

## Solid Tantalum Chip Capacitors

### TANTAMOUNT<sup>®</sup>, Molded-Case, Built-In-Fuse Miniature

#### FEATURES

- Terminations: 100 % Matte Tin standard, Tin/Lead available
- Molded package available in three case codes
- Compatible with "High Volume" automatic pick and place
- Electrically activated internal fuse
- Meets EIA 535BAAC and IEC specification QC300801/US0001
- Fuse activation at 25 °C: 0.1 s max. with 5 A min. applied current
- 100 % surge current tested (D and E Case codes)



RoHS\*  
COMPLIANT



#### PERFORMANCE/ELECTRICAL CHARACTERISTICS

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

Capacitance Range: 0.47 µF to 470 µF

Voltage Rating: 4 VDC to 50 VDC

Capacitance Tolerance: ± 10 %, ± 20 %

Note: References

Molded Guide:

[www.vishay.com/docs/40074/molded.pdf](http://www.vishay.com/docs/40074/molded.pdf)

Performance Characteristics:

[www.vishay.com/docs/40088/perfchar.pdf](http://www.vishay.com/docs/40088/perfchar.pdf)

#### ORDERING INFORMATION

893D	106	X0	010	B	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	X9 = ± 10 % X0 = ± 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)	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

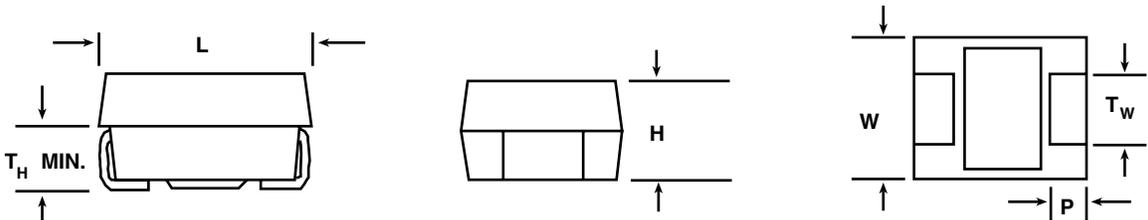
#### Notes

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]

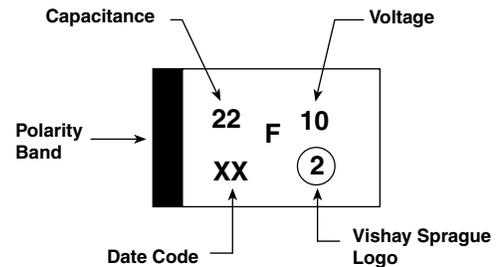
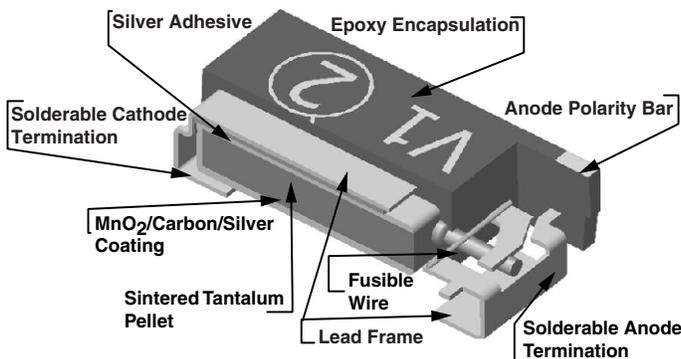


	EIA SIZE	L	W	H	P	Tw	Th (MIN.)
C	6032 - 28	0.236 ± 0.012 [6.0 ± 0.30]	0.126 ± 0.012 [3.2 ± 0.30]	0.098 ± 0.012 [2.5 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.087 ± 0.004 [2.2 ± 0.10]	0.039 [1.0]
D	7343 - 31	0.287 ± 0.012 [7.3 ± 0.30]	0.170 ± 0.012 [4.3 ± 0.30]	0.110 ± 0.012 [2.8 ± 0.30]	0.051 ± 0.012 [1.3 ± 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]

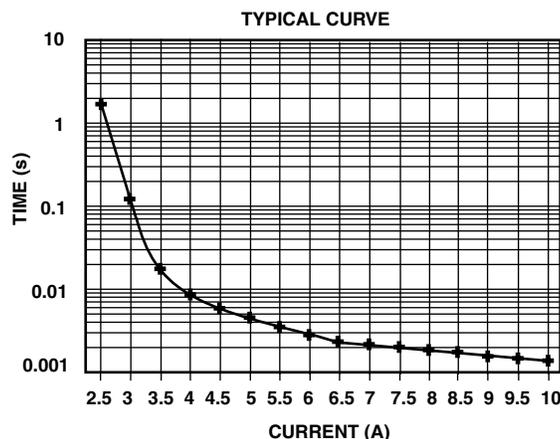
\* Pb containing terminations are not RoHS compliant

**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						D	C	C/D
3.3						C	C	C/D
4.7					C	C	C/D	D
6.8				C	C	C	D	D/E
10			C	C	C	C/D	D	
15		C	C	C	C/D	D	D/E	
22		C	C	C/D	D	D/E	E	
33		C	C/D	C/D	D/E	E		
47		C/D	C/D	D/E	E			
68	C	C/D	D/E	D	E			
100	C	D/E	D	E				
150	D	D	D/E	E				
220	D	D/E	E					
330	D/E	E						
470	E							

**CONSTRUCTION AND MARKING**


**Marking:** Capacitors shall be marked with an anode polarity band, capacitance (in microfarads) and the rated DC working voltage 85 °C. The capacitance voltage will be separated by the letter "F" indicating a fused capacitor. Units rated at 6.3 V shall be marked as 6 V.

**FUSE ACTIVATION**




<b>RATINGS AND PART NUMBER REFERENCE</b>						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{rms}$ (A)
<b>4 VDC AT + 85 °C, 2.7 VDC AT + 125 °C</b>						
68	C	893D686(1)004C(2)	2.7	6	1.4	0.28
100	C	893D107(1)004C(2)	4.0	8	0.8	0.37
150	D	893D157(1)004D(2)	6.0	8	0.6	0.50
220	D	893D227(1)004D(2)	8.8	8	0.6	0.50
330	D	893D337(1)004D(2)	13.2	15	0.6	0.50
330	E	893D337(1)004E(2)	13.2	8	0.5	0.57
470	E	893D477(1)004E(2)	18.8	16	0.5	0.57
<b>6.3 VDC AT + 85 °C, 4 VDC AT + 125 °C</b>						
15	C	893D156(1)6R3C(2)	0.9	6	1.8	0.25
22	C	893D226(1)6R3C(2)	1.1	6	1.8	0.25
33	C	893D336(1)6R3C(2)	1.6	6	1.4	0.28
47	C	893D476(1)6R3C(2)	2.3	6	1.3	0.29
47	D	893D476(1)6R3D(2)	2.3	6	0.9	0.41
68	C	893D686(1)6R3C(2)	3.3	6	0.8	0.37
68	D	893D686(1)6R3D(2)	3.3	6	0.7	0.46
100	D	893D107(1)6R3D(2)	4.8	8	0.7	0.46
100	E	893D107(1)6R3E(2)	6.0	8	0.7	0.49
150	D	893D157(1)6R3D(2)	9.0	8	0.6	0.50
220	D	893D227(1)6R3D(2)	13.2	8	0.6	0.50
220	E	893D227(1)6R3E(2)	13.2	8	0.5	0.57
330	E	893D337(1)6R3E(2)	19.8	8	0.5	0.57
<b>10 VDC AT + 85 °C, 7 VDC AT + 125 °C</b>						
10	C	893D106(1)010C(2)	1.0	6	1.8	0.25
15	C	893D156(1)010C(2)	1.5	6	1.8	0.25
22	C	893D226(1)010C(2)	2.2	6	1.4	0.28
33	C	893D336(1)010C(2)	3.3	6	1.3	0.29
33	D	893D336(1)010D(2)	3.3	6	0.9	0.41
47	C	893D476(1)010C(2)	4.7	6	1.0	0.33
47	D	893D476(1)010D(2)	4.7	6	0.7	0.46
68	D	893D686(1)010D(2)	6.8	6	0.7	0.46
68	E	893D686(1)010E(2)	6.8	6	0.7	0.49
100	D	893D107(1)010D(2)	10	8	0.6	0.50
150	D	893D157(1)010D(2)	15.0	8	0.6	0.50
150	E	893D157(1)010E(2)	15.0	8	0.5	0.57
220	E	893D227(1)010E(2)	22	8	0.5	0.57
<b>16 VDC AT + 85 °C, 10 VDC AT + 125 °C</b>						
6.8	C	893D685(1)016C(2)	1.1	6	2.0	0.23
10	C	893D106(1)016C(2)	1.6	6	1.8	0.25
15	C	893D156(1)016C(2)	2.4	6	1.4	0.28
22	C	893D226(1)016C(2)	3.5	6	1.3	0.29
22	D	893D226(1)016D(2)	3.5	6	0.9	0.41
33	C	893D336(1)016C(2)	5.3	6	1.0	0.33
33	D	893D336(1)016D(2)	5.3	6	0.7	0.46
47	D	893D476(1)016D(2)	7.5	6	0.7	0.46
47	E	893D476(1)016E(2)	7.5	6	0.7	0.49
68	D	893D686(1)016D(2)	10.9	6	0.6	0.50
100	E	893D107(1)016E(2)	16	8	0.6	0.52
150	E	893D157(1)016E(2)	24	10	0.4	0.64

**Notes**

- (1) Tolerance: X0, X9
- (2) Terminations and packaging: 2TE3, 2WE3, 8T, 8W



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

Vishay Sprague

<b>RATINGS AND PART NUMBER REFERENCE</b>						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT+ 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{rms}$ (A)
<b>20 VDC AT + 85 °C, 13 VDC AT + 125 °C</b>						
4.7	C	893D475(1)020C(2)	0.9	6	2.0	0.22
6.8	C	893D685(1)020C(2)	1.4	6	1.9	0.24
10	C	893D106(1)020C(2)	2.0	6	1.6	0.26
15	C	893D156(1)020C(2)	3.0	6	1.4	0.28
15	D	893D156(1)020D(2)	3.0	6	0.9	0.41
22	D	893D226(1)020D(2)	4.4	6	0.7	0.46
33	D	893D336(1)020D(2)	6.6	6	0.7	0.46
33	E	893D336(1)020E(2)	6.6	6	0.7	0.49
47	E	893D476(1)020E(2)	9.4	6	0.6	0.52
68	E	893D686(1)020E(2)	13.6	6	0.6	0.52
<b>25 VDC AT + 85 °C, 17 VDC AT + 125 °C</b>						
2.2	C	893D225(1)025C(2)	0.9	6	2.8	0.21
3.3	C	893D335(1)025C(2)	0.8	6	2.3	0.22
4.7	C	893D475(1)025C(2)	1.2	6	1.9	0.24
6.8	C	893D685(1)025C(2)	1.7	6	1.6	0.26
10	C	893D106(1)025C(2)	2.5	6	1.4	0.28
10	D	893D106(1)025D(2)	2.5	6	1.0	0.39
15	D	893D156(1)025D(2)	3.8	6	0.8	0.43
22	D	893D226(1)025D(2)	5.5	6	0.7	0.46
22	E	893D226(1)025E(2)	5.5	6	0.7	0.49
33	E	893D336(1)025E(2)	8.3	6	0.6	0.52
<b>35 VDC AT + 85 °C, 23 VDC AT + 125 °C</b>						
1.5	C	893D155(1)035C(2)	0.5	6	3.8	0.17
2.2	C	893D225(1)035C(2)	0.8	6	2.9	0.20
3.3	C	893D335(1)035C(2)	1.2	4	2.0	0.23
4.7	C	893D475(1)035C(2)	1.6	6	1.8	0.25
4.7	D	893D475(1)035D(2)	1.6	6	1.2	0.35
6.8	D	893D685(1)035D(2)	2.4	6	1.0	0.39
10	D	893D106(1)035D(2)	3.5	6	0.8	0.43
15	D	893D156(1)035D(2)	5.3	6	0.7	0.46
15	E	893D156(1)035E(2)	5.3	6	0.7	0.49
22	E	893D226(1)035E(2)	7.7	6	0.6	0.52
<b>50 VDC AT + 85 °C, 33 VDC AT + 125 °C</b>						
0.47	C	893D474(1)050C(2)	0.5	4	6.7	0.13
0.68	C	893D684(1)050C(2)	0.5	4	5.9	0.14
1.0	C	893D105(1)050C(2)	0.5	4	4.4	0.16
1.5	C	893D155(1)050C(2)	0.8	6	3.2	0.19
2.2	C	893D225(1)050C(2)	1.1	6	2.8	0.20
2.2	D	893D225(1)050D(2)	1.1	6	2.1	0.27
3.3	C	893D335(1)050C(2)	1.7	6	2.4	0.21
3.3	D	893D335(1)050D(2)	1.7	6	1.6	0.31
4.7	D	893D475(1)050D(2)	2.4	6	1.1	0.37
6.8	D	893D685(1)050D(2)	3.4	6	0.9	0.41
6.8	E	893D685(1)050E(2)	3.4	6	0.9	0.43

**Notes**

- (1) Tolerance: X0, X9
- (2) Terminations and packaging: 2TE3, 2WE3, 8T, 8W



## Disclaimer

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