

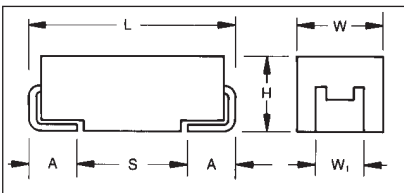
THJ Series

High Temperature Tantalum Chip Capacitor



The THJ surface mount series combines high temperature operation and higher basic reliability for optimal performance in high temperature automotive and industry applications. The operational temperature is up to +175°C with 50% voltage derating. The level of reliability of this tantalum product is 0.5% / 1000 hours at rated voltage,

rated temperature and 0.1Ω/volt circuit impedance. The capacitors are produced in black encapsulation with white polarity marking. The THJ series encompasses the 4 case sizes with dimensions identical to TAJ standard series. The voltage range available today is 6.3V to 50V.



For part marking see page 165

CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	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	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	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	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	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	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)

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

HOW TO ORDER

THJ

Type

B

Case Size
See table above

105

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

Tolerance
K=±10%
M=±20%

035

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

R

Packaging
R = 7" T/R Lead Free
S = 13" T/R Lead Free
A = Gold Plating 7" Reel
B = Gold Plating 13" Reel
H = Tin Lead 7" Reel
K = Tin Lead 13" Reel

JN

Additional characters may be added for special requirements

TECHNICAL SPECIFICATIONS

Technical Data:

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

Capacitance Range:

0.1 μF to 150 μF

Capacitance Tolerance:

±10%; ±20%

Rated Voltage (V_R)

≤ +85°C:	6.3	10	16	20	25	35	50
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Category Voltage (V_C)

≤ +125°C	4	7	10	13	17	23	33
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≤ +175°C	3	5	8	10	12	17	25
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Surge Voltage (V_S)

≤ +85°C	8	13	20	26	32	46	65
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≤ +125°C	5	8	13	16	20	28	40
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≤ +175°C	4	6	10	12	15	21	30
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Temperature Range:

Up to 175°C with 50% voltage derating.

Reliability:

0.5% per 1000 hours at 85°C, V_R with 0.1Ω/V series impedance,
60% confidence level, 3.5 Fits at 40°C, 0.5V_R

Termination Finish:

Sn Plating (standard), Gold Plating available on request

Meets requirements of AEC-Q200

THJ Series



High Temperature Tantalum Chip Capacitor

CAPACITANCE AND VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated voltage (V _R) to 85°C (Voltage Code)						
μF	Code	6.3V (J)	10V (A)	16V (C)	20V (D)	25V (E)	35V (V)	50V (T)
0.10 0.15 0.22	104 154 224						A A A	
0.33 0.47 0.68	334 474 684					A A	A B B	
1.0 1.5 2.2	105 155 225			A	A	A B	A/B C C	
3.3 4.7 6.8	335 475 685	A A A	A A A	A A/B A/B	B	C	C C D	D
10 15 22	106 156 226	A B B	B B B	B B C	C	C D	D D D	
33 47 68	336 476 686	B C C	C C D	C D D	D	D	E	
100 150	107 157	D D	D					

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	DCL (μA) Max.	DF % Max.	ESR Max. (Ω) @ 100 kHz
Voltage Rating 6.3 v @ 85°C (3 v @ 175°C) / J						
THJA475*006#JN	A	4.7	6.3	0.5	6	6
THJA685*006#JN	A	6.8	6.3	0.5	4.5	2.6
THJA106*006#JN	A	10	6.3	0.6	4.5	2.2
THJB156*006#JN	B	15	6.3	0.9	6	2.5
THJB226*006#JN	B	22	6.3	1.4	6	2.5
THJB336*006#JN	B	33	6.3	1.9	6	1.7
THJC476*006#JN	C	47	6.3	3.0	6	1.6
THJC686*006#JN	C	68	6.3	4.3	6	1.5
THJD107*006#JN	D	100	6.3	6	4.5	0.4
THJD157*006#JN	D	150	6.3	9.5	6	0.9
Voltage Rating 10 v @ 85°C (5 v @ 175°C) / A						
THJA335*010#JN	A	3.3	10	0.5	6	5.5
THJA475*010#JN	A	4.7	10	0.5	4.5	2.9
THJA685*010#JN	A	6.8	10	0.7	4.5	2.6
THJB106*010#JN	B	10	10	1	4.5	1.8
THJB156*010#JN	B	15	10	1.5	4.5	1.5
THJB226*010#JN	B	22	10	2.2	6	2.4
THJC336*010#JN	C	33	10	3.3	6	1.6
THJC476*010#JN	C	47	10	4.7	4.5	0.5
THJD686*010#JN	D	68	10	6.8	4.5	0.4
THJD107*010#JN	D	100	10	10	6	0.9
Voltage Rating 16 v @ 85°C (8 v @ 175°C) / C						
THJA225*016#JN	A	2.2	16	0.5	6	6.5
THJA335*016#JN	A	3.3	16	0.5	6	3.7
THJA475*016#JN	A	4.7	16	0.8	4.5	2.9
THJB475*016#JN	B	4.7	16	0.8	6	3.5
THJA685*016#JN	A	6.8	16	1.1	6	2.6
THJB685*016#JN	B	6.8	16	1.1	6	2.5
THJB106*016#JN	B	10	16	1.6	6	2.8
THJB156*016#JN	B	15	16	2.4	6	2.0
THJC226*016#JN	C	22	16	3.5	6	1.6
THJC336*016#JN	C	33	16	5.3	6	0.6
THJD476*016#JN	D	47	16	7.5	6	0.9
THJD686*016#JN	D	68	16	10.9	4.5	0.9

AVX Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	DCL (μA) Max.	DF % Max.	ESR Max. (Ω) @ 100 kHz
Voltage Rating 20 v @ 85°C (10 v @ 175°C) / D						
THJA155*020#JN	A	1.5	20	0.5	6	6.5
THJB335*020#JN	B	3.3	20	0.7	6	3
THJC156*020#JN	C	15	20	3.0	6	1.7
THJD336*020#JN	D	33	20	6.6	6	0.9
Voltage Rating 25 v @ 85°C (12 v @ 175°C) / E						
THJA474*025#R	A	0.47	25	0.5	4	14
THJA684*025#JN	A	0.68	25	0.5	4	10
THJA105*025#JN	A	1.0	25	0.5	3	5.2
THJB225*025#JN	B	2.2	25	0.6	6	4.5
THJC685*025#JN	C	6.8	25	1.7	6	2
THJC106*025#JN	C	10	25	2.5	6	1.8
THJD226*025#JN	D	22	25	5.5	6	0.9
THJD336*025#JN	D	33	25	8.3	6	0.5
Voltage Rating 35 v @ 85°C (17 v @ 175°C) / V						
THJA104*035#JN	A	0.1	35	0.5	4	24
THJA154*035#JN	A	0.15	35	0.5	4	21
THJA224*035#JN	A	0.22	35	0.5	4	18
THJA334*035#JN	A	0.33	35	0.5	4	15
THJB474*035#JN	B	0.47	35	0.5	4	10
THJB684*035#JN	B	0.68	35	0.5	4	8
THJA105*035#JN	A	1.0	35	0.5	4	6.6
THJB105*035#JN	B	1.0	35	0.5	4	6.5
THJC155*035#JN	C	1.5	35	0.5	6	4.5
THJC225*035#JN	C	2.2	35	0.8	6	3.5
THJC335*035#JN	C	3.3	35	1.2	6	2.5
THJC475*035#JN	C	4.7	35	1.6	6	2.2
THJD685*035#JN	D	6.8	35	2.4	6	1.3
THJD106*035#JN	D	10	35	3.5	6	1
THJD156*035#JN	D	15	35	5.3	6	0.9
THJD226*035#JN	D	22	35	7.7	6	0.6
THJE336*035#JN	E	33	35	11.6	6	0.5
Voltage Rating 50 v @ 85°C (25 v @ 150°C) / T						
THJD475*050#JN	D	4.7	50	2.4	6	0.9

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.

* Insert K for ±10% and M for ±20%

NOTE: AVX reserves the right to supply higher specification parts in the same case size, to the same reliability standards.

Standard Plating – Insert R for 7" reel and S for 13" reel
Gold Plating – Insert A for 7" reel and B for 13" reel
Tin Lead – Insert H for 7" reel and K for 13" reel

For parametric information on development codes, please contact your local AVX sales office.