



TH3 - High Temperature Molded Solid Tantalum Chip Capacitors



KEY BENEFITS

- Operating temperature up to 150 °C
- High reliability
- AEC-Q200 qualified
- Automotive grade product
- 100 % surge current tested (B, C, D, E case sizes)
- SnPb, 100 % tin, solder plated and gold-plated terminations available

APPLICATIONS

- Automotive
- Industrial controls
- Oil exploration

RESOURCES

- Datasheet: <http://www.vishay.com/doc?40084>
- Tantalum product portfolio: <http://www.vishay.com/capacitors/tantalum/>
- Reliability calculator: <http://www.vishay.com/capacitors/tantalum/capacitors/tantalum/tantalum-wet/tantalum-reliability-calculator-list/>
- Technical questions: contact_tantalum@vishay.com
- Sales contacts: <http://www.vishay.com/doc?99914>
- Material categorization: For definitions of compliance please see <http://www.vishay.com/doc?99912>

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CAPACITORS

TH3 Series Tantalum



Capacitors- High Temperature (150°C), High Reliability SMD Tantalum Molded Chip

ORDERING INFORMATION						
TH3 TYPE	D CASE CODE	106 CAPACITANCE	K TOLERANCE	035 DC VOLTAGE RATING AT +85 °C	C TERMINATION AND PACKAGING	0700 ESR
	See Ratings and Case Codes table.	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	K = ± 10 % M = ± 20 %	This is expressed in V. To complete the three-digit block, zeros precede the voltage rating. A decimal point is indicated by an "R". (6R3 = 6.3 V)	A: Gold/7" (178 mm) reels (1) B: Gold/13" (330 mm) reels (1) C: Matte tin/7" (178 mm) reels D: Matte tin/13" (330 mm) reels E: Tin/lead/7" (178 mm) reels F: Tin/lead/13" (330 mm) reels	Maximum 100 kHz ESR 0500 = 500 mΩ 5000 = 5.0 Ω 10R0 = 10.0 Ω

Notes

- We reserve the right to supply higher voltage ratings and tighter capacitance tolerance capacitors in the same case size. Voltage substitutions will be marked with the higher voltage rating.
- (1) Contact factory for availability

DIMENSIONS in inches [millimeters]							
CASE CODE	EIA SIZE	L	W	H	P	T _W	T _H (MIN.)
A	3216-18	0.126 ± 0.008 [3.2 ± 0.20]	0.063 ± 0.008 [1.6 ± 0.20]	0.063 ± 0.008 [1.6 ± 0.20]	0.031 ± 0.012 [0.80 ± 0.30]	0.047 ± 0.004 [1.2 ± 0.10]	0.028 [0.70]
B	3528-21	0.138 ± 0.008 [3.5 ± 0.20]	0.110 ± 0.008 [2.8 ± 0.20]	0.075 ± 0.008 [1.9 ± 0.20]	0.031 ± 0.012 [0.80 ± 0.30]	0.087 ± 0.004 [2.2 ± 0.10]	0.028 [0.70]
C	6032-28	0.236 ± 0.012 [6.0 ± 0.30]	0.126 ± 0.012 [3.2 ± 0.30]	0.098 ± 0.012 [2.5 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.087 ± 0.004 [2.2 ± 0.10]	0.039 [1.0]
D	7343-31	0.287 ± 0.012 [7.3 ± 0.30]	0.169 ± 0.012 [4.3 ± 0.30]	0.110 ± 0.012 [2.8 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.094 ± 0.004 [2.4 ± 0.10]	0.039 [1.0]
E	7343-43	0.287 ± 0.012 [7.3 ± 0.30]	0.169 ± 0.012 [4.3 ± 0.30]	0.157 ± 0.012 [4.0 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.094 ± 0.004 [2.4 ± 0.10]	0.039 [1.0]

RATINGS AND CASE CODES							
μF	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V
0.33						A (11.0)	
0.47					A (14.0)		
0.68							
1.0			A (6.5)	A (5.9)	A (3.0, 5.2)/ B (0.5)	A (6.6)/B (4.4)	C (3.3)
1.5			A (4.3)			B (4.2)/C (3.3)	
2.2		A (4.6)	A (3.4)/B (3.0)	A (5.9)/B (3.5)	A (5.2)/B (3.0)	B (2.5)/C (2.2)	
3.3				B (2.7)/C (3.7)	B (3.0)/C (2.0)	B (2.5, 3.5)/ C (1.7)	D (1.7)
4.7		A (2.9)/B (2.7)	A (2.9)/B (2.1)	A (5.0)/ B (2.9, 1.9)/ C (1.7)	A (5.0)/B (2.8)/ C (1.6)	B (3.1)/C (1.3)/ D (1.0)	C (1.5)/D (0.9)
6.8		A (2.6)	A (2.6, 2.0)/ B (1.8)/C (1.7)		B (2.4)/C (1.4)	C (1.8)/D (0.9)	D (0.9)
10	A (3.4, 2.7)	A (3.4)/B (1.8)/ C (1.8, 1.7)	B (2.0)/C (1.4)	C (1.1)	C (1.1)/D (0.9)	C (1.6)/ D (0.3, 0.7)	D (0.8)/E (0.5)
15	B (1.8)	A (2.9, 2.0)/ B (2.0, 1.8, 1.5)/ C (1.8, 1.4)	B (2.0)/C (1.0)	B (2.0)/C (1.0)/ D (0.9)	B (1.4, 2.0)/ C (1.2)/D (0.7)	D (0.7)	
22	B (2.0, 1.5)	B (1.5)/ C (1.5, 1.1)	B (1.9)/C (1.0)/ D (0.8)	C (1.0)/D (0.7)	D (0.6)	D (0.3, 0.6)/ E (0.5)	
33	B (1.9, 1.7)	B (1.9, 1.4)/ D (0.8)	C (0.9, 0.6)/ D (0.6)	D (0.6)	D (0.5)		
47	B (1.8)/C (0.8)	B (1.8)/ C (0.8, 0.5)/ D (0.6)	C (0.8, 0.6)/ D (0.6)	D (0.7)/E (0.6)	E (0.6)		
68	B (1.8)	C (1.0, 0.8)/ D (1.0, 0.6, 0.4)	D (0.6)	E (0.6)			
100	E (0.3)	C (0.9, 0.5)/ D (0.6)	D (0.6)/ E (0.6, 0.15)				
150		D (0.6)					
220		E (0.5)					

Note

- ESR limits in Ω are shown in parenthesis