



TANTALUM CAPACITORS

TF3 Tantalum Capacitors with Built-In Fuse



Solid Tantalum Chip Capacitors, TANTAMOUNT[®] Molded Case, Low ESR, Miniature Built-In Fuse

KEY BENEFITS

- Miniature built-in fuse
- Very short fuse activation at 25 °C: 0.1 s maximum with 5-A minimum applied current
- Molded case available in three case codes (C, D, and E)
- Low ESR: down to 0.250 Ω
- Capacitance range: 0.47 μF to 470 μF
- Voltage rating: 4 VDC to 50 VDC
- 100 % surge current tested
- Lead (Pb)-free and RoHS-compliant

APPLICATIONS

- Safety-critical industrial applications
- Medical instrumentation
- Diagnostic
- High-end computing
- Data storage

Low ESR Solid Tantalum Chip Capacitors TANTAMOUNT® Molded Case, Built-In-Fuse

FEATURES

- Terminations: 100% matte tin, standard, tin/lead available
- Molded case available in three case codes
- Compatible with "High Volume" automatic pick and place equipment
- High ripple current carrying capability
- Low ESR
- Meets EIA 535BAAC
- 100% Surge current tested
- Compliant to RoHS directive 2002/95/EC



PERFORMANCE/ELECTRICAL CHARACTERISTICS

Operating Temperature: -55 °C to +85 °C
Capacitance Range: 0.47 µF to 470 µF
Capacitance Tolerance: ±10%, ±20%
Voltage Rating: 4 VDC to 50 VDC

Note: Refer to doc. 40088

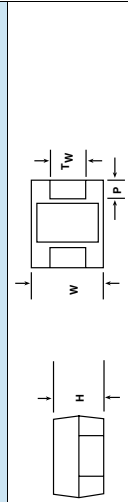
ORDERING INFORMATION

TF3 TYPE	E CASE CODE	477 CAPACITANCE	M CAPACITANCE TOLERANCE	004 DC VOLTAGE RATING AT +85 °C	E TERMINATION/ PACKAGING	0500 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	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)	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 in mΩ

Note
 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.

DIMENSIONS in inches (millimeters)

CASE CODE	EIA SIZE	L	W	H	P	T _w	T _H (MIN.)
C	6032-28	0.236 ± 0.012 [6.0 ± 0.30]	0.128 ± 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]	0.170 ± 0.012 [4.3 ± 0.30]	0.119 ± 0.012 [2.8 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.095 ± 0.004 [2.4 ± 0.10]	0.039 [1.0]
E	7343-43	0.287 ± 0.012 [7.3 ± 0.30]	0.170 ± 0.012 [4.3 ± 0.30]	0.158 ± 0.012 [4.0 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.095 ± 0.004 [2.4 ± 0.10]	0.039 [1.0]



RATINGS AND CASE CODES								
µF	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V
0.47								C
0.68								C
1.0								C
1.5							C	C
2.2							C	C
3.3							C	C
4.7							C	D
6.8							C	D
10							C	D
15							C/D	D/E
22							C/D	D/E
33							C/D	D/E
47							C/D	D/E
68							C/D	D/E
100							C/D	D/E
150							D	D/E
220							D	D/E
330							D ⁽¹⁾	E
470							E	

Note

⁽¹⁾ Preliminary values, contact factory for availability.

CONSTRUCTION AND MARKING

Marking:
 Capacitor marking includes an anode (+) polarity band, capacitance in microfarads and the voltage rating. The Vishay Sprague® trademark is included if space permits. Capacitors rated at 6.3 V are marked on all capacitors. A manufacturing date code is marked on all capacitors.

Marking Example:
 Polarity Band → 22F10L → XX → Date Code → C, D, E, Cases

Revision 22-Dec-09

* Pb containing terminations are not RoHS compliant, exemptions may apply

DISCLAIMER All product specifications and data are subject to change without notice. Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product. Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications. Product names and markings noted herein may be trademarks of their respective owners.

Build Vishay into your Design

For technical questions, contact tantalum@vishay.com