V	D	33	16	85	10	125	5.3	6	200	3	0.866	0.779	0.346
TPSC476*016T0350	C	47	16	85	10	125	7.5	6	350	1	0.561	0.505	0.224
TPSD476*016T0200V	D	47	16	85	10	125	7.5	6	200	3	0.866	0.779	0.346
TPSC686*016T0200	С	68	16	85	10	125	10.9	6	200	1	0.742	0.667	0.297
	D	68	16	85	10	125	10.9	6	150	3	1.000	0.900	0.400
TPSD686*016T0150V		100	16	85	10	125	16	6	100	3	1.225	1.102	0.490
TPSD686*016T0150V TPSD107*016T0100V	D	100	4.0	O.E	1 10								
TPSD686*016T0150V TPSD107*016T0100V TPSD107*016T0125V	D	100	16	85	10	125	16	6	125	3	1.095	0.986	
TPSD686*016T0150V TPSD107*016T0100V TPSD107*016T0125V TPSD107*016T0150V	D D	100	16	85	10	125	16	6	150	3	1.000	0.900	0.400
TPSD686*016T0150V TPSD107*016T0100V TPSD107*016T0125V TPSD107*016T0150V TPSE107*016T0100V	D D E	100 100	16 16	85 85	10 10	125 125	16 16	6 6	150 100	3	1.000 1.285	0.900 1.156	0.400 0.514
TPSD686*016T0150V TPSD107*016T0100V TPSD107*016T0125V TPSD107*016T0150V	D D	100	16	85	10	125	16	6	150	3	1.000	0.900	0.400



Low ESR - Automotive Product Range

AVX	Case	Capacitance	Rated	Rated	Category	Category	DCL	DF	ESR Mov (m0)	MCI	100kHz	RMS Cur	rent (A)
Part No.	Size	(μF)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μΑ) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
			(-/	(-)		t @ 85°C							
TPSA105*020T3000	Α	1	20	85	13	125	0.5	4	3000	1	0.158	0.142	0.063
TPSA155*020T3000	Α	1.5	20	85	13	125	0.5	6	3000		0.158	0.142	0.063
TPSA225*020T3000	A	2.2	20	85	13	125	0.5	6	3000	1	0.158	0.142	0.063
TPSB225*020T1700 TPSA335*020T2500	В	2.2 3.3	20 20	85 85	13 13	125 125	0.5	6	1700 2500	1	0.224	0.201	0.089
TPSB335*020T1300	B	3.3	20	85	13	125	0.7	6	1300	1	0.173	0.130	0.102
TPSA475*020T1800	A	4.7	20	85	13	125	0.7	6	1800	1	0.204	0.230	0.102
TPSB475*020T0750	В	4.7	20	85	13	125	0.9	6	750	1	0.337	0.303	0.135
TPSB475*020T1000	В	4.7	20	85	13	125	0.9	6	1000	1	0.292	0.262	0.117
TPSB685*020T0600	В	6.8	20	85	13	125	1.4	6	600	1	0.376	0.339	0.151
TPSB685*020T1000	В	6.8	20	85	13	125	1.4	6	1000	1	0.292	0.262	0.117
TPSC685*020T0700	С	6.8	20	85	13	125	1.4	6	700	11	0.396	0.357	0.159
TPSB106*020T0500	В	10	20	85	13	125	2	6	500	1	0.412	0.371	0.165
TPSB106*020T1000	В	10	20	85	13	125	2	6	1000	1	0.292	0.262	0.117
TPSC106*020T0500 TPSC106*020T0700	С	10 10	20 20	85 85	13 13	125 125	2	6	500 700	1	0.469	0.422	0.188
TPSB156*020T0500	В	15	20	85	13	125	3	6	500	1	0.396	0.357	0.159
TPSC156*020T0400	C	15	20	85	13	125	3	6	400	1	0.524	0.371	0.103
TPSC156*020T0450	C	15	20	85	13	125	3	6	450	1	0.494	0.472	0.198
TPSC226*020T0400	C	22	20	85	13	125	4.4	6	400	1	0.524	0.472	0.130
TPSD226*020T0200V	D	22	20	85	13	125	4.4	6	200	3	0.866	0.779	0.346
TPSD226*020T0300V	D	22	20	85	13	125	4.4	6	300	3	0.707	0.636	0.283
TPSC336*020T0300	С	33	20	85	13	125	6.6	6	300	1	0.606	0.545	0.242
TPSD336*020T0160V	D	33	20	85	13	125	6.6	6	160	3	0.968	0.871	0.387
TPSD336*020T0200V	D	33	20	85	13	125	6.6	6	200	3	0.866	0.779	0.346
TPSD476*020T0200V	D	47	20	85	13	125	9.4	6	200	3	0.866	0.779	0.346
TPSD686*020T0150V	D	68	20	85	13	125	13.6	6	150	3	1.000	0.900	0.400
TPSD686*020T0200V	D	68	20	85	13	125	13.6	6	200	3	0.866	0.779	0.346
TPSD686*020T0300V	D	68	20	85	13	125	13.6	6	300	3	0.707	0.636	0.283
TPSE686*020T0125V	E	68	20	85	13 13	125 125	13.6	6	125	3	1.149	1.034	0.460
TPSE686*020T0150V TPSE686*020T0200V	E	68 68	20	85 85	13	125	13.6 13.6	6	150 200	3	1.049 0.908	0.944	0.420
TPSE107*020T0100V	E	100	20	85	13	125	20	6	100	3	1.285	1.156	0.514
TPSE107*020T0150V	E	100	20	85	13	125	20	6	150	3	1.049	0.944	0.420
TPSE107*020T0200V	Ē	100	20	85	13	125	20	6	200	3	0.908	0.817	0.363
						t @ 85°C			,,-,				
TPSA474*025T7000	Α	0.47	25	85	17	125	0.5	4	7000	1	0.104	0.093	0.041
TPSA684*025T6000	Α	0.68	25	85	17	125	0.5	4	6000	1	0.112	0.101	0.045
TPSA105*025T4000	Α	1.0	25	85	17	125	0.5	4	4000	11	0.137	0.123	0.055
TPSA155*025T3000	Α	1.5	25	85	17	125	0.5	6	3000	1	0.158	0.142	0.063
TPSA225*025T2500	Α	2.2	25	85	17	125	0.6	6	2500	1	0.173	0.156	0.069
TPSB225*025T0900	В	2.2	25	85	17	125	0.6	6	900	1	0.307	0.277	0.123
TPSB225*025T1200	В	2.2	25	85	17	125	0.6	6	1200	1	0.266	0.240	0.106
TPSB225*025T2500	B	2.2 3.3	25 25	85 85	17 17	125 125	0.6	6	2500	1	0.184	0.166	0.074
TPSB335*025T0750 TPSB335*025T1500	В	3.3	25	85	17	125	0.8	6	750 1500	1	0.337	0.303	0.135
TPSB335*025T2000	В	3.3	25	85	17	125	0.8	6	2000	1	0.206	0.214	0.082
TPSB475*025T0700	В	4.7	25	85	17	125	1.2	6	700	1	0.200	0.314	0.139
TPSB475*025T0900	В	4.7	25	85	17	125	1.2	6	900	1	0.307	0.277	0.123
TPSC475*025T0700	C	4.7	25	85	17	125	1.2	6	700	1	0.396	0.357	0.159
TPSB685*025T0700	В	6.8	25	85	17	125	1.7	6	700	1	0.348	0.314	0.139
TPSC685*025T0500	С	6.8	25	85	17	125	1.7	6	500	1	0.469	0.422	0.188
TPSC685*025T0600	С	6.8	25	85	17	125	1.7	6	600	1	0.428	0.385	0.171
TPSC685*025T0700	С	6.8	25	85	17	125	1.7	6	700	1	0.396	0.357	0.159
TPSC106*025T0300	С	10	25	85	17	125	2.5	6	300	1	0.606	0.545	0.242
TPSC106*025T0500	С	10	25	85	17	125	2.5	6	500	1	0.469	0.422	0.188
TPSD106*025T0500V	D	10	25	85	17	125	2.5	6	500	3	0.548	0.493	0.219
TPSC156*025T0220	C	15	25	85	17	125	3.8	6	220	1	0.707	0.636	0.283
TPSC156*025T0300	C	15	25	85	17	125	3.8	6	300	1	0.606	0.545	0.242
TPSD156*025T0300V TPSC226*025T0275	C	15 22	25 25	85 85	17 17	125 125	3.8 5.5	6	300 275	3	0.707	0.636	0.283
TPSC226*025T0275	C	22	25	85	17	125	5.5	6	400	1	0.524	0.369	0.233
TPSD226*025T0200V	D	22	25	85	17	125	5.5	6	200	3	0.866	0.472	0.210
TPSD226*025T0300V	D	22	25	85	17	125	5.5	6	300	3	0.707	0.636	0.283
TPSD336*025T0200V	D	33	25	85	17	125	8.3	6	200	3	0.866	0.030	0.265
TPSD336*025T0300V	D	33	25	85	17	125	8.3	6	300	3	0.707	0.636	0.283
TPSD476*025T0125V	D	47	25	85	17	125	11.8	6	125	3	1.095	0.986	0.438
	D	47	25	85	17	125	11.8	6	150	3	1.000	0.900	0.400
TPSD476*02510150V	1 1												,
TPSD476*025T0150V TPSD476*025T0250V	D	47	25	85	17	125	11.8	6	250	3	0.775	0.697	0.310



Low ESR - Automotive Product Range

RATINGS & PART NUMBER REFERENCE

AVX	Case	Capacitance	Rated	Rated	Category	_ Category	DCL	DF	ESR		100kHz	z RMS Cur	rent (A)
Part No.	Size	(μF)	Voltage (V)	Temperature (°C)	Voltage (V)	Temperature (°C)	(μΑ) Max.	% Max.	Max. (mΩ) @ 100kHz	MSL	25°C	85°C	125°C
			(*)	(0)		t @ 85°C	MUA	IVIGA	@ TOOKITE			l .	
TPSA334*035T6000	Α	0.33	35	85	23	125	0.5	4	6000	1	0.112	0.101	0.045
TPSA474*035T6000	Α	0.47	35	85	23	125	0.5	4	6000	1	0.112	0.101	0.045
TPSA684*035T6000	Α	0.68	35	85	23	125	0.5	4	6000	1	0.112	0.101	0.045
TPSA105*035T3000	Α	1	35	85	23	125	0.5	4	3000	1	0.158	0.142	0.063
TPSB105*035T2000	В	1	35	85	23	125	0.5	4	2000	1	0.206	0.186	0.082
TPSA155*035T3000	Α	1.5	35	85	23	125	0.5	6	3000	1	0.158	0.142	0.063
TPSB155*035T2500	В	1.5	35	85	23	125	0.5	6	2500	1	0.184	0.166	0.074
TPSB225*035T0750	В	2.2	35	85	23	125	0.8	6	750	1	0.337	0.303	0.135
TPSB225*035T1500	В	2.2	35	85	23	125	0.8	6	1500	1	0.238	0.214	0.095
TPSB225*035T2000	В	2.2	35	85	23	125	0.8	6	2000	1	0.206	0.186	0.082
TPSC225*035T1000	С	2.2	35	85	23	125	0.8	6	1000	1	0.332	0.298	0.133
TPSB335*035T1000	В	3.3	35	85	23	125	1.2	6	1000	1	0.292	0.262	0.117
TPSC335*035T0700	С	3.3	35	85	23	125	1.2	6	700	1	0.396	0.357	0.159
TPSB475*035T0700	В	4.7	35	85	23	125	1.6	6	700	11	0.348	0.314	0.139
TPSB475*035T1500	В	4.7	35	85	23	125	1.6	6	1500	1	0.238	0.214	0.095
TPSC475*035T0600	С	4.7	35	85	23	125	1.6	6	600	1	0.428	0.385	0.171
TPSD475*035T0700V	D	4.7	35	85	23	125	1.6	6	700	3	0.463	0.417	0.185
TPSC685*035T0350	С	6.8	35	85	23	125	2.4	6	350	1	0.561	0.505	0.224
TPSD685*035T0400V	D	6.8	35	85	23	125	2.4	6	400	3	0.612	0.551	0.245
TPSD685*035T0500V	D	6.8	35	85	23	125	2.4	6	500	3	0.548	0.493	0.219
TPSC106*035T0600	С	10	35	85	23	125	3.5	6	600	1	0.428	0.385	0.171
TPSD106*035T0300V	D	10	35	85	23	125	3.5	6	300	3	0.707	0.636	0.283
TPSD156*035T0300V	D	15	35	85	23	125	5.3	6	300	3	0.707	0.636	0.283
TPSD226*035T0200V	D	22	35	85	23	125	7.7	6	200	3	0.866	0.779	0.346
TPSD226*035T0300V	D	22	35	85	23	125	7.7	6	300	3	0.707	0.636	0.283
TPSD226*035T0400V	D	22	35	85	23	125	7.7	6	400	3	0.612	0.551	0.245
TPSE226*035T0200V	E	22	35	85	23	125	7.7	6	200	3	0.908	0.817	0.363
TPSE226*035T0300V	E	22	35	85	23	125	7.7	6	300	3	0.742	0.667	0.297
TPSE336*035T0250V	E	33	35	85	23	125	11.6	6	250	3	0.812	0.731	0.325
TPSE336*035T0300V	Е	33	35	85	23	125	11.6	6	300	3	0.742	0.667	0.297
TDC 4.00.4*0.F0T7000	۸	0.00	F0	0.5		t @ 85°C	0.5	1	7000	4	0 101	0.000	0.044
TPSA224*050T7000	A	0.22	50	85	33	125	0.5	4	7000	<u> </u>	0.104	0.093	0.041
TPSA334*050T7000 TPSA474*050T6500	A	0.33 0.47	50 50	85 85	33	125 125	0.5 0.5	4	7000 6500	1	0.104	0.093	0.041
TPSB474*050T6000	В	0.47	50	85	33	125	0.5	4	6000	1	0.107	0.107	0.043
TPSB474 05016000 TPSB684*050T4000	В	0.47	50	85	33	125	0.5	4	4000	1	0.119	0.107	0.048
TPSB105*050T3000	В	1	50	85	33	125	0.5	6	3000	1	0.146	0.151	0.038
TPSC105*050T2500	С	1	50	85	33	125	0.5	4	2500	1	0.100	0.131	0.084
TPSC105 05012500	C	1.5	50	85	33	125	0.8	6	1500	1	0.210	0.169	0.108
TPSC155*050T2000	C	1.5	50	85	33	125	0.8	6	2000	1	0.235	0.244	0.108
TPSC225*050T1500	C	2.2	50	85	33	125	1.1	8	1500	1	0.233	0.244	0.108
TPSD225*050T1200V	D	2.2	50	85	33	125	1.1	6	1200	3	0.354	0.244	0.100
TPSC335*050T1000	C	3.3	50	85	33	125	1.6	6	1000	1	0.332	0.298	0.133
TPSD335*050T0800V	D	3.3	50	85	33	125	1.7	6	800	3	0.433	0.390	0.173
TPSC475*050T0800	C	4.7	50	85	33	125	2.4	6	800	1	0.371	0.334	0.178
TPSD475*050T0250V	D	4.7	50	85	33	125	2.4	6	250	1	0.775	0.697	0.310
TPSD475*050T0500V	D	4.7	50	85	33	125	2.4	6	500	3	0.548	0.493	0.219
TPSD475*050T0700V	D	4.7	50	85	33	125	2.4	6	700	3	0.463	0.417	0.185
TPSD685*050T0500V	D	6.8	50	85	33	125	3.4	6	500	3	0.548	0.493	0.100
TPSD685*050T0600V	D	6.8	50	85	33	125	3.4	6	600	3	0.500	0.450	0.200
TPSD106*050T0500V	D	10	50	85	33	125	5	6	500	3	0.548	0.493	0.219
TPSE106*050T0250V	Ē	10	50	85	33	125	5	6	250	3	0.812	0.731	0.325
TPSE106*050T0300V	E	10	50	85	33	125	5	6	300	3	0.742	0.667	0.297
TPSE106*050T0400V	Ē	10	50	85	33	125	5	6	400	3	0.642	0.578	0.257
TPSE106*050T0500V	E	10	50	85	33	125	5	6	500	3	0.574	0.517	0.230
						120	_			_		1 0.0 17	1 0.200

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 216.

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.



^{*}Please use "U" instead of "T" in the suffix letter for 13" reel packaging

Please use specific PN for automotive version – see "HOW TO ORDER".



Low ESR - Automotive Product Range

QUALIFICATION TABLE

TEST		TF	S automotive	series (Temperature i	range -	55°C to	+125°C)				
IESI		Condition		Characteristics								
	Determine	after application of rate	d voltage for 2000	Visual examination	no visible damage							
	+48/-0 ho	urs at 85±2°C and then le	eaving 1-2 hours at	DCL	1.25	x initial	limit					
Endurance		perature. Also determine gory voltage for 2000 +48		ΔC/C	withi	n ±10%	of initial	value				
	then leaving	ng 1-2 hours at room tem		DF	initia	limit						
	supply im	pedance to be $\leq 0.1 \Omega/V$.		ESR	1.25	x initial	limit					
				Visual examination	no vi	sible da	mage					
				DCL	1.25	x initial	limit					
Storage Life	125°C, 0	V, 2000h		ΔC/C	withi	n ±10%	of initial	value				
· ·				DF	initia	limit						
				ESR	1.25	x initial	limit					
				Visual examination	no vi	sible da	mage					
	Determine	e after storage without a C and 95±2% relative hu	applied voltage	DCL	1.5 x	initial lir	nit					
Humidity	hours and	then recovery 1-2 hou	rs at room	ΔC/C	within ±10% of initial value							
-	temperati			DF	1.2 x	1.2 x initial limit						
				ESR	1.25	x initial	limit					
				Visual examination	no vi	sible da	mage					
Biased	Determine	e after leaving for 1000	hours at 85±2°C.	DCL	2 x ir	nitial limi	t					
Humidity	85% relat	tive humidity and rated	voltage and then	ΔC/C	withi	n ±10%	of initial	value				
riamilaity	recovery	1-2 hours at room temp	erature.	DF	1.2 x initial limit							
				ESR	1.25 x initial limit							
	Step	Temperature°C	Duration(min)		+20°C	-55°C	+20°C	+85°C	+125°C	+20°C		
Temperature	2	+20±2	15 15	DCL	IL*	n/a	IL*	10 x IL*	12.5 x IL*	IL*		
Stability	3	-55+0/-3 +20±2	15	ΔC/C	n/a	+0/-10%	±5%	+10/-0%	+12/-0%	±5%		
Ctability	4	+85+3/-0	15	DF	IL*	1.5 x IL*	IL*	1.5 x IL*	2 x IL*	11 *		
	5	+125+3/-0	15									
	6	+20±2	15	ESR	1.25 x IL*	2.5 x IL*	1.25 x IL*	1.25 x IL*	1.25 x IL*	1.25 x IL		
	Test temr	perature: 125°C+3/0°C	:	Visual examination	no vi	sible da	mage					
_	Test volta	ge: Category voltage	at 125°C	DCL	initia	limit						
Surge	Surge vo	ltage: 1.3 x category votection resistance 10	oltage at 125°C	DOL	пппа	IIIIIL						
Voltage	Discharge	e resistance: 1000Ω	OO ± 1 OO 1	ΔC/C	withi	n ±5% c	of initial v	/alue				
		of cycles: 1000x ration: 6 min; 30 sec c 5 min 30 sec di	harge,	DF	initia	limit						
		Sec al	scharge	ESR	1.25	x initial	limit					

*Initial Limit



Mouser Electronics

Authorized Distributor

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AVX:

TPSE226M035R0300	TPSE227K010R0050	TPSE227K010R0100	TPSE227M010R0050	TPSE336K025R0300
TPSE336M035R0100	TPSE337K010R0050	TPSE337M010R0050	TPSE337M010R0100	TPSE476K035R0250
TPSE477K006R0045	TPSE477K010R0045	TPSE477K010R0100	TPSE477M010R0045	TPSE477M010R0100
TPSE686K025R0200	TPSE686M020R0125	TPSE686M020R0150	TPSE686M025R0125	TPSV227M016R0050
TPSV227M016R0075	TPSV337M010R0100	TPSV687K006R0035	TPSW336K016R0175	TPSW476K010R0125
TPSW476K010R0150	TPSW686K006R0125	TPSY157K010R0100	TPSY686K016R0200	TPSD107M020R0085
TPSD156K035R0100	TPSD156M025R0100	TPSD156M035R0300	TPSD157K006R0050	TPSD157K010R0085
TPSD157M006R0050	TPSD157M016R0100	TPSD157M016R0125	TPSD157M016R0150	TPSD226K025R0100
TPSD226M025R0100	TPSD227K010R0150	TPSD227M010R0050	TPSD336K035R0300	TPSD336M025R0300
TPSD336M035R0300	TPSD337K006R0045	TPSD337K010R0100	TPSD337K010R0150	TPSD475M050R0700
TPSD686M010R0100	TPSD686M016R0070	TPSE106K050R0400	TPSE107K016R0100	TPSE107K016R0150
TPSE107K020R0150	TPSE107M016R0055	TPSE226K035R0300	TPSA105K035R3000	TPSA105M035R3000
TPSA106K010R0900	TPSA106K010R1800	TPSA226M010R0900	TPSA335M016R3500	TPSA475K020R1800
TPSA476M004R0500	TPSA684K035R6000	TPSB106M016R0800	TPSB106M020R1000	TPSB156K016R0800
TPSB225K025R2500	TPSB225K035R2000	TPSB226K016R0600	TPSB226M016R0600	TPSB476K010R0650
TPSB476M010R0500	TPSC107K006R0150	TPSC107M010R0100	TPSC226K016R0375	TPSC227K006R0070
TPSC227M006R0250	TPSC335M035R0700	TPSC336M016R0300	TPSC475M035R0600	TPSC476K016R0350
TPSC476M010R0350	TPSC685M025R0600	TPSD106M035R0125	TPSD107K016R0125	TPSD107M010R0050
TPSD107M010R0080	TPSD107M010R0100	TPSD107M016R0060	TPSA156M006R1500	TPSA225K010R1800
TPSA225K016R1800	TPSA225M010R1800	TPSA335M020R2500	TPSA336K006R0600	TPSA475M020R1800