



FEATURES

- Conductive polymer electrode
- Benign failure mode under recommended use conditions
- Lower ESR
- 3x reflow 260°C compatible
- CV range: 0.47-470μF / 2.5-125V
- 19 case sizes available

APPLICATIONS

- Smart phone, Tablets, Notebook, LCD TV, Power supplies



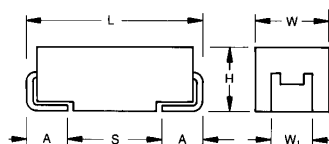
Elektra Award 2010



LEAD-FREE
LEAD-FREE COMPATIBLE
COMPONENT

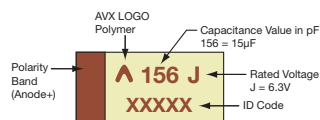


RoHS
COMPLIANT

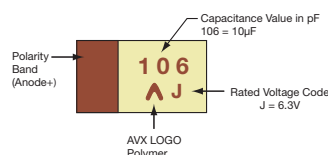


MARKING

A, B, C, D, E, G, H, K, S, T,
U, V, W, X, Y, 5 CASE



N, P, R CASE



CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L±0.20 (0.008)	W+0.20 (0.008) -0.10 (0.004)	H+0.20 (0.008) -0.10 (0.004)	W1±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)
U	2924	7361-43	7.30 (0.287)	6.10 (0.240)	4.10 (0.162)	3.10 (0.120)	1.30 (0.051)	4.40 (0.173)
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)
X	2917	7343-15	7.30 (0.287)	4.30 (0.169)	1.50 (0.059) max	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)
Y	2917	7343-20	7.30 (0.287)	4.30 (0.169)	2.00 (0.079) max	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)
5	2917	7343-40	7.30 (0.287)	4.30 (0.169)	3.80 (0.150)	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	A	226	M	004	R	0300	E
Type	Case Size See table above	Capacitance Code pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	Tolerance M = ±20%	Rated DC Voltage	Packaging R = Pure Tin 7" Reel S = Pure Tin 13" Reel	ESR in mΩ	Additional Character E = Black resin
				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			

TECHNICAL SPECIFICATIONS (Common for all TCJ series)

Technical Data:	All technical data relate to an ambient temperature of +25°C
Capacitance Tolerance:	±20%
Leakage Current DCL:	0.1CV
Reliability:	1% per 1000 hours at 85°C, V _R with 0.1Ω/V series impedance, 60% confidence level
Resistance to soldering heat:	3x260°C peak for max. 10s reflow

NOTE: Conductive Polymer

CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

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							P(500)		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				K(300,500) R(500)			B(100,150)	B(200) C(200)	C(200) X(250) Y(250)	C(200) D(120)	D(150)	D(250)	
6.8	685					A(200)		A(150), B(90,150) T(100,150)	C(200)	C(200) D(120)	D(120) E(100,150)	D(120)		
10	106			A(300) N(200,250,500) R(500)	A(200,300)	A(200) B(100,200) T(100,150,200)	A(150)	A(150) B(90,100,150)	B(200) C(200) Y(70)	D(90,120) E(70,100)	E(100,150)			
15	156		A(300)	A(300)	A(200)	B(150)		B(100,150) Y(90)	B(200), C(200) D(70,100) Y(70,100)	E(70,100)				
22	226		A(300)	A(300), K(400) N(500), R(500) S(400), T(150)	B(300) T(70,150)	B(150)	B(90,150) Y(70)	B(100,150), C(100) D(60,100) Y(70)	D(70,100) Y(150)					
33	336		A(300)	A(200) B(70,200) T(150)	B(70,200) C(100) T(70,150)	A(200) Y(45,60,70)	Y(70)	D(60,100) X(70,100) Y(60,70,100)	D(70,100) E(55,70) U(70), Y(100)					
47	476		A(200) T(80)	A(70,100,200), B(70) K(150,200,400) P(500), R(500) T(55,69,70,80,120)	B(70) C(100)	X(45,70) Y(45,70)	D(55) X(55,70) Y(70)	D(60,100) E(50) Y(100)	E(55), U(70) Y(100)					
68	686	A(250)	A(250) B(70) T(80)	B(55,70) C(100) T(200), W(70)	D(45,55) Y(45,55)	D(50) Y(50)	D(55) E(45)	D(70) E(50) Y(100)						
100	107	A(200), B(70)	A(200) B(40,70) G(300) T(70,150)	A(100,150) B(40,45,55,70) T(70,200)	D(18,25,45,55,80) Y(18,25,45,55)	D(50), E(40) Y(50)	D(55) E(45) Y(55)	D(55,70) E(80) U(70)						
150	157	B(70)	B(70), D(15) Y(15,25,45)	B(25,35,45,55,70) D(12,15,25,40) H(200), W(40,70) Y(15,25,40)	D(25,40,45,55) Y(25,40,45,55)	D(40,50,70) E(40) Y(40,50,70)		U(70)						
220	227	B(35,45,70)	B(35,45,55,60,70) D(12,15,25,40) Y(15,25,40)	B(70,200) D(12,15,25,35,40,50) H(170) Y(15,25,35,40,50)	D(12,15,25,40,50) Y(15,25,40,50)	D(50)	U(70)							
330	337	B(35,45,70) Y(25,40)	D(15,25,40,50) Y(15,25,40,50)	D(12,15,25,40,50) Y(15,25,40,50)	D(25) 5(35,100)	E(50,70) 5(100)								
470	477	D(12,15,25,40,50) Y(15,25,40,50)	D(10,12,15,25,40,50) Y(15,25,40,50)	X(50,55,100)		5(100)								

Released ratings, (ESR ratings in mOhms in parentheses)
Engineering samples - please contact AVX

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

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Maximum Operating Temperature (°C)	DCL Max. (µA)	DF Max. (%)	ESR Max. @ 100kHz (mΩ)	100kHz RMS Current (mA)				Product Category	MSL
								45°C	85°C	105°C	125°C		
2.5 Volt @ 85°C													
TCJA686M002#0250	A	68	2.5	105	17	6	250	600	400	300	—	3	3
TCJA107M002#0200	A	100	2.5	105	25	6	200	700	500	300	—	3	3
TCJB107M002#0070	B	100	2.5	125	25	6	70	1300	900	600	300	1	3
TCJB157M002#0070	B	150	2.5	105	37.5	6	70	1300	900	600	—	3	3
TCJB227M002#0035	B	220	2.5	105	55	8	35	1900	1300	900	—	3	3
TCJB227M002#0045	B	220	2.5	105	55	8	45	1700	1200	800	—	3	3
TCJB227M002#0070	B	220	2.5	105	55	8	70	1300	900	600	—	3	3
TCJB337M002#0035	B	330	2.5	105	82.5	8	35	1900	1300	900	—	3	3
TCJB337M002#0045	B	330	2.5	105	82.5	8	45	1700	1200	800	—	3	3
TCJB337M002#0070	B	330	2.5	105	82.5	8	70	1300	900	600	—	3	3
TCJY337M002#0025	Y	330	2.5	105	82.5	6	25	2700	1900	1200	—	2	3
TCJY337M002#0040	Y	330	2.5	105	82.5	6	40	2200	1500	1000	—	3	3
TCJD477M002#0012	D	470	2.5	105	117.5	6	12	4300	3000	1900	—	2	3
TCJD477M002#0015	D	470	2.5	105	117.5	6	15	3900	2700	1800	—	2	3
TCJD477M002#0025	D	470	2.5	105	117.5	6	25	3000	2100	1400	—	2	3
TCJD477M002#0040	D	470	2.5	105	117.5	6	40	2400	1700	1100	—	3	3
TCJD477M002#0050	D	470	2.5	105	117.5	6	50	2100	1500	900	—	3	3
TCJY477M002#0015	Y	470	2.5	85	117.5	6	15	3500	2500	—	—	5	3
TCJY477M002#0025	Y	470	2.5	105	117.5	6	25	2700	1900	1200	—	3	3
TCJY477M002#0040	Y	470	2.5	105	117.5	6	40	2200	1500	1000	—	3	3
TCJY477M002#0050	Y	470	2.5	105	117.5	6	50	1900	1300	900	—	3	3
4 Volt @ 85°C													
TCJA156M004#0300	A	15	4	125	6	6	300	600	400	300	200	1	3
TCJA226M004#0300	A	22	4	125	8.8	6	300	600	400	300	200	1	3
TCJA336M004#0300	A	33	4	125	13.2	6	300	600	400	300	200	1	3
TCJA476M004#0200	A	47	4	105	18.8	6	200	700	500	300	—	3	3
TCJT476M004#0080	T	47	4	105	18.8	8	80	1100	800	500	—	3	3
TCJA686M004#0250	A	68	4	105	27.2	6	250	600	400	300	—	3	3
TCJB686M004#0070	B	68	4	125	27.2	6	70	1300	900	600	300	1	3
TCJT686M004#0080	T	68	4	105	27.2	8	80	1100	800	500	—	3	3
TCJA107M004#0200	A	100	4	105	40	6	200	700	500	300	—	3	3
TCJB107M004#0040	B	100	4	105	40	8	40	1800	1300	800	—	3	3
TCJB107M004#0070	B	100	4	125	40	8	70	1300	900	600	300	1	3
TCJG107M004#0300	G	100	4	105	40	10	300	600	400	300	—	3	3
TCJT107M004#0070	T	100	4	105	40	8	70	1200	800	500	—	3	3
TCJT107M004#0150	T	100	4	105	40	8	150	800	600	400	—	3	

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Maximum Operating Temperature (°C)	DCL Max. (µA)	DF Max. (%)	ESR Max. @ 100kHz (mΩ)	100kHz RMS Current (mA)				Product Category	MSL
								45°C	85°C	105°C	125°C		
TCJA156M006#0300	A	15	6.3	125	9	6	300	600	400	300	200	1	3
TCJA226M006#0300	A	22	6.3	125	13.2	6	300	600	400	300	200	1	3
TCJK226M006#0400	K	22	6.3	105	13.2	8	400	500	400	200	—	3	3
TCJN226M006#0500	N	22	6.3	105	13.2	10	500	400	300	200	—	3	3
TCJR226M006#0500	R	22	6.3	105	13.2	10	500	400	300	200	—	3	3
TCJS226M006#0400	S	22	6.3	105	13.2	8	400	500	400	200	—	3	3
TCJT226M006#0150	T	22	6.3	105	13.2	6	150	800	600	400	—	3	3
TCJA336M006#0200	A	33	6.3	105	19.8	6	200	700	500	300	—	3	3
TCJB336M006#0070	B	33	6.3	125	19.8	6	70	1300	900	600	300	1	3
TCJB336M006#0200	B	33	6.3	125	19.8	6	200	800	600	400	200	1	3
TCJT336M006#0150	T	33	6.3	105	19.8	8	150	800	600	400	—	3	3
TCJA476M006#0070	A	47	6.3	105	28.2	6	70	1200	800	500	—	3	3
TCJA476M006#0100	A	47	6.3	105	28.2	6	100	1000	700	500	—	3	3
TCJA476M006#0200	A	47	6.3	105	28.2	6	200	700	500	300	—	3	3
TCJB476M006#0070	B	47	6.3	125	28.2	6	70	1300	900	600	300	1	3
TCJK476M006#0150	K	47	6.3	105	28.2	6	150	800	600	400	—	3	3
TCJ476M006#0200	K	47	6.3	105	28.2	6	200	700	500	300	—	3	3
TCJK476M006#0400	K	47	6.3	105	28.2	6	400	500	400	200	—	3	3
TCJP476M006#0500	P	47	6.3	105	28.2	10	500	400	300	200	—	3	3
TCJR476M006#0500	R	47	6.3	105	28.2	10	500	400	300	200	—	3	3
TCJT476M006#0055	T	47	6.3	105	28.2	8	55	1300	900	600	—	3	3
TCJT476M006#0069	T	47	6.3	105	20	8	69	1200	800	500	—	3	3
TCJT476M006#0070	T	47	6.3	105	28.2	8	70	1200	800	500	—	3	3
TCJT476M006#0080	T	47	6.3	105	28.2	8	80	1100	800	500	—	3	3
TCJT476M006#0120	T	47	6.3	105	28.2	8	120	900	600	400	—	3	3
TCJB686M006#0055	B	68	6.3	125	40.8	8	55	1500	1100	700	400	1	3
TCJB686M006#0070	B	68	6.3	125	40.8	8	70	1300	900	600	300	1	3
TCJC686M006#0100	C	68	6.3	125	40.8	6	100	1300	900	600	300	1	3
TCJT686M006#0200	T	68	6.3	105	40.8	8	200	700	500	300	—	3	3
TCJW686M006#0070	W	68	6.3	125	40.8	8	70	1400	1000	600	400	1	3
TCJA107M006#0100	A	100	6.3	105	60	10	100	1000	700	500	—	3	3
TCJA107M006#0150	A	100	6.3	105	60	10	150	800	600	400	—	3	3
TCJB107M006#0040	B	100	6.3	105	60	10	40	1800	1300	800	—	3	3
TCJB107M006#0045	B	100	6.3	105	60	10	45	1700	1200	800	—	3	3
TCJB107M006#0055	B	100	6.3	105	60	10	55	1500	1100	700	—	3	3
TCJB107M006#0070	B	100	6.3	105	60	10	70	1300	900	600	—	3	3
TCJT107M006#0070	T	100	6.3	105	60	10	70	1200	800	500	—		

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	Maximum Operating Temperature (°C)	DCL Max. (μA)	DF Max. (%)	ESR Max. @ 100kHz (mΩ)	100kHz RMS Current (mA)				Product Category	MSL
								45°C	85°C	105°C	125°C		
TCJX477M006#0055	X	470	6.3	105	282	6	55	1800	1300	800	—	3	3
TCJX477M006#0100	X	470	6.3	105	282	6	100	1300	900	600	—	3	3
10 Volt @ 85°C													
TCJK475M010#0300	K	4.7	10	105	4.7	6	300	500	400	200	—	3	3
TCJK475M010#0500	K	4.7	10	105	4.7	6	500	400	300	200	—	3	3
TCJR475M010#0500	R	4.7	10	105	4.7	6	500	400	300	200	—	3	3
TCJA106M010#0200	A	10	10	125	10	6	200	700	500	300	200	1	3
TCJA106M010#0300	A	10	10	125	10	6	300	600	400	300	200	1	3
TCJA156M010#0200	A	15	10	125	15	6	200	700	500	300	200	1	3
TCJB226M010#0300	B	22	10	125	22	6	300	600	400	300	200	1	3
TCJT226M010#0070	T	22	10	105	22	6	70	1200	800	500	—	3	3
TCJT226M010#0150	T	22	10	105	22	6	150	800	600	400	—	3	3
TCJB336M010#0070	B	33	10	125	33	6	70	1300	900	600	300	1	3
TCJB336M010#0200	B	33	10	125	33	6	200	800	600	400	200	1	3
TCJC336M010#0100	C	33	10	125	33	6	100	1300	900	600	300	1	3
TCJT336M010#0070	T	33	10	105	33	6	70	1200	800	500	—	3	3
TCJT336M010#0150	T	33	10	105	33	6	150	800	600	400	—	3	3
TCJB476M010#0070	B	47	10	105	47	6	70	1300	900	600	—	3	3
TCJC476M010#0100	C	47	10	125	47	6	100	1300	900	600	300	1	3
TCJD686M010#0045	D	68	10	105	68	6	45	2200	1500	1000	—	3	3
TCJD686M010#0055	D	68	10	105	68	6	55	2000	1400	900	—	3	3
TCJY686M010#0045	Y	68	10	105	68	6	45	2000	1400	900	—	3	3
TCJY686M010#0055	Y	68	10	105	68	6	55	1800	1300	800	—	3	3
TCJD107M010#0018	D	100	10	105	100	6	18	3500	2500	1600	—	2	3
TCJD107M010#0025	D	100	10	105	100	6	25	3000	2100	1400	—	2	3
TCJD107M010#0045	D	100	10	105	100	6	45	2200	1500	1000	—	3	3
TCJD107M010#0055	D	100	10	105	100	6	55	2000	1400	900	—	3	3
TCJD107M010#0080	D	100	10	105	100	6	80	1700	1200	800	—	3	3
TCJY107M010#0018	Y	100	10	105	100	6	18	3200	2200	1400	—	2	3
TCJY107M010#0025	Y	100	10	105	100	6	25	2700	1900	1200	—	2	3
TCJY107M010#0045	Y	100	10	105	100	6	45	2000	1400	900	—	3	3
TCJY107M010#0055	Y	100	10	105	100	6	55	1800	1300	800	—	3	3
TCJD157M010#0025	D	150	10	105	150	6	25	3000	2100	1400	—	3	3
TCJD157M010#0040	D	150	10	105	150	6	40	2400	1700	1100	—	3	3
TCJD157M010#0045	D	150	10	105	150	6	45	2200	1500	1000	—	3	3
TCJD157M010#0055	D	150	10	105	150	6	55	2000	1400	900	—	3	3
TCJY157M010#0025	Y	150	10	105	150	6	25	2700	1900	1200			

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Maximum Operating Temperature (°C)	DCL Max. (µA)	DF Max. (%)	ESR Max. @ 100kHz (mΩ)	100kHz RMS Current (mA)				Product Category	MSL
								45°C	85°C	105°C	125°C		
TCJD227M016#0050	D	220	16	105	352	10	50	2100	1500	900	—	2	3
TCJE337M016#0050	E	330	16	105	528	10	50	2200	1500	1000	—	2	3
TCJE337M016#0070	E	330	16	105	528	10	70	1900	1300	900	—	2	3
TCJ537M016#0100	5	330	16	105	528	10	100	1500	1100	700	—	2	3
TCJ5477M016#0100	5	470	16	105	752	10	100	1500	1100	700	—	3	3
20 Volt @ 85°C													
TCJA106M020#0150	A	10	20	105	20	6	150	800	600	400	—	3	3
TCJB226M020#0090	B	22	20	105	44	6	90	1200	800	500	—	3	3
TCJB226M020#0150	B	22	20	105	44	6	150	900	600	400	—	3	3
TCJY226M020#0070	Y	22	20	105	44	6	70	1600	1100	700	—	2	3
TCJY336M020#0070	Y	33	20	105	66	6	70	1600	1100	700	—	2	3
TCJD476M020#0055	D	47	20	105	94	6	55	2000	1400	900	—	2	3
TCJX476M020#0055	X	47	20	105	94	6	55	1800	1300	800	—	3	3
TCJX476M020#0070	X	47	20	105	94	6	70	1600	1100	700	—	3	3
TCJY476M020#0070	Y	47	20	105	94	6	70	1600	1100	700	—	2	3
TCJD686M020#0055	D	68	20	105	136	6	55	2000	1400	900	—	3	3
TCJE686M020#0045	E	68	20	105	136	6	45	2400	1700	1100	—	2	3
TCJD107M020#0055	D	100	20	105	200	6	55	2000	1400	900	—	2	3
TCJE107M020#0045	E	100	20	105	200	6	45	2400	1700	1100	—	3	3
TCJY107M020#0055	Y	100	20	105	200	6	55	1800	1300	800	—	2	3
TCJU227M020#0070E	U	220	20	105	440	12	70	2300	1600	1000	—	2	3
25 Volt @ 85°C													
TCJP105M025#0500	P	1.0	25	105	2.5	6	500	400	300	200	—	2	3
TCJB475M025#0100	B	4.7	25	105	11.8	6	100	1100	800	500	—	3	3
TCJB475M025#0150	B	4.7	25	105	11.8	6	150	900	600	400	—	3	3
TCJA685M025#0150	A	6.8	25	105	17	6	150	800	600	400	—	3	3
TCJB685M025#0090	B	6.8	25	105	17	6	90	1200	800	500	—	2	3
TCJB685M025#0150	B	6.8	25	105	17	6	150	900	600	400	—	3	3
TCJT685M025#0100	T	6.8	25	105	17	6	100	1000	700	500	—	3	3
TCJT685M025#0150	T	6.8	25	105	17	6	150	800	600	400	—	3	3
TCJA106M025#0150	A	10	25	105	25	6	150	800	600	400	—	3	3
TCJB106M025#0090	B	10	25	105	25	6	90	1200	800	500	—	2	3
TCJB106M025#0100	B	10	25	105	25	6	100	1100	800	500	—	2	3
TCJB106M025#0150	B	10	25	105	25	6	150	900	600	400	—	2	3
TCJB156M025#0100	B	15	25	105	37.5	6	100	1100	800	500	—	2	3
TCJB156M025#0150	B	15	25	105	37.5	6	150	900	600	400	—	2	3
TCJY156M025#0090	Y	15	25	105	37.5	6	90	1400	1000	6			

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	Maximum Operating Temperature (°C)	DCL Max. (μA)	DF Max. (%)	ESR Max. @ 100kHz (mΩ)	100kHz RMS Current (mA)				Product Category	MSL
								45°C	85°C	105°C	125°C		
TCJD226M035#0100	D	22	35	105	77	6	100	1500	1100	700	—	2	3
TCJY226M035#0150	Y	22	35	105	77	6	150	1100	800	500	—	3	3
TCJD336M035#0070	D	33	35	105	115.5	6	70	1800	1300	800	—	2	3
TCJD336M035#0100	D	33	35	105	115.5	6	100	1500	1100	700	—	2	3
TCJE336M035#0055	E	33	35	105	115.5	6	55	2100	1500	900	—	3	3
TCJE336M035#0070	E	33	35	105	115.5	6	70	1900	1300	900	—	3	3
TCJU336M035#0070E	U	33	35	125	115.5	12	70	2300	1600	1000	600	1	3
TCJY336M035#0100E	Y	33	35	105	115.5	6	100	1400	1000	600	—	3	3
TCJE476M035#0055	E	47	35	105	164.5	6	55	2100	1500	900	—	2	3
TCJU476M035#0070E	U	47	35	125	164.5	12	70	2300	1600	1000	600	1	3
TCJY476M035#0100E	Y	47	35	105	164.5	6	100	1400	1000	600	—	3	3
50 Volt @ 85°C													
TCJB684M050#0400	B	0.68	50	105	3.4	6	400	600	400	300	—	3	3
TCJB105M050#0300	B	1.0	50	105	5	6	300	600	400	300	—	3	3
TCJB155M050#0300	B	1.5	50	105	7.5	6	300	600	400	300	—	3	3
TCJC155M050#0300	C	1.5	50	105	7.5	6	300	800	600	400	—	3	3
TCJC225M050#0300	C	2.2	50	105	11	6	300	800	600	400	—	3	3
TCJC335M050#0200	C	3.3	50	105	16.5	8	200	900	600	400	—	3	3
TCJC475M050#0200	C	4.7	50	105	23.5	8	200	900	600	400	—	3	3
TCJX475M050#0250	X	4.7	50	105	23.5	6	250	800	600	400	—	2	5
TCJY475M050#0250	Y	4.7	50	105	23.5	6	250	900	600	400	—	2	5
TCJC685M050#0200	C	6.8	50	105	34	8	200	900	600	400	—	3	3
TCJD685M050#0120	D	6.8	50	105	34	10	120	1400	1000	600	—	3	3
TCJD106M050#0090	D	10	50	105	50	10	90	1600	1100	700	—	3	3
TCJD106M050#0120	D	10	50	105	50	10	120	1400	1000	600	—	3	3
TCJE106M050#0070	E	10	50	105	50	6	70	1900	1300	900	—	3	3
TCJE106M050#0100	E	10	50	105	50	6	100	1600	1100	700	—	3	3
TCJE156M050#0070	E	15	50	105	75	6	70	1900	1300	900	—	3	3
TCJE156M050#0100	E	15	50	105	75	6	100	1600	1100	700	—	3	3
63 Volt @ 85°C													
TCJB474M063#0400	B	0.47	63	105	3	8	400	600	400	300	—	3	3
TCJB684M063#0300	B	0.68	63	105	4.3	8	300	600	400	300	—	3	3
TCJB105M063#0300	B	1.0	63	105	6.3	8	300	600	400	300	—	3	3
TCJC105M063#0300	C	1.0	63	105	6.3	6	300	800	600	400	—	3	3
TCJC155M063#0300	C	1.5	63	105	9.5	6	300	800	600	400	—	3	3
TCJC225M063#0200	C	2.2	63	105	13.9	6	200	900	600	400	—	3	3
TCJC335M063#0200	C	3.3	63	105									

PRODUCT CATEGORY 1 (TEMPERATURE RANGE -55°C TO +125°C)

TEST	Condition	Characteristics						
Endurance	Apply rated voltage (Ur) at 85°C and / or 2/3 rated voltage (Ur) at 125°C for 2000 hours through a circuit impedance of $\leq 0.1\Omega/V$. Stabilize at room temperature for 1-2 hours before measuring.	Visual examination	no visible damage					
		DCL	1.25 x initial limit					
		$\Delta C/C$	within $\pm 20\%$ of initial value					
		DF	1.5 x initial limit					
		ESR	2 x initial limit					
Storage Life	Store at 125°C, no voltage applied, for 2000 hours. Stabilize at room temperature for 1-2 hours before measuring.	Visual examination	no visible damage					
		DCL	2 x initial limit					
		$\Delta C/C$	within $\pm 20\%$ of initial value					
		DF	1.5 x initial limit					
		ESR	2 x initial limit					
Humidity	Store at 65°C and 95% relative humidity for 500 hours, with no applied voltage. Stabilize at room temperature and humidity for 1-2 hours before measuring.	Visual examination	no visible damage					
		DCL	3 x initial limit					
		$\Delta C/C$	within +30/-20% of initial value					
		DF	1.5 x initial limit					
		ESR	2 x initial limit					
Temperature Stability	Step	Temperature°C	Duration(min)					
	1	+20	15					
	2	-55	15					
	3	+20	15					
	4	+85	15					
	5	+125	15					
	6	+20	15					
Surge Voltage	Apply 1.3x 2/3x rated voltage (Ur) at 125°C for 1000 cycles of duration 6 min (30 sec charge, 5 min 30 sec discharge) through a charge / discharge resistance of 1000 Ω	Visual examination	no visible damage					
		DCL	initial limit					
		$\Delta C/C$	within +10/-20% of initial value for Vr $\leq$ 10V within +20/-30% of initial value for Vr $\geq$ 16V					
		DF	1.25 x initial limit					
		ESR	initial limit					
Mechanical Shock	MIL-STD-202, Method 213, Condition C	Visual examination	no visible damage					
		DCL	initial limit					
		$\Delta C/C$	within $\pm 5\%$ of initial value					
		DF	initial limit					
		ESR	initial limit					
Vibration	MIL-STD-202, Method 204, Condition D	Visual examination	no visible damage					
		DCL	initial limit					
		$\Delta C/C$	within $\pm 5\%$ of initial value					
		DF	initial limit					
		ESR	initial limit					

*Initial Limit

Initial measurement max. 1hr after the removal from dry pack or after pretreatment at 85°C for 24 hours.

PRODUCT CATEGORY 2, 3, 4 (TEMPERATURE RANGE -55°C TO +105°C)

TEST	Condition			Characteristics						
Endurance	Apply rated voltage (Ur) at 85°C for 2000 hours through a circuit impedance of $\leq 0.1\Omega/V$ (all CATEGORIES). And / or apply rated voltage (Ur) (CATEGORY 2) or 0.8x rated voltage (CATEGORY 3, 4) at 105°C for 2000 hours through a circuit impedance of $\leq 0.1\Omega/V$. Always stabilize at room temperature for 1-2 hours before measuring.			Visual examination	no visible damage					
				DCL	1.25 x initial limit					
				$\Delta C/C$	within $\pm 20\%$ of initial value					
				DF	1.5 x initial limit					
				ESR	2 x initial limit					
Storage Life	Store at 105°C, no voltage applied, for 2000 hours. Stabilize at room temperature for 1-2 hours before measuring.			Visual examination	no visible damage					
				DCL ($V_R \leq 75V$)	1.25 x initial limit					
				DCL ($V_R > 75V$)	2 x initial limit					
				$\Delta C/C$	within $\pm 20\%$ of initial value					
				DF	1.5 x initial limit					
Humidity	Store at 65°C and 95% relative humidity for 500 hours, with no applied voltage. Stabilize at room temperature and humidity for 1-2 hours before measuring.			Visual examination	no visible damage					
				DCL	3 x initial limit					
				$\Delta C/C$	within +30/-20% of initial value					
				DF	1.5 x initial limit					
				ESR	2 x initial limit					
Temperature Stability	Step	Temperature°C	Duration(min)		+20°C	-55°C	+20°C	+85°C	+105°C	+20°C
	1	+20	15	DCL	IL*	n/a	IL*	10 x IL*	12.5 x IL*	IL*
	2	-55	15							
	3	+20	15	$\Delta C/C$	n/a	+0/-20%	$\pm 5\%$	+20/-0%	+30/-0%	$\pm 5\%$
	4	+85	15							
	5	+105	15	DF	IL*	1.5 x IL*	IL*	1.5 x IL*	2 x IL*	IL*
	6	+20	15							
Surge Voltage	Apply 1.3x rated voltage (Ur) at 105°C for CATEGORY 2, or apply 1.3x 0.8x rated voltage (Ur) at 105°C for CATEGORY 3, 4 for 1000 cycles of duration 6 min (30 sec charge, 5 min 30 sec discharge) through a charge / discharge resistance of 1000 Ω			Visual examination	no visible damage					
				DCL	initial limit					
				$\Delta C/C$	within +10/-20% of initial value for $V_R \leq 10V$ within +20/-30% of initial value for $V_R \geq 16V$					
				DF	1.25 x initial limit					
Mechanical Shock	MIL-STD-202, Method 213, Condition C			Visual examination	no visible damage					
				DCL	initial limit					
				$\Delta C/C$	within $\pm 5\%$ of initial value					
				DF	initial limit					
				ESR	initial limit					
Vibration	MIL-STD-202, Method 204, Condition D			Visual examination	no visible damage					
				DCL	initial limit					
				$\Delta C/C$	within $\pm 5\%$ of initial value					
				DF	initial limit					
				ESR	initial limit					

*Initial Limit

Initial measurement max. 1hr after the removal from dry pack or after pretreatment at 85°C for 24 hours.

PRODUCT CATEGORY 5 (TEMPERATURE RANGE -55°C TO +85°C)

*Initial Limit

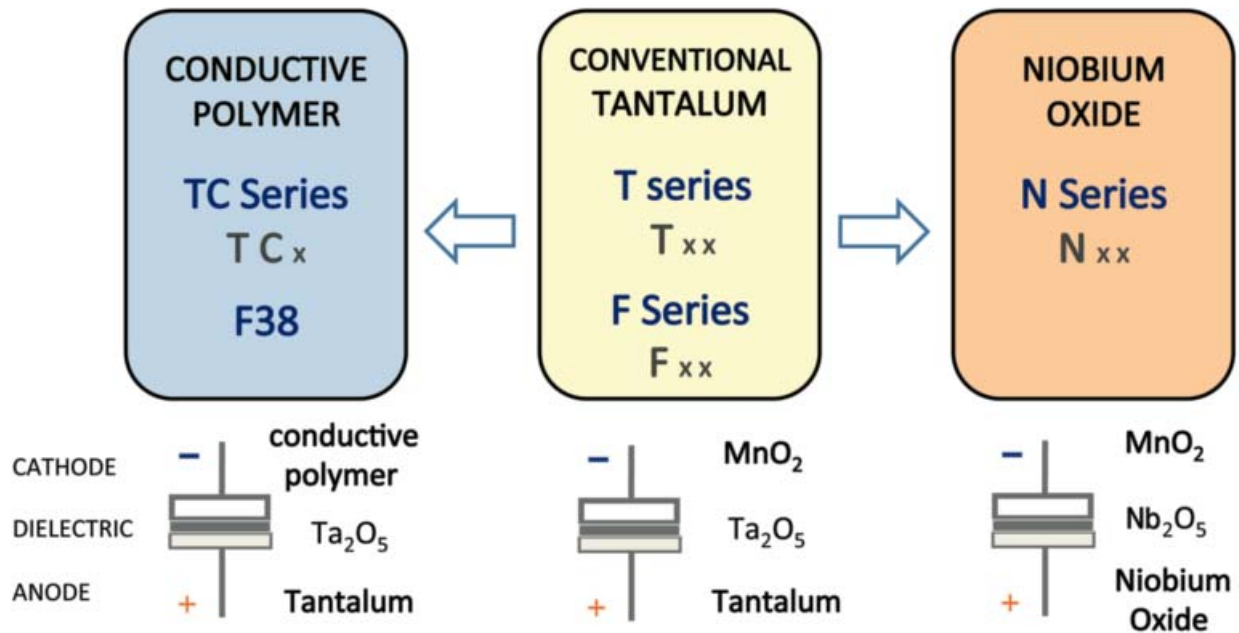
Initial measurement max. 1hr after the removal from dry pack or after pretreatment at 85°C for 24 hours.

TCJ Series

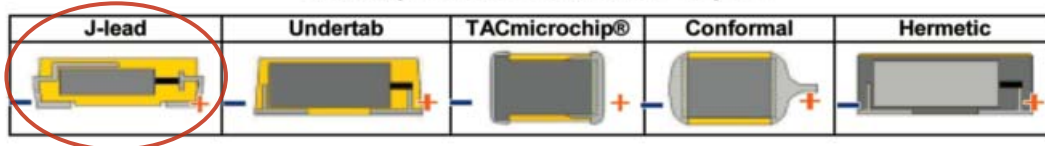
Conductive Polymer Solid Electrolytic Chip Capacitors



AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP



Five Capacitor Construction Styles



SERIES LINE UP: CONDUCTIVE POLYMER

