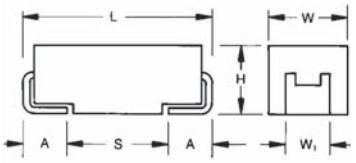
TRJ Series

Professional Tantalum Chip Capacitor



FEATURES

- Improved reliability – 2x standard
- DCL reduced by 25% to 0.0075 CV
- Robust against higher thermo-mechanical stresses during assembly process
- CV range: 0.10-680µF / 4-50V
- 6 case sizes available
- 130 low ESR parts released
- Automotive, medical, aerospace, military and other high-end applications

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

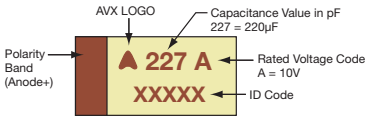
SnPb termination option is not RoHS compliant.

APPLICATIONS

- Automotive ECU
- ABS
- Airbag systems
- Avionics,
- Industrial control units

MARKING

A, B, C, D, E, U 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)	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)
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)

W_1 dimension applies to the termination width for A dimensional area only.

HOW TO ORDER

TRJ | **B** | **105** | ***** | **035** | **R** | **RJ** | **—**

Type

Case Size
See table above

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

Tolerance
K=±10%
M=±20%

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

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

Standard Suffix
OR
0100
Low ESR in mΩ

Additional characters may be added for special requirements
V = Dry pack Option (selected codes only)

TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C								
Capacitance Range:	0.10 µF to 680 µF								
Capacitance Tolerance:	±10%; ±20%								
Leakage Current DCL:	0.0075CV or 0.3µA whichever is the greater								
Rated Voltage (V_R)	≤ +85°C:	4	6.3	10	16	20	25	35	50
Category Voltage (V_C)	≤ +125°C:	2.7	4	7	10	13	17	23	33
Surge Voltage (V_S)	≤ +85°C:	5.2	8	13	20	26	32	46	65
Surge Voltage (V_S)	≤ +125°C:	3.4	5	8	13	16	20	28	40
Temperature Range:	-55°C to +125°C								
Reliability:	0.5% per 1000 hours at 85°C, V_R with 0.1Ω/V series impedance, 60% confidence level								
Termination Plating:	Sn Plating (standard), Gold and SnPb Plating upon request								
	Meets requirements of AEC-Q200								

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CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage DC (V_R) to 85°C							
µF	Code	4V (G)	6.3V (J)	10V (A)	16V (C)	20V (D)	25V (E)	35V (V)	50V (T)
0.10	104							A	
0.15	154							A, A(6000)	
0.22	224							A, A(6000)	A, A(7000)
0.33	334							A, A(6000)	A
0.47	474						A, A(7000)	A, A(4000)	B
0.68	684						A, A(6000)	A, A(6000)	B, B(2000)
1.0	105				A	A, A(3000)	A, A(3000)	A, B, A(3000), B(2000)	C, B, B(2000)
1.5	155			A		A, A(3000)	A, B, A(3000)	A, B, A(2000), B(2500)	C, C(1500)
2.2	225			A	A, A(3500)	A, A(3000)	A, B, A(1600), B(1200)	B, B(2000)	C, D, C(1000), D(1200)
3.3	335				A, B, A(3500)	A, B, A(2500), B(1300)	B, B(2000)	B, C, D, B(1000), C(800)	C, D, C(1000), D(800)
4.7	475			A, A(2000)	A, B, A(2000), B(1500)	A, B, A(1800), B(1000)	B, B(1000)	B, C, D, B(1500), C(600)	D, D(600)
6.8	685			A, B, A(1800)	A, B, C, A(1500), B(1200)	B, C, B(1000)	B, C, B(1000), C(600)	C, D, C(600)	D
10	106		A, B, A(1500)	A, B, A(1800), B(800)	B, C, B(800)	B, C, B(1000), C(500)	C, D, C(600)	C, D, C(600), D(250,400)	E, E(300,400)
15	156	B	A, B, A(1500), B(700)	A, B, C, A(1000), B(600)	B, B(800)	B, C, D, B(500), C(400)	C, D, C(500), D(300)	D, D(225)	U
22	226		A, B, C, A(900), B(600)	B, B(700)	B, C, D, B(600), C(350)	C, D, C(400), D(150,300)	D, D(300)	D, D(200.400)	U
33	336	C	B, C, B(600)	B, C, D, B(650), C(300)	C, C(300)	C, D, C(300), D(250)	D, D(400)	E, E(150,250)	
47	476		B, C, B(500), C(250)	C, D, C(300)	C, D, C(350), D(200)	D, D(200)	D, E, D(250), E(150)	U, U(200)	
68	686		C, C(200)	C, C(300)	C, D C(200), D(150)	D, E, D(200), E(120,200)	U		
100	107		C, C(300)	C, D, E, C(200) D(100,150), E(100)	D, E, D(150), E(150)	E, E(150)	U		
150	157		C, D, C(300), D(150)	D, E, D(150), E(150)	E, E(150)	U, U(250)			
220	227		D, D(150)	D, E, E(150)	U, U(200)				
330	337		D, E, E(150)	E, E(100)	U, U(200)				
470	477		E, E(200)	U, U(200)					
680	687		U, U(250)						

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

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.

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RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Rated Temperature (°C)	Category Voltage (V)	Category Temperature (°C)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @ 100kHz	MSL	100kHz RMS Current (mA)		
											25°C	85°C	125°C
4 Volt @ 85°C													
TRJB156*004#RJ	B	15	4	85	2.7	125	0.45	6	3000	1	168	151	67
TRJC336*004#RJ	C	33	4	85	2.7	125	1	6	2000	1	235	211	94
6.3 Volt @ 85°C													
TRJA106*006#RJ	A	10	6.3	85	4	125	0.45	6	2200	1	185	166	74
TRJA106*006#1500	A	10	6.3	85	4	125	0.45	6	1500	1	224	201	89
TRJB106*006#RJ	B	10	6.3	85	4	125	0.45	6	3000	1	168	151	67
TRJA156*006#RJ	A	15	6.3	85	4	125	0.68	6	2030	1	192	173	77
TRJA156*006#1500	A	15	6.3	85	4	125	0.68	6	1500	1	224	201	89
TRJB156*006#RJ	B	15	6.3	85	4	125	0.68	6	2030	1	205	184	82
TRJB156*006#0700	B	15	6.3	85	4	125	0.68	6	700	1	348	314	139
TRJA226*006#RJ	A	22	6.3	85	4	125	0.99	6	1700	1	210	189	84
TRJA226*006#0900	A	22	6.3	85	4	125	0.99	6	900	1	289	260	115
TRJB226*006#RJ	B	22	6.3	85	4	125	0.99	6	1880	1	213	191	85
TRJB226*006#0600	B	22	6.3	85	4	125	0.99	6	600	1	376	339	151
TRJC226*006#RJ	C	22	6.3	85	4	125	0.99	6	2000	1	235	211	94
TRJB336*006#RJ	B	33	6.3	85	4	125	1.5	6	1740	1	221	199	88
TRJB336*006#0600	B	33	6.3	85	4	125	1.5	6	600	1	376	339	151
TRJC336*006#RJ	C	33	6.3	85	4	125	1.5	6	1800	1	247	222	99
TRJB476*006#RJ	B	47	6.3	85	4	125	2.1	6	1620	1	229	206	92
TRJB476*006#0500	B	47	6.3	85	4	125	2.1	6	500	1	412	371	165
TRJC476*006#RJ	C	47	6.3	85	4	125	2.1	6	540	1	451	406	181
TRJC476*006#0250	C	47	6.3	85	4	125	2.1	6	250	1	663	597	265
TRJC686*006#RJ	C	68	6.3	85	4	125	3.1	6	490	1	474	426	190
TRJC686*006#0200	C	68	6.3	85	4	125	3.1	6	200	1	742	667	297
TRJC107*006#RJ	C	100	6.3	85	4	125	4.5	6	440	1	500	450	200
TRJC107*006#0300	C	100	6.3	85	4	125	4.5	6	300	1	606	545	242
TRJC157*006#RJ	C	150	6.3	85	4	125	6.8	8	500	1	469	422	188
TRJC157*006#0300	C	150	6.3	85	4	125	6.8	8	300	1	606	545	242
TRJD157*006#RJ	D	150	6.3	85	4	125	6.8	6	400	1	612	551	245
TRJD157*006#0150	D	150	6.3	85	4	125	6.8	6	150	1	1000	900	400
TRJD227*006#RJ	D	220	6.3	85	4	125	9.9	8	360	1	645	581	258
TRJD227*006#0150	D	220	6.3	85	4	125	9.9	8	150	1	1000	900	400
TRJD337*006#RJ	D	330	6.3	85	4	125	14	8	400	1	612	551	245
TRJE337*006#RJ	E	330	6.3	85	4	125	14	8	330	1[1)]	707	636	283
TRJE337*006#0150	E	330	6.3	85	4	125	14	8	150	1[1)]	1049	944	420
TRJE477*006#RJ	E	470	6.3	85	4	125	21	8	250	1[1)]	812	731	325
TRJE477*006#0200	E	470	6.3	85	4	125	21	8	200	1[1)]	908	817	363
TRJU687*006RRJV	U	680	6.3	85	4	125	30	30	500	3	574	517	230
TRJU687*006R0250V	U	680	6.3	85	4	125	30	30	250	3	812	731	325
10 Volt @ 85°C													
TRJA155*010#RJ	A	1.5	10	85	7	125	0.3	6	7000	1	104	93	41
TRJA225*010#RJ	A	2.2	10	85	7	125	0.3	6	7000	1	104	93	41
TRJA475*010#RJ	A	4.7	10	85	7	125	0.35	6	2900	1	161	145	64
TRJA475*010#2000	A	4.7	10	85	7	125	0.35	6	2000	1	194	174	77
TRJA685*010#RJ	A	6.8	10	85	7	125	0.51	6	2650	1	168	151	67
TRJA685*010#1800	A	6.8	10	85	7	125	0.51	6	1800	1	204	184	82
TRJB685*010#RJ	B	6.8	10	85	7	125	0.51	6	3000	1	168	151	67
TRJA106*010#RJ	A	10	10	85	7	125	0.75	6	2200	1	185	166	74
TRJA106*010#1800	A	10	10	85	7	125	0.75	6	1800	1	204	184	82
TRJB106*010#RJ	B	10	10	85	7	125	0.75	6	2200	1	197	177	79
TRJB106*010#0800	B	10	10	85	7	125	0.75	6	800	1	326	293	130
TRJA156*010#RJ	A	15	10	85	7	125	1.1	6	1800	1	204	184	82
TRJA156*010#1000	A	15	10	85	7	125	1.1	6	1000	1	274	246	110
TRJB156*010#RJ	B	15	10	85	7	125	1.1	6	2030	1	205	184	82
TRJB156*010#0600	B	15	10	85	7	125	1.1	6	600	1	376	339	151
TRJC156*010#RJ	C	15	10	85	7	125	1.1	6	2000	1	235	211	94
TRJB226*010#RJ	B	22	10	85	7	125	1.7	6	1880	1	213	191	85
TRJB226*010#0700	B	22	10	85	7	125	1.7	6	700	1	348	314	139
TRJB336*010#RJ	B	33	10	85	7	125	2.5	6	1000	1	292	262	117
TRJB336*010#0650	B	33	10	85	7	125	2.5	6	650	1	362	325	145
TRJC336*010#RJ	C	33	10	85	7	125	2.5	6	590	1	432	389	173
TRJC336*010#0300	C	33	10	85	7	125	2.5	6	300	1	606	545	242
TRJD336*010#RJ	D	33	10	85	7	125	2.5	6	1100	1	369	332	148
TRJC476*010#RJ	C	47	10	85	7	125	3.5	6	540	1	451	406	181
TRJC476*010#0300	C	47	10	85	7	125	3.5	6	300	1	606	545	242
TRJD476*010#RJ	D	47	10	85	7	125	3.5	6	400	1	612	551	245
TRJC686*010#RJ	C	68	10	85	7	125	5.1	6	490	1	474	426	190
TRJC686*010#0300	C	68	10	85	7	125	5.1	6	300	1	606	545	242
TRJC107*010#RJ	C	100	10	85	7	125	7.5	8	500	1	469	422	188
TRJC107*010#0200	C	100	10	85	7	125	7.5	8	200	1	742	667	297

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RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Rated Temperature (°C)	Category Voltage (V)	Category Temperature (°C)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @ 100kHz	MSL	100kHz RMS Current (mA)		
											25°C	85°C	125°C
TRJD107*010#RJ	D	100	10	85	7	125	7.5	6	440	1	584	525	234
TRJD107*010#0100	D	100	10	85	7	125	7.5	6	100	1	1225	1102	490
TRJD107*010#0150	D	100	10	85	7	125	7.5	6	150	1	1000	900	400
TRJE107*010#RJ	E	100	10	85	7	125	7.5	6	440	1[1)]	612	551	245
TRJE107*010#0100	E	100	10	85	7	125	7.5	6	100	1[1)]	1285	1156	514
TRJD157*010#RJ	D	150	10	85	7	125	11	8	400	1	612	551	245
TRJD157*010#0150	D	150	10	85	7	125	11	8	150	1	1000	900	400
TRJE157*010#RJ	E	150	10	85	7	125	11	8	400	1[1)]	642	578	257
TRJE157*010#0150	E	150	10	85	7	125	11	8	150	1[1)]	1049	944	420
TRJD227*010#RJ	D	220	10	85	7	125	17	8	500	1	548	493	219
TRJE227*010#RJ	E	220	10	85	7	125	17	8	360	1[1)]	677	609	271
TRJE227*010#0150	E	220	10	85	7	125	17	8	150	1[1)]	1049	944	420
TRJE337*010#RJ	E	330	10	85	7	125	25	8	300	1[1)]	742	667	297
TRJE337*010#0100	E	330	10	85	7	125	25	8	100	1[1)]	1285	1156	514
TRJU477*010RRJV	U	470	10	85	7	125	35	30	400	3	642	578	257
TRJU477*010R0200V	U	470	10	85	7	125	35	30	200	3	908	817	363
16 Volt @ 85°C													
TRJA105*016#RJ	A	1.0	16	85	10	125	0.3	6	10000	1	87	78	35
TRJA225*016#RJ	A	2.2	16	85	10	125	0.3	6	4550	1	128	116	51
TRJA225*016#3500	A	2.2	16	85	10	125	0.3	6	3500	1	146	132	59
TRJA335*016#RJ	A	3.3	16	85	10	125	0.4	6	3740	1	142	127	57
TRJA335*016#3500	A	3.3	16	85	10	125	0.4	6	3500	1	146	132	59
TRJB335*016#RJ	B	3.3	16	85	10	125	0.4	6	4500	1	137	124	55
TRJA475*016#RJ	A	4.7	16	85	10	125	0.56	6	3160	1	154	139	62
TRJA475*016#2000	A	4.7	16	85	10	125	0.56	6	2000	1	194	174	77
TRJB475*016#RJ	B	4.7	16	85	10	125	0.56	6	3160	1	164	148	66
TRJB475*016#1500	B	4.7	16	85	10	125	0.56	6	1500	1	238	214	95
TRJA685*016#RJ	A	6.8	16	85	10	125	0.82	4	2000	1	194	174	77
TRJA685*016#1500	A	6.8	16	85	10	125	0.82	4	1500	1	224	201	89
TRJB685*016#RJ	B	6.8	16	85	10	125	0.82	6	2650	1	179	161	72
TRJB685*016#1200	B	6.8	16	85	10	125	0.82	6	1200	1	266	240	106
TRJC685*016#RJ	C	6.8	16	85	10	125	0.82	6	2500	1	210	189	84
TRJB106*016#RJ	B	10	16	85	10	125	1.2	6	2200	1	197	177	79
TRJB106*016#0800	B	10	16	85	10	125	1.2	6	800	1	326	293	130
TRJC106*016#RJ	C	10	16	85	10	125	1.2	6	2000	1	235	211	94
TRJB156*016#RJ	B	15	16	85	10	125	1.8	6	2030	1	205	184	82
TRJB156*016#0800	B	15	16	85	10	125	1.8	6	800	1	326	293	130
TRJB226*016#RJ	B	22	16	85	10	125	2.6	6	1100	1	278	250	111
TRJB226*016#0600	B	22	16	85	10	125	2.6	6	600	1	376	339	151
TRJC226*016#RJ	C	22	16	85	10	125	2.6	6	700	1	396	357	159
TRJC226*016#0350	C	22	16	85	10	125	2.6	6	350	1	561	505	224
TRJD226*016#RJ	D	22	16	85	10	125	2.6	6	1100	1	369	332	148
TRJC336*016#RJ	C	33	16	85	10	125	4	6	590	1	432	389	173
TRJC336*016#0300	C	33	16	85	10	125	4	6	300	1	606	545	242
TRJC476*016#RJ	C	47	16	85	10	125	5.6	6	540	1	451	406	181
TRJC476*016#0350	C	47	16	85	10	125	5.6	6	350	1	561	505	224
TRJD476*016#RJ	D	47	16	85	10	125	5.6	6	540	1	527	474	211
TRJD476*016#0200	D	47	16	85	10	125	5.6	6	200	1	866	779	346
TRJC686*016#RJ	C	68	16	85	10	125	8.2	6	490	1	474	426	190
TRJC686*016#0200	C	68	16	85	10	125	8.2	6	200	1	742	667	297
TRJD686*016#RJ	D	68	16	85	10	125	8.2	6	490	1	553	498	221
TRJD686*016#0150	D	68	16	85	10	125	8.2	6	150	1	1000	900	400
TRJD107*016#RJ	D	100	16	85	10	125	12	6	440	1	584	525	234
TRJD107*016#0150	D	100	16	85	10	125	12	6	150	1	1000	900	400
TRJE107*016#RJ	E	100	16	85	10	125	12	6	440	1[1)]	612	551	245
TRJE107*016#0150	E	100	16	85	10	125	12	6	150	1[1)]	1049	944	420
TRJE157*016#RJ	E	150	16	85	10	125	16	6	300	1[1)]	742	667	297
TRJE157*016#0150	E	150	16	85	10	125	16	6	150	1[1)]	1049	944	420
TRJU227*016RRJV	U	220	16	85	10	125	26.4	12	500	3	574	517	230
TRJU227*016R0200V	U	220	16	85	10	125	26.4	12	200	3	908	817	363
TRJU337*016RRJV	U	330	16	85	10	125	39	30	400	3	642	578	257
TRJU337*016R0200V	U	330	16	85	10	125	39	30	200	3	908	817	363
20 Volt @ 85°C													
TRJA105*020#RJ	A	1	20	85	13	125	0.3	4	6630	1	106	96	43
TRJA105*020#3000	A	1	20	85	13	125	0.3	4	3000	1	158	142	63
TRJA155*020#RJ	A	1.5	20	85	13	125	0.3	6	5460	1	117	105	47
TRJA155*020#3000	A	1.5	20	85	13	125	0.3	6	3000	1	158	142	63
TRJA225*020#RJ	A	2.2	20	85	13	125	0.33	6	4550	1	128	116	51
TRJA225*020#3000	A	2.2	20	85	13	125	0.33	6	3000	1	158	142	63
TRJA335*020#RJ	A	3.3	20	85	13	125	0.5	6	3740	1	142	127	57
TRJA335*020#2500	A	3.3	20	85	13	125	0.5	6	2500	1	173	156	69

TRJ Series

Professional Tantalum Chip Capacitor

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Rated Temperature (°C)	Category Voltage (V)	Category Temperature (°C)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @ 100kHz	MSL	100kHz RMS Current (mA)		
											25°C	85°C	125°C
TRJB335*020#RJ	B	3.3	20	85	13	125	0.5	6	3740	1	151	136	60
TRJB335*020#1300	B	3.3	20	85	13	125	0.5	6	1300	1	256	230	102
TRJA475*020#RJ	A	4.7	20	85	13	125	0.71	5	2500	1	184	166	74
TRJA475*020#1800	A	4.7	20	85	13	125	0.71	5	1800	1	217	196	87
TRJB475*020#RJ	B	4.7	20	85	13	125	0.71	6	3160	1	164	148	66
TRJB475*020#1000	B	4.7	20	85	13	125	0.71	6	1000	1	292	262	117
TRJB685*020#RJ	B	6.8	20	85	13	125	1	6	2650	1	179	161	72
TRJB685*020#1000	B	6.8	20	85	13	125	1	6	1000	1	292	262	117
TRJC685*020#RJ	C	6.8	20	85	13	125	1	6	2000	1	235	211	94
TRJB106*020#RJ	B	10	20	85	13	125	1.5	6	2200	1	197	177	79
TRJB106*020#1000	B	10	20	85	13	125	1.5	6	1000	1	292	262	117
TRJC106*020#RJ	C	10	20	85	13	125	1.5	6	800	1	371	334	148
TRJC106*020#0500	C	10	20	85	13	125	1.5	6	500	1	469	422	188
TRJB156*020#RJ	B	15	20	85	13	125	2.3	6	1400	1	280	252	112
TRJB156*020#0500	B	15	20	85	13	125	2.3	6	500	1	469	422	188
TRJC156*020#RJ	C	15	20	85	13	125	2.3	6	720	1	391	352	156
TRJC156*020#0400	C	15	20	85	13	125	2.3	6	400	1	524	472	210
TRJD156*020#RJ	D	15	20	85	13	125	2.3	6	1100	1	369	332	148
TRJC226*020#RJ	C	22	20	85	13	125	3.3	6	650	1	411	370	165
TRJC226*020#0400	C	22	20	85	13	125	3.3	6	400	1	524	472	210
TRJD226*020#RJ	D	22	20	85	13	125	3.3	6	650	1	480	432	192
TRJD226*020#0150	D	22	20	85	13	125	3.3	6	150	1	1000	900	400
TRJD226*020#0300	D	22	20	85	13	125	3.3	6	300	1	707	636	283
TRJC336*020#RJ	C	33	20	85	13	125	5	6	590	1	432	389	173
TRJC336*020#0300	C	33	20	85	13	125	5	6	300	1	606	545	242
TRJD336*020#RJ	D	33	20	85	13	125	5	6	590	1	504	454	202
TRJD336*020#0250	D	33	20	85	13	125	5	6	250	1	775	697	310
TRJD476*020#RJ	D	47	20	85	13	125	7.1	6	540	1	527	474	211
TRJD476*020#0200	D	47	20	85	13	125	7.1	6	200	1	866	779	346
TRJD686*020#RJ	D	68	20	85	13	125	10	6	490	1	553	498	221
TRJD686*020#0200	D	68	20	85	13	125	10	6	200	1	866	779	346
TRJE686*020#RJ	E	68	20	85	13	125	10	6	490	1[1)]	580	522	232
TRJE686*020#0120	E	68	20	85	13	125	10	6	120	1[1)]	1173	1055	469
TRJE686*020#0200	E	68	20	85	13	125	10	6	200	1[1)]	908	817	363
TRJE107*020#RJ	E	100	20	85	13	125	15	6	300	1[1)]	742	667	297
TRJE107*020#0150	E	100	20	85	13	125	15	6	150	1[1)]	1049	944	420
TRJU157*020RRJV	U	150	20	85	13	125	22	30	500	3	574	517	230
TRJU157*020R0250V	U	150	20	85	13	125	22	30	250	3	812	731	325
25 Volt @ 85°C													
TRJA474*025#RJ	A	0.47	25	85	17	125	0.3	4	9530	1	89	80	35
TRJA474*025#7000	A	0.47	25	85	17	125	0.3	4	7000	1	104	93	41
TRJA684*025#RJ	A	0.68	25	85	17	125	0.3	4	7980	1	97	87	39
TRJA684*025#6000	A	0.68	25	85	17	125	0.3	4	6000	1	112	101	45
TRJA105*025#RJ	A	1	25	85	17	125	0.3	4	6630	1	106	96	43
TRJA105*025#3000	A	1	25	85	17	125	0.3	4	3000	1	158	142	63
TRJA155*025#RJ	A	1.5	25	85	17	125	0.3	6	5460	1	117	105	47
TRJA155*025#3000	A	1.5	25	85	17	125	0.3	6	3000	1	158	142	63
TRJB155*025#RJ	B	1.5	25	85	17	125	0.3	6	5000	1	130	117	52
TRJA225*025#RJ	A	2.2	25	85	17	125	0.41	6	2900	1	161	145	64
TRJA225*025#1600	A	2.2	25	85	17	125	0.41	6	1600	1	217	195	87
TRJB225*025#RJ	B	2.2	25	85	17	125	0.41	6	4550	1	137	123	55
TRJB225*025#1200	B	2.2	25	85	17	125	0.41	6	1200	1	266	240	106
TRJB335*025#RJ	B	3.3	25	85	17	125	0.62	6	3740	1	151	136	60
TRJB335*025#2000	B	3.3	25	85	17	125	0.62	6	2000	1	206	186	82
TRJB475*025#RJ	B	4.7	25	85	17	125	0.88	6	3160	1	164	148	66
TRJB475*025#1000	B	4.7	25	85	17	125	0.88	6	1000	1	292	262	117
TRJB685*025#RJ	B	6.8	25	85	17	125	1.3	6	1500	1	238	214	95
TRJB685*025#1000	B	6.8	25	85	17	125	1.3	6	1000	1	292	262	117
TRJC685*025#RJ	C	6.8	25	85	17	125	1.3	6	1070	1	321	289	128
TRJC685*025#0600	C	6.8	25	85	17	125	1.3	6	600	1	428	385	171
TRJC106*025#RJ	C	10	25	85	17	125	1.9	6	800	1	371	334	148
TRJC106*025#0600	C	10	25	85	17	125	1.9	6	600	1	428	385	171
TRJD106*025#RJ	D	10	25	85	17	125	1.9	6	1200	1	354	318	141
TRJC156*025#RJ	C	15	25	85	17	125	2.8	6	720	1	391	352	156
TRJC156*025#0500	C	15	25	85	17	125	2.8	6	500	1	469	422	188
TRJD156*025#RJ	D	15	25	85	17	125	2.8	6	720	1	456	411	183
TRJD156*025#0300	D	15	25	85	17	125	2.8	6	300	1	707	636	283
TRJD226*025#RJ	D	22	25	85	17	125	4.1	6	650	1	480	432	192
TRJD226*025#0300	D	22	25	85	17	125	4.1	6	300	1	707	636	283
TRJD336*025#RJ	D	33	25	85	17	125	6.2	6	590	1	504	454	202
TRJD336*025#0400	D	33	25	85	17	125	6.2	6	400	1	612	551	245

TRJ Series

Professional Tantalum Chip Capacitor

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Rated Temperature (°C)	Category Voltage (V)	Category Temperature (°C)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @ 100kHz	MSL	100kHz RMS Current (mA)		
											25°C	85°C	125°C
TRJD476*025#RJ	D	47	25	85	17	125	8.8	6	540	1	527	474	211
TRJD476*025#0250	D	47	25	85	17	125	8.8	6	250	1	775	697	310
TRJE476*025#RJ	E	47	25	85	17	125	8.8	6	540	1[1)]	553	497	221
TRJE476*025#0150	E	47	25	85	17	125	8.8	6	150	1[1)]	1049	944	420
TRJU686*025RRJV	U	68	25	85	17	125	12	30	500	3	574	517	230
TRJU107*025RRJV	U	100	25	85	17	125	18	30	500	3	574	517	230
35 Volt @ 85°C													
TRJA104*035#RJ	A	0.1	35	85	23	125	0.3	4	20000	1	61	55	24
TRJA154*035#RJ	A	0.15	35	85	23	125	0.3	4	16470	1	67	61	27
TRJA154*035#6000	A	0.15	35	85	23	125	0.3	4	6000	1	112	101	45
TRJA224*035#RJ	A	0.22	35	85	23	125	0.3	4	13710	1	74	67	30
TRJA224*035#6000	A	0.22	35	85	23	125	0.3	4	6000	1	112	101	45
TRJA334*035#RJ	A	0.33	35	85	23	125	0.3	4	11280	1	82	73	33
TRJA334*035#6000	A	0.33	35	85	23	125	0.3	4	6000	1	112	101	45
TRJA474*035#RJ	A	0.47	35	85	23	125	0.3	4	9530	1	89	80	35
TRJA474*035#4000	A	0.47	35	85	23	125	0.3	4	4000	1	137	123	55
TRJA684*035#RJ	A	0.68	35	85	23	125	0.3	4	7980	1	97	87	39
TRJA684*035#6000	A	0.68	35	85	23	125	0.3	4	6000	1	112	101	45
TRJA105*035#RJ	A	1	35	85	23	125	0.3	4	6630	1	106	96	43
TRJA105*035#3000	A	1	35	85	23	125	0.3	4	3000	1	158	142	63
TRJB105*035#RJ	B	1	35	85	23	125	0.3	4	3400	1	158	142	63
TRJB105*035#2000	B	1	35	85	23	125	0.3	4	2000	1	206	186	82
TRJA155*035#RJ	A	1.5	35	85	23	125	0.39	6	3100	1	166	149	66
TRJA155*035#2000	A	1.5	35	85	23	125	0.39	6	2000	1	206	186	82
TRJB155*035#RJ	B	1.5	35	85	23	125	0.39	6	5460	1	125	112	50
TRJB155*035#2500	B	1.5	35	85	23	125	0.39	6	2500	1	184	166	74
TRJB225*035#RJ	B	2.2	35	85	23	125	0.58	6	4550	1	137	123	55
TRJB225*035#2000	B	2.2	35	85	23	125	0.58	6	2000	1	206	186	82
TRJB335*035#RJ	B	3.3	35	85	23	125	0.87	6	3740	1	151	136	60
TRJB335*035#1000	B	3.3	35	85	23	125	0.87	6	1000	1	292	262	117
TRJC335*035#RJ	C	3.3	35	85	23	125	0.87	6	1840	1	245	220	98
TRJC335*035#0800	C	3.3	35	85	23	125	0.87	6	800	1	371	334	148
TRJD335*035#RJ	D	3.3	35	85	23	125	0.87	6	2000	1	274	246	110
TRJB475*035#RJ	B	4.7	35	85	23	125	1.2	6	2200	1	224	201	89
TRJB475*035#1500	B	4.7	35	85	23	125	1.2	6	1500	1	271	244	108
TRJC475*035#RJ	C	4.7	35	85	23	125	1.2	6	1410	1	279	251	112
TRJC475*035#0600	C	4.7	35	85	23	125	1.2	6	600	1	428	385	171
TRJD475*035#RJ	D	4.7	35	85	23	125	1.2	6	1500	1	316	285	126
TRJC685*035#RJ	C	6.8	35	85	23	125	1.8	6	1070	1	321	289	128
TRJC685*035#0600	C	6.8	35	85	23	125	1.8	6	600	1	428	385	171
TRJD685*035#RJ	D	6.8	35	85	23	125	1.8	6	1300	1	340	306	136
TRJC106*035#RJ	C	10	35	85	23	125	2.6	6	800	1	371	334	148
TRJC106*035#0600	C	10	35	85	23	125	2.6	6	600	1	428	385	171
TRJD106*035#RJ	D	10	35	85	23	125	2.6	6	800	1	433	390	173
TRJD106*035#0250	D	10	35	85	23	125	2.6	6	250	1	775	697	310
TRJD106*035#0400	D	10	35	85	23	125	2.6	6	400	1	612	551	245
TRJD156*035#RJ	D	15	35	85	23	125	3.9	6	720	1	456	411	183
TRJD156*035#0225	D	15	35	85	23	125	3.9	6	225	1	816	735	327
TRJD226*035#RJ	D	22	35	85	23	125	5.8	6	650	1	480	432	192
TRJD226*035#0200	D	22	35	85	23	125	5.8	6	200	1	866	779	346
TRJD226*035#0400	D	22	35	85	23	125	5.8	6	400	1	612	551	245
TRJE336*035#RJ	E	33	35	85	23	125	8.7	6	590	1[1)]	529	476	212
TRJE336*035#0150	E	33	35	85	23	125	8.7	6	150	1[1)]	1049	944	420
TRJE336*035#0250	E	33	35	85	23	125	8.7	6	250	1[1)]	812	731	325
TRJU476*035RRJV	U	47	35	85	23	125	12.3	10	400	3	642	578	257
TRJU476*035R0200V	U	47	35	85	23	125	12.3	10	200	3	908	8.17	363
50 Volt @ 85°C													
TRJA224*050#RJ	A	0.22	50	85	33	125	0.3	4	7500	1	100	90	40
TRJA224*050#7000	A	0.22	50	85	33	125	0.3	4	7000	1	104	93	41
TRJA334*050#RJ	A	0.33	50	85	33	125	0.3	4	7000	1	104	93	41
TRJB474*050#RJ	B	0.47	50	85	33	125	0.3	4	5000	1	130	117	52
TRJB684*050#RJ	B	0.68	50	85	33	125	0.3	4	4000	1	146	131	58
TRJB684*050#2000	B	0.68	50	85	33	125	0.3	4	2000	1	206	186	82
TRJB105*050#RJ	B	1	50	85	33	125	0.4	4	3400	1	158	142	63
TRJB105*050#2000	B	1	50	85	33	125	0.4	4	2000	1	206	186	82
TRJC105*050#RJ	C	1	50	85	33	125	0.4	4	3000	1	191	172	77
TRJC155*050#RJ	C	1.5	50	85	33	125	0.6	6	2500	1	210	189	84
TRJC155*050#1500	C	1.5	50	85	33	125	0.6	6	1500	1	271	244	108
TRJC225*050#RJ	C	2.2	50	85	33	125	0.8	6	1700	1	254	229	102
TRJC225*050#1000	C	2.2	50	85	33	125	0.8	6	1000	1	332	298	133
TRJD225*050#RJ	D	2.2	50	85	33	125	0.8	4.5	2000	1	274	246	110

TRJ Series

Professional Tantalum Chip Capacitor

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	Rated Temperature (°C)	Category Voltage (V)	Category Temperature (°C)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @ 100kHz	MSL	100kHz RMS Current (mA)		
											25°C	85°C	125°C
TRJD225*050#1200	D	2.2	50	85	33	125	0.8	4.5	1200	1	354	318	141
TRJC335*050#RJ	C	3.3	50	85	33	125	1.2	6	1400	1	280	252	112
TRJC335*050#1000	C	3.3	50	85	33	125	1.2	6	1000	1	332	298	133
TRJD335*050#RJ	D	3.3	50	85	33	125	1.2	4.5	1100	1	369	332	148
TRJD335*050#0800	D	3.3	50	85	33	125	1.2	4.5	800	1	433	390	173
TRJD475*050#RJ	D	4.7	50	85	33	125	1.8	4.5	900	1	408	367	163
TRJD475*050#0600	D	4.7	50	85	33	125	1.8	4.5	600	1	500	450	200
TRJD685*050#RJ	D	6.8	50	85	33	125	2.6	4.5	700	1	463	417	185
TRJE106*050#RJ	E	10	50	85	33	125	3.8	4.5	700	1[1)]	486	437	194
TRJE106*050#0300	E	10	50	85	33	125	3.8	4.5	300	1[1)]	742	667	297
TRJE106*050#0400	E	10	50	85	33	125	3.8	4.5	400	1[1)]	642	578	257
TRJU156*050RRJV	U	15	50	85	33	125	5.6	30	500	3	574	517	230
TRJU226*050RRJV	U	22	50	85	33	125	8.2	30	500	3	574	517	230

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

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

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

The EIA & CECC standards for low ESR Solid Tantalum Capacitors allow an ESR movement to 1.25 times catalogue limit post mounting.

For typical weight and composition see page 220.

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	TRJ professional series (Temperature range -55°C to +125°C)		
	Condition	Characteristics	
Endurance	Determine after application of rated voltage for 2000 +48/-0 hours at 85±2°C and then leaving 1-2 hours at room temperature. Also determine of 125°C temperature, category voltage for 2000 +48/-0 hours and then leaving 1-2 hours at room temperature. Power supply impedance to be ≤0.1Ω/V.	Visual examination	no visible damage
		DCL	1.25 x initial limit
		ΔC/C	within ±10% of initial value
		DF	initial limit
		ESR	1.25 x initial limit
Storage Life	125°C, 0V, 2000h	Visual examination	no visible damage
		DCL	1.25 x initial limit
		ΔC/C	within ±10% of initial value
		DF	initial limit
		ESR	1.25 x initial limit
Humidity	Determine after storage without applied voltage at 65±2°C and 95±2% relative humidity for 500 hours and then recovery 1-2 hours at room temperature.	Visual examination	no visible damage
		DCL	1.5 x initial limit
		ΔC/C	within ±10% of initial value
		DF	1.2 x initial limit
		ESR	1.25 x initial limit
Biased Humidity	Determine after leaving for 1000 hours at 85±2°C, 85% relative humidity and rated voltage and then recovery 1-2 hours at room temperature.	Visual examination	no visible damage
		DCL	2 x initial limit
		ΔC/C	within ±10% of initial value
		DF	1.2 x initial limit
		ESR	1.25 x initial limit

Temperature Stability

Step	Temperature°C	Duration(min)
1	+20±2	15
2	-55+0/-3	15
3	+20±2	15
4	+85+3/-0	15
5	+125+3/-0	15
6	+20±2	15

	+20°C	-55°C	+20°C	+85°C	+125°C	+20°C
DCL	IL*	n/a	IL*	10 x IL*	12.5 x IL*	IL*
ΔC/C	n/a	+0/-10%	±5%	+10/-0%	+12/-0%	±5%
DF	IL*	1.5 x IL*	IL*	1.5 x IL*	2 x IL*	IL*
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*

Surge Voltage			
	Test temperature: 125°C+3/0°C Test voltage: Category voltage at 125°C Surge voltage: 1.3 x category voltage at 125°C Series protection resistance 1000±100Ω Discharge resistance: 1000Ω Number of cycles: 1000x Cycle duration: 6 min; 30 sec charge, 5 min 30 sec discharge	Visual examination	no visible damage
		DCL	initial limit
		ΔC/C	within ±5% of initial value
		DF	initial limit
		ESR	1.25 x initial limit

*Initial Limit