

TCJ Series



Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode



- Conductive polymer electrode reduces ignition failure mode
- Lower ESR
- 3x reflow 260°C compatible
- CV range: 0.47-470µF / 2.5-125V
- 16 case sizes available



Elektra Award 2010



LEAD-FREE
LEAD-FREE COMPATIBLE
COMPONENT



RoHS
COMPLIANT

CASE DIMENSIONS: millimeters (inches)



For part marking see page 132

Code	EIA Code	EIA Metric	L±0.20 (0.008)	W+0.20 (0.008) -0.10 (0.004)	H+0.20 (0.008) -0.10 (0.004)	W ₁ ±0.20 (0.008)	A+0.30 (0.012) -0.20 (0.008)	S Min.
A	1206	3216-18	3.20 (0.126)	1.60 (0.063)	1.60 (0.063)	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
B	1210	3528-21	3.50 (0.138)	2.80 (0.110)	1.90 (0.075)	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
C	2312	6032-28	6.00 (0.236)	3.20 (0.126)	2.60 (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)
G	1206	3216-15	3.20 (0.126)	1.60 (0.063)	1.50 (0.059) max	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
H	1210	3528-15	3.50 (0.138)	2.80 (0.110)	1.50 (0.059) max	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
K	1206	3216-10	3.20 (0.126)	1.60 (0.063)	1.00 (0.039) max	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
N	0805	2012-10	2.05 (0.081)	1.30 (0.051)	1.00 (0.039) max	1.00 (0.039)	0.50 (0.020)	0.85 (0.033)
P	0805	2012-15	2.05 (0.081)	1.35 (0.050)	1.50 (0.059) max	1.00±0.10 (0.039±0.004)	0.50 (0.020)	0.85 (0.033)
R	0805	2012-12	2.05 (0.081)	1.30 (0.051)	1.20 (0.047) max	1.00±0.10 (0.039±0.004)	0.50 (0.020)	0.85 (0.033)
S	1206	3216-12	3.20 (0.126)	1.60 (0.063)	1.20 (0.047) max	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
T	1210	3528-12	3.50 (0.138)	2.80 (0.110)	1.20 (0.047) max	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
V	2924	7361-38	7.30 (0.287)	6.10 (0.240)	3.55 (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)
Y	2917	7343-20	7.30 (0.287)	4.30 (0.169)	2.00 (0.079) max	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)

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

HOW TO ORDER

TCJ

Type

A

Case Size
See table above

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

M

Tolerance
M=±20%

004

Rated DC Voltage
002=2.5Vdc
004=4Vdc
006=6.3Vdc
010=10Vdc
016=16Vdc
020=20Vdc
025=25Vdc
035=35Vdc
050=50Vdc
063=63Vdc
075=75Vdc
100=100Vdc
125=125Vdc

R

Packaging
R = Pure Tin 7" Reel
S = Pure Tin 13" Reel

0300

ESR in mΩ

TECHNICAL SPECIFICATIONS

Technical Data:

All technical data relate to an ambient temperature of +25°C

Capacitance Range: 0.47 µF to 470 µF

Capacitance Tolerance: ±20%

Leakage Current DCL: 0.1CV

Rated Voltage (V _R)	≤ +85°C:	2.5	4	6.3	10	16	2.5	4	6.3	10	16	20	25	35	50	63	75	100	125
Category Voltage (V _C)	≤ +105°C:						2	3.2	5	8	12.8	16	20	28	40	50.4	60	80	100
Category Voltage (V _C)	≤ +125°C:	1.7	2.7	4	7	10													
Surge Voltage (V _S)	≤ +85°C:	3.3	5.2	8	13	20	3.25	5.2	8	13	20.8	26	33	46	65	81.9	97.5	130	162.5
Surge Voltage (V _S)	≤ +105°C:						2.5	4	6	10	16	20	25	35	50	63	75	100	125
Surge Voltage (V _S)	≤ +125°C:	2.2	3.4	5	8	13													

Temperature Range: -55°C to +125°C, -55°C to +105°C

Reliability: 1% per 1000 hours at 85°C, V_R with 0.1Ω/V series impedance, 60% confidence level



TCJ Series



Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

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

125°C RATED PARTS

Capacitance		Rated Voltage DC (V _R) to 85°C				
μF	Code	2.5V (e)	4V (G)	6.3V (J)	10V (A)	16V (C)
1.0	105					
4.7	475				K(500), R(500)	
6.8	685					A(200)
10	106			A(300), R(500)	A(300)	A(200), B(200), T(150,200)
15	156		A(300)	A(300)	A(200)	B(150)
22	226		A(300)	A(300), K(400) R(500), S(400), T(150)	B(300), T(150)	B(150)
33	336		A(300)	A(200) B(70,200) T(150)	B(70,200) C(100) T(70,150)	
47	476		A(200), T(80)	A(200), B(70) K(400), P(500) T(80,120)	B(70), C(100)	
68	686	A(250)	A(250), B(70) T(80)	B(55,70) C(100), W(70)		
100	107	A(200), B(70)	A(200), B(70) G(300), T(150)	B(45,69,70)		
150	157	B(70)	B(70)	B(45,69,70) H(200), W(40,70)		
220	227		B(45,70)	B(70,200)		

105°C RATED PARTS

Cap		Rated Voltage DC (V _R) to 85°C												
μF	Code	2.5V (e)	4V (G)	6.3V (J)	10V (A)	16V (C)	20V (D)	25V (E)	35V (V)	50V (T)	63V (J)	75V (P)	100V (A)	125V (B)
0.47	474										B(400)			
0.68	684									B(400)	B(300)			
1.0	105							N*, P(500)	A(250)*	A*, B(300)	B(300), C(300)			
1.5	155								B(200)	B(300), C(300)	C(300)			
2.2	225								B(200)	C(300)	C(200)			
3.3	335								B(200)	C(200)	C(200)			D(250)
4.7	475							B(150)	B(200), C(200)	C(200)	C(200), D(120)	D(150)		
6.8	685							B(150)	C(200)	C(200), D(120)	D(120), E(100,150)	D(120)	V(250)	
10	106			N(200*,500)				B(100,150)	B(200), C(200), Y(70)	D(120), E(70,100)	E(100,150)			
15	156							B(100,150), Y(70,200)*	C(200), D(70,100), W*, Y(200)*	E(70,100)				
22	226			N(500)		Y(70)		B(100,150), C(100), D(60,100), Y(70)	D(70,100), Y(70)*					
33	336					Y(70)	Y(70)	D(60,100), Y(70,100)	D(70,100), E(55,70), Y*					
47	476			K(150,200), R(500), T(70)		Y(70)	D(55)*, Y(70)	D(60,100), E(50)	E(55)					
68	686			T(200)			D(55), E(45)	E(50)						
100	107			A(70)*, B(55), T(200)		E(40)	D(55), E(45)							
150	157			B(55)		E(40)								
220	227	A(35)*	B(55)	D(50), W(100)*, Y(50)	D(40,50)									
330	337		D(50), Y(50)	D(40,50) Y(40,50)										
470	477	D(50), Y(50)	D(50) Y(50)											

Available Ratings, (ESR ratings in mOhms in brackets)

Engineering samples - please contact manufacturer

*Codes under development - subject to change

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



TCJ Series



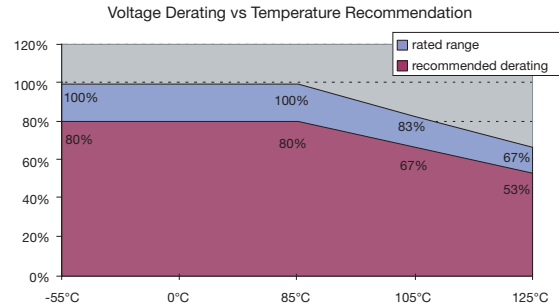
Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @100kHz	MSL	100kHz RMS Current (mA)			100kHz RMS Voltage (mV)		
								25°C	85°C	125°C	25°C	85°C	125°C
TCJB226M010#0300	B	22	10	22.0	6	300	3	532	479	213	160	144	64
TCJT226M010#0150	T	22	10	22.0	6	150	3	730	657	292	110	99	44
TCJB336M010#0070	B	33	10	33.0	6	70	3	1102	992	441	77	69	31
TCJB336M010#0200	B	33	10	33.0	6	200	3	652	587	261	130	117	52
TCJC336M010#0100	C	33	10	33.0	6	100	3	1049	944	420	105	94	42
TCJT336M010#0070	T	33	10	33.0	6	70	3	1069	962	428	75	67	30
TCJT336M010#0150	T	33	10	33.0	6	150	3	730	657	292	110	99	44
TCJB476M010#0070	B	47	10	47.0	6	70	3	1102	992	441	77	69	31
TCJC476M010#0100	C	47	10	47.0	6	100	3	1049	944	420	105	94	42
16 Volt @ 85°C (10 Volt @ 125°C)													
TCJA685M016#0200	A	6.8	16	10.9	6	200	3	612	551	245	122	110	49
TCJA106M016#0200	A	10	16	16.0	6	200	3	612	551	245	122	110	49
TCJB106M016#0200	B	10	16	16.0	6	200	3	652	587	261	130	117	52
TCJT106M016#0150	T	10	16	16.0	6	150	3	730	657	292	110	99	44
TCJT106M016#0200	T	10	16	16.0	6	200	3	632	569	253	126	114	51
TCJB156M016#0150	B	15	16	24.0	6	150	3	753	677	301	113	102	45
TCJB226M016#0150	B	22	16	35.2	6	150	3	753	677	301	113	102	45

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, 0.5RMS with DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.
 ESR allowed to move up to 1.25 times catalog limit post mounting.
 For typical weight and composition see page 126.

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.



AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @100kHz	MSL	100kHz RMS Current (mA)			100kHz RMS Voltage (mV)		
								25°C	85°C	105°C	25°C	85°C	105°C
2.5 Volt @ 85°C (2 Volt @ 105°C)													
TCJD477M002#0050	D	470	2.5	117.5	6	50	3	1732	1559	1126	87	78	56
TCJY477M002#0050	Y	470	2.5	117.5	6	50	3	1581	1423	1028	79	71	51
4 Volt @ 85°C (3.2 Volt @ 105°C)													
TCJB227M004#0055	B	220	4	88	10	55	3	1243	1119	808	68	62	44
TCJD337M004#0050	D	330	4	132	6	50	3	1732	1559	1126	87	78	56
TCJY337M004#0050	Y	330	4	132	6	50	3	1581	1423	1028	79	71	51
TCJD477M004#0050	D	470	4	188	6	50	3	1732	1559	1126	87	78	56
TCJY477M004#0050	Y	470	4	188	6	50	3	1581	1423	1028	79	71	51
6.3 Volt @ 85°C (5 Volt @ 105°C)													
TCJN106M006#0500	N	10	6.3	6.0	6	500	3	316	285	206	158	142	103
TCJN226M006#0500	N	22	6.3	13.2	10	500	3	316	285	206	158	142	103
TCJK476M006#0150	K	47	6.3	28.2	6	150	3	658	592	428	99	89	64
TCJK476M006#0200	K	47	6.3	28.2	6	200	3	570	513	371	114	103	74
TCJR476M006#0500	R	47	6.3	28.2	10	500	3	332	298	216	166	149	108
TCJT476M006#0070	T	47	6.3	28.2	8	70	3	1069	962	695	75	67	49
TCJT686M006#0200	T	68	6.3	40.8	8	200	3	632	569	411	126	114	82
TCJB107M006#0055	B	100	6.3	60	10	55	3	1243	1119	808	68	62	44
TCJT107M006#0200	T	100	6.3	60	10	200	3	632	569	411	126	114	82
TCJB157M006#0055	B	150	6.3	90	10	55	3	1243	1119	808	68	62	44
TCJD227M006#0050	D	220	6.3	138.6	6	50	3	1732	1559	1126	87	78	56
TCJY227M006#0050	Y	220	6.3	138.6	6	50	3	1581	1423	1028	79	71	51
TCJD337M006#0040	D	330	6.3	207.9	6	40	3	1936	1743	1259	77	70	50
TCJD337M006#0050	D	330	6.3	207.9	6	50	3	1732	1559	1126	87	78	56
TCJY337M006#0040	Y	330	6.3	198	12	40	3	1768	1591	1149	71	64	46
TCJY337M006#0050	Y	330	6.3	198	12	50	3	1581	1423	1028	79	71	51
10 Volt @ 85°C (8 Volt @ 105°C)													
TCJD227M010#0040	D	220	10	220	6	40	3	1936	1743	1259	77	70	50
TCJD227M010#0050	D	220	10	220	6	50	3	1732	1559	1126	87	78	56
16 Volt @ 85°C (12.8 Volt @ 105°C)													
TCJY336M016#0070	Y	33	16	52.8	6	70	3	1336	1203	869	94	84	61
TCJY476M016#0070	Y	47	16	75.2	6	70	3	1336	1203	869	94	84	61
TCJE107M016#0040	E	100	16	160.0	6	40	3	2031	1828	1320	81	73	53
TCJE157M016#0040	E	150	16	240.0	6	40	3	2031	1828	1320	81	73	53



TCJ Series



Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	DCL (μA) Max.	DF % Max.	ESR Max. (mΩ) @100kHz	MSL	100kHz RMS Current (mA)			100kHz RMS Voltage (mV)		
								25°C	85°C	105°C	25°C	85°C	105°C
63 Volt @ 85°C (50.4 Volt @ 105°C)													
TCJB474M063#0400	B	0.47	63	3.0	8	400	3	461	415	300	184	166	120
TCJB684M063#0300	B	0.68	63	4.3	8	300	3	532	479	346	160	144	104
TCJB105M063#0300	B	1.0	63	6.3	8	300	3	532	479	346	160	144	104
TCJC105M063#0300	C	1.0	63	6.3	6	300	3	606	545	394	182	163	118
TCJC155M063#0300	C	1.5	63	9.5	6	300	3	606	545	394	182	163	118
TCJC225M063#0200	C	2.2	63	13.9	6	200	3	742	667	482	148	133	96
TCJC335M063#0200	C	3.3	63	20.8	6	200	3	742	667	482	148	133	96
TCJC475M063#0200	C	4.7	63	29.6	6	200	3	742	667	482	148	133	96
TCJD475M063#0120	D	4.7	63	29.6	6	120	3	1118	1006	727	134	121	87
TCJD685M063#0120	D	6.8	63	42.8	6	120	3	1118	1006	727	134	121	87
TCJE685M063#0100	E	6.8	63	42.8	6	100	3	1285	1156	835	128	116	83
TCJE685M063#0150	E	6.8	63	42.8	6	150	3	1049	944	682	157	142	102
TCJE106M063#0100	E	10	63	63.0	6	100	3	1285	1156	835	128	116	83
TCJE106M063#0150	E	10	63	63.0	6	150	3	1049	944	682	157	142	102
75 Volt @ 85°C (60 Volt @ 105°C)													
TCJD475M075#0150	D	4.7	75	35.3	6	150	3	1000	900	650	150	135	98
TCJD685M075#0120	D	6.8	75	51.0	6	120	3	1118	1006	727	134	121	87
100 Volt @ 85°C (80 Volt @ 105°C)													
TCJV685M100#0250	V	6.8	100	68.0	8	250	3	1000	900	650	250	225	163
125 Volt @ 85°C (100 Volt @ 105°C)													
TCJD335M125#0250	D	3.3	125	41.3	8	250	3	775	697	503	194	174	126

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

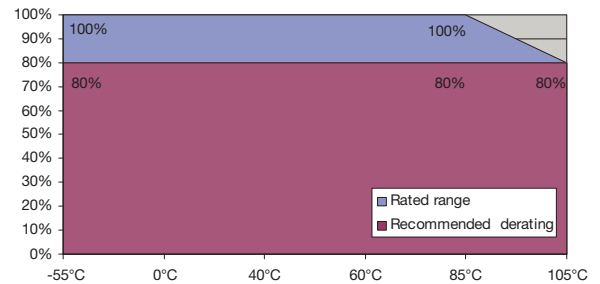
All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

ESR allowed to move up to 1.25 times catalog limit post mounting.

For typical weight and composition see page 126.

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.

Voltage vs Temperature Rating





Стандарт Электрон Связь

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

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