

# TCJ Series



## Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode



### FEATURES

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

### APPLICATIONS

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



Elektra Award 2010



LEAD-FREE  
LEAD-FREE COMPATIBLE  
COMPONENT



RoHS  
COMPLIANT



### 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 <sub>1</sub> ±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)
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)

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

### MARKING

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



N, P, R CASE



### HOW TO ORDER

TCJ	A	226	M	004	R	0300
Type	Case Size	Capacitance Code	Tolerance	Rated DC Voltage	Packaging	ESR in mΩ
	See table above	pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	M = ±20%	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 = Pure Tin 7" Reel S = Pure Tin 13" Reel	

### 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 <sub>R</sub> with 0.1Ω/V series impedance, 60% confidence level
Resistance to soldering heat:	3x260°C peak for max. 10s reflow



# TCJ Series



## Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

### CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Cap		Rated Voltage DC (V <sub>R</sub> ) 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(500) R(500)			B(100,150)	B(200) C(200)	C(200)	C(200) D(120)	D(150)	D(250)	
6.8	685					A(200)		B(90,150) T(100,150)	C(200)	C(200) D(120)	D(120) E(100,150)	D(120)		
10	106			A(300) N(250,500) R(500)	A(300)	A(200) B(200) T(150,200)		B(90,100,150)	B(200) C(200) Y(70)	D(120) E(70,100)	E(100,150)	U*	U*	
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*					
33	336		A(300)	A(200) B(70,200) T(150)	B(70,200) C(100) T(70,150)	Y(45,60,70)	Y(70)	D(60,100) X(70,100) Y(60,70,100)	D(70,100) E(55,70)					
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)	E(55)					
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)						
100	107	A(200), B(70)	A(200) B(40,70) G(300) T(150)	A(100,150) B(45,55,69,70) T(70,200)	D(45,55,80) Y(25,45,55)	D(50), E(40) Y(50)	D(55) E(45)	D(55,70) E(80)						
150	157	B(70)	B(70), Y(25,45)	B(25,35,45,55,69,70) D(15,25,40) H(70,200), W(40,70) Y(15,25,40)	D(25,40,45,55) Y(25,40,45,55)	D(40,50) E(40) Y(40,50)								
220	227	B(35,45,70)	B(35,45,55,60,70) D(15,25,40) Y(15,25,40)	B(70,200) D(25,35,40,50) Y(15,25,35,40,50)	D(15,18,25,40,50) Y(25,40,50)									
330	337	B(35,45,70) Y(25,40)	D(25,40,50) Y(25,40,50)	D(25,40,50) Y(25,40,50)		E*								
470	477	D(15,25,40,50) Y(15,25,40,50)	D(15,25,40,50) Y(15,25,40,50)	X(55,100)										
3300	208			U*										

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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## Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

### RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Cap (µF)	Rated Voltage (V)	Rated Temp. (°C)	Category Voltage (V)	Category Temp. (°C)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @ 100kHz	MSL	100kHz RMS Current (mA)				Product Category
											25°C	85°C	105°C	125°C	
TCJW686M006#0070	W	68	6.3	85	4	125	40.8	8	70	3	1400	1000	600	400	125°C
TCJS226M006#0400	S	22	6.3	85	5	105	13.2	8	400	3	500	400	200	-	105°C
TCJT226M006#0150	T	22	6.3	85	5	105	13.2	6	150	3	800	600	400	-	105°C
TCJA336M006#0200	A	33	6.3	85	5	105	19.8	6	200	3	700	500	300	-	105°C
TCJB336M006#0070	B	33	6.3	85	4	125	19.8	6	70	3	1300	900	600	300	125°C
TCJB336M006#0200	B	33	6.3	85	4	125	19.8	6	200	3	800	600	400	200	125°C
TCJT336M006#0150	T	33	6.3	85	5	105	19.8	8	150	3	800	600	400	-	105°C
TCJA476M006#0070	A	47	6.3	85	5	105	28.2	6	70	3	1200	800	500	-	105°C
TCJA476M006#0100	A	47	6.3	85	5	105	28.2	6	100	3	1000	700	500	-	105°C
TCJA476M006#0200	A	47	6.3	85	5	105	28.2	6	200	3	700	500	300	-	105°C
TCJB476M006#0070	B	47	6.3	85	4	125	28.2	6	70	3	1300	900	600	300	125°C
TCJK476M006#0150	K	47	6.3	85	5	105	28.2	6	150	3	800	600	400	-	105°C
TCJK476M006#0200	K	47	6.3	85	5	105	28.2	6	200	3	700	500	300	-	105°C
TCJA476M006#0400	K	47	6.3	85	5	105	28.2	6	400	3	500	400	200	-	105°C
TCJP476M006#0500	P	47	6.3	85	5	105	28.2	10	500	3	400	300	200	-	105°C
TCJR476M006#0500	R	47	6.3	85	5	105	28.2	10	500	3	400	300	200	-	105°C
TCJT476M006#0055	T	47	6.3	85	5	105	28.2	8	55	3	1300	900	600	-	105°C
TCJT476M006#0070	T	47	6.3	85	5	105	28.2	8	70	3	1200	800	500	-	105°C
TCJT476M006#0069	T	47	6.3	85	5	105	20	8	69	3	1200	800	500	-	105°C
TCJT476M006#0080	T	47	6.3	85	5	105	28.2	8	80	3	1100	800	500	-	105°C
TCJT476M006#0120	T	47	6.3	85	5	105	28.2	8	120	3	900	600	400	-	105°C
TCJB686M006#0055	B	68	6.3	85	4	125	40.8	8	55	3	1500	1100	700	400	125°C
TCJB686M006#0070	B	68	6.3	85	4	125	40.8	8	70	3	1300	900	600	300	125°C
TCJC686M006#0100	C	68	6.3	85	4	125	40.8	6	100	3	1300	900	600	300	125°C
TCJT686M006#0200	T	68	6.3	85	5	105	40.8	8	200	3	700	500	300	-	105°C
TCJA107M006#0100	A	100	6.3	85	6.3	85	60	10	100	3	1000	700	-	-	85°C
TCJA107M006#0150	A	100	6.3	85	6.3	85	60	10	150	3	800	600	-	-	85°C
TCJB107M006#0045	B	100	6.3	85	5	105	60	10	45	3	1700	1200	800	-	105°C
TCJB107M006#0055	B	100	6.3	85	5	105	60	10	55	3	1500	1100	700	-	105°C
TCJB107M006#0069	B	100	6.3	85	5	105	60	10	69	3	1300	900	600	-	105°C
TCJB107M006#0070	B	100	6.3	85	5	105	60	10	70	3	1300	900	600	-	105°C
TCJT107M006#0070	T	100	6.3	85	5	105	60	10	70	3	1200	800	500	-	105°C
TCJT107M006#0200	T	100	6.3	85	5	105	60	10	200	3	700	500	300	-	105°C
TCJB157M006#0035	B	150	6.3	85	5	105	90	10	35	3	1900	1300	900	-	105°C
TCJB157M006#0045	B	150	6.3	85	5	105	90	10	45	3	1700	1200	800	-	105°C
TCJB157M006#0055	B	150	6.3	85	5	105	90	10	55	3	1500	1100	700	-	105°C
TCJB157M006#0069	B	150	6.3	85	5	105	90	10	69	3	1300	900	600	-	105°C
TCJB157M006#0070	B	150	6.3	85	5	105	90	10	70	3	1300	900	600	-	105°C
TCJD157M006#0015	D	150	6.3	105	6.3	105	90	6	15	3	3900	2700	1800	-	105°C
TCJD157M006#0025	D	150	6.3	105	6.3	105	90	6	25	3	3000	2100	1400	-	105°C
TCJD157M006#0040	D	150	6.3	105	6.3	105	90	6	40	3	2400	1700	1100	-	105°C
TCJH157M006#0200	H	150	6.3	85	5	105	90	6	200	3	700	500	300	-	105°C
TCJW157M006#0040	W	150	6.3	85	5	105	90	6	40	3	1800	1300	800	-	105°C
TCJW157M006#0070	W	150	6.3	85	5	105	90	6	70	3	1400	1000	600	-	105°C
TCJY157M006#0015	Y	150	6.3	105	6.3	105	90	6	15	3	3500	2500	1600	-	105°C
TCJY157M006#0025	Y	150	6.3	85	5	105	90	6	25	3	2700	1900	1200	-	105°C
TCJY157M006#0040	Y	150	6.3	85	5	105	90	6	40	3	2200	1500	1000	-	105°C
TCJB227M006#0070	B	220	6.3	85	5	105	132	10	70	3	1300	900	600	-	105°C
TCJB227M006#0200	B	220	6.3	85	5	105	132	10	200	3	800	600	400	-	105°C
TCJD227M006#0025	D	220	6.3	85	5	105	132	6	25	3	3000	2100	1400	-	105°C
TCJD227M006#0035	D	220	6.3	85	5	105	132	6	35	3	2500	1800	1100	-	105°C
TCJD227M006#0040	D	220	6.3	85	5	105	132	6	40	3	2400	1700	1100	-	105°C
TCJD227M006#0050	D	220	6.3	85	5	105	132	6	50	3	2100	1500	900	-	105°C
TCJY227M006#0025	Y	220	6.3	85	5	105	132	6	25	3	2700	1900	1200	-	105°C
TCJY227M006#0035	Y	220	6.3	85	5	105	132	6	35	3	2300	1600	1000	-	105°C
TCJY227M006#0040	Y	220	6.3	85	5	105	132	6	40	3	2200	1500	1000	-	105°C
TCJY227M006#0050	Y	220	6.3	85	5	105	132	6	50	3	1900	1300	900	-	105°C
TCJD337M006#0025	D	330	6.3	85	5	105	198	6	25	3	3000	2100	1400	-	105°C
TCJD337M006#0040	D	330	6.3	105	6.3	105	198	6	40	3	2400	1700	1100	-	105°C
TCJD337M006#0050	D	330	6.3	105	6.3	105	198	6	50	3	2100	1500	900	-	105°C
TCJY337M006#0025	Y	330	6.3	85	5	105	198	12	25	3	2700	1900	1200	-	105°C
TCJY337M006#0040	Y	330	6.3	85	5	105	198	12	40	3	2200	1500	1000	-	105°C
TCJY337M006#0050	Y	330	6.3	85	5	105	198	12	50	3	1900	1300	900	-	105°C
TCJX477M006#0055	X	470	6.3	85	5	105	282	6	55	3	1800	1300	800	-	105°C
TCJX477M006#0100	X	470	6.3	85	5	105	282	6	100	3	1300	900	600	-	105°C

**10 Volt @ 85°C**









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## Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

### RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Cap (µF)	Rated Voltage (V)	Rated Temp. (°C)	Category Voltage (V)	Category Temp. (°C)	DCL (µA) Max.	DF % Max.	ESR Max. (mΩ) @ 100kHz	MSL	100kHz RMS Current (mA)				Product Category
											25°C	85°C	105°C	125°C	
TCJE685M063#0100	E	6.8	63	85	50	105	42.8	6	100	3	1600	1100	700	-	105°C
TCJE685M063#0150	E	6.8	63	85	50	105	42.8	6	150	3	1300	900	600	-	105°C
TCJE106M063#0100	E	10	63	85	50	105	63	6	100	3	1600	1100	700	-	105°C
TCJE106M063#0150	E	10	63	85	50	105	63	6	150	3	1300	900	600	-	105°C
<b>75 Volt @ 85°C</b>															
TCJD475M075#0150	D	4.7	75	85	60	105	35.3	6	150	3	1200	800	500	-	105°C
TCJD685M075#0120	D	6.8	75	85	60	105	51	6	120	3	1400	1000	600	-	105°C
<b>100 Volt @ 85°C</b>															
TCJD475M100#0250	D	4.7	100	85	80	105	47	8	250	3	900	600	400	-	105°C
<b>125 Volt @ 85°C</b>															
TCJD335M125#0250	D	3.3	125	85	100	105	41.2	8	250	3	900	600	400	-	105°C

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 214.

**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.**

### PRODUCT CATEGORY 125°C

TEST	125°C series (Temperature range -55°C to +125°C)									
	Condition			Characteristics						
<b>Endurance</b>	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 +20/-30% of initial value					
				DF	1.5 x initial limit					
				ESR	2 x initial limit					
<b>Storage Life</b>	125°C, 0V, 2000h			Visual examination	no visible damage					
				DCL	2 x initial limit					
				ΔC/C	within ±20% of initial value					
				DF	1.5 x initial limit					
				ESR	2 x initial limit					
<b>Humidity</b>	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	3 x initial limit					
				ΔC/C	within +30/-20% of initial value					
				DF	1.5 x initial limit					
				ESR	2 x initial limit					
<b>Temperature Stability</b>	Step	Temperature°C	Duration(min)		+20°C	-55°C	+20°C	+85°C	+125°C	+20°C
	1	+20±2	15							
	2	-55+0/-3	15	DCL	IL*	n/a	IL*	10 x IL*	12.5 x IL*	IL*
	3	+20±2	15	ΔC/C	n/a	+0/-20%	±5%	+20/-0%	+30/-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							
<b>Surge Voltage</b>	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 +20/-30% of initial value					
				DF	1.25 x initial limit					

\*Initial Limit

## Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

### PRODUCT CATEGORY 105°C

TEST	105°C series (Temperature range -55°C to +105°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 after application of 105°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 +20/-30% of initial value			
				DF	1.5 x initial limit			
				ESR	2 x initial limit			
Storage Life	105°C, 0V, 2000h			Visual examination	no visible damage			
				DCL (V <sub>R</sub> ≤ 75V)	1.25 x initial limit			
				DCL (V <sub>R</sub> > 75V)	2 x initial limit			
				ΔC/C	within ±20% of initial value			
				DF	1.5 x initial limit			
				ESR	2 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	3 x initial limit			
				ΔC/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±2	15					
	2	-55+0/-3	15					
	3	+20±2	15					
	4	+85+3/-0	15					
	5	+105+3/-0	15					
	6	+20±2	15					
Surge Voltage	Test temperature: 105°C+3/0°C Test voltage: Category voltage at 105°C Surge voltage: 1.3 x category voltage at 105°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 +20/-30% of initial value			
				DF	1.25 x initial limit			

\*Initial Limit

### PRODUCT CATEGORY 85°C

TEST	85°C series (Temperature range -55°C to +85°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. Power supply impedance to be ≤0.1Ω/V.			Visual examination	no visible damage			
				DCL	1.25 x initial limit			
				ΔC/C	within +20/-30% of initial value			
				DF	1.5 x initial limit			
				ESR	2 x initial limit			
Storage Life	85°C, 0V, 2000h			Visual examination	no visible damage			
				DCL	1.25 x initial limit			
				ΔC/C	within ±20% of initial value			
				DF	1.5 x initial limit			
				ESR	2 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
DCL	5 x initial limit							
ΔC/C	within +40/-20% of initial value							
DF	1.5 x initial limit							
ESR	2 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	+20±2	15					
Surge Voltage	Test temperature: 85+3/0°C Test voltage: Rated voltage Surge voltage: 1.3 x rated voltage 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 +20/-30% of initial value			
				DF	1.25 x initial limit			

\*Initial Limit



Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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