TANTALUM CAPACITOR

293D

Solid Tantalum Surface-Mount Capacitor, Molded Case, Standard Industrial Grade

KEY BENEFITS

- Broad capacitance range: 0.10 µF to 1000 µF
- Broad voltage range: 4 VDC to 50 VDC
- 6 EIA case sizes: 3216-18, 3528-21, 6032-28, 7343-20, 7343-31, 7343-43
- Lead (Pb)-free (RoHS-compliant) and 90/10 Sn/Pb terminations available
- Mature, well proven product line
- Tape and reel to EIA standard; allows high-speed insertion

APPLICATIONS

- PCs and servers
- Workstations
- Power supplies
- Converters
- Consumer electronics

Datasheet is available on our web site at www.vishay.com
for 293D - http://www.vishay.com/doc?40002

Solid Tantalum Surface Mount Capacitors
TANTAMOUNT® Molded Case, Standard Industrial Grade

FEATURES

- Terminations: 100 % matte tin, standard, tin/lead available
- Compliant terminations
- Molded case available in six case codes
- Compatible with "High Volume" automatic pick and place equipment
- Optical character recognition qualified
- Meets IEC Specification QC300801/US0001 and EIA535BAAC mechanical and performance requirements

Pb-free Available

RoHS* COMPLIANT

PERFORMANCE/ELECTRICAL CHARACTERISTICS

Operating Temperature: - 55 °C to + 125 °C

Note: Refer to Doc. 40088

Capacitance Range: 0.10 µF to 1000 µF

Capacitance Tolerance: ± 5 %, ± 10 % , ± 20 %

100 % Surge Current Tested (D and E Case Codes)

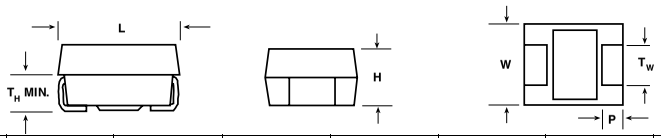
Voltage Rating: 4 VDC to 50 VDC

ORDERING INFORMATION

293D	107	X9	010	D	2WE3
TYPE	CAPACITANCE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING AT + 85 °C	CASE CODE	TERMINATION AND PACKAGING
	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	X0 = ± 20 % X9 = ± 10 % X5 = ± 5 %	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).	See Ratings and Case Codes table	2TE3: Matte tin, 7" (178 mm) reel 2WE3: Matte tin, 13" (330 mm) reel 8T: Tin/lead, 7" (178 mm) reel 8W: Tin/lead, 13" (330 mm) reel

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.
Effective July 15, 2008, part numbers with solderable termination codes "2T" and "2W" may have either matte tin or tin/lead terminations. Codes 2TE3 and 2WE3 specify only matte tin terminations. Codes 8T and 8W specify only tin/lead terminations.

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]	0.170 ± 0.012 [4.3 ± 0.30]	0.110 ± 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]
V	7343-20	0.287 ± 0.012 [7.3 ± 0.30]	0.170 ± 0.012 [4.3 ± 0.30]	0.079 max. [2.0 max.]	0.051 ± 0.012 [1.3 ± 0.30]	0.095 ± 0.004 [2.4 ± 0.10]	0.039 [1.0]

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

RATINGS AND CASE CODES

µF	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V
0.10							A	A
0.15							A	A/B
0.22							A	A/B
0.33							A	A/B
0.47						A	A/B	A/B/C
0.68					A	A	A/B	B/C
1.0				A	A	A/B	A/B	B/C
1.5			A	A	A	A/B	B/C	B/C
2.2		A	A	A/B	A/B	A/B	B/C	C/D
3.3	A	A	A	A/B	A/B	A/B/C	B/C	C/D
4.7	A	A/B	A/B	A/B	A/B/C	A/B/C	B/C/D	D
6.8	A	A/B	A/B	A/B/C	A/B/C	B/C	C/D	D/E
10	A/B	A/B/C	A/B/C	A/B/C	B/C	B/C/D	C/D	D/E
15	A/B	A/B/C	A/B/C	B/C	B/C/D	B/C/D	D/E	
22	A/BC	A/B/C	A/B/C	B/C/D	B/C/D	C/D/V	D/E	
33	A/B/C	A/B/C	B/C/D	B/C/D	C/D	D/E		
47	A/B/C	A/B/C/D	B/C/D	C/D	D/E	D/E		
68	B/C/D	B/C/D	B/C/D/V	D	D/E			
100	A/B/C/D	B/C/D/V	C/D/V	D/E	E			
150	B/C/D	C/D/E	D/E	D/E				
220	B/C/D/E	C/D/E	D/E	E				
330	D/E	D/E	D/E					
470	D/E	D/E	E					
680	E	E						
1000	E							

Note:
• Preliminary values, contact factory for availability.

Revision 05-May-08