

Solid Tantalum Chip Capacitors

TANTAMOUNT®, Built-In-Fuse Miniature, Molded-Case



PERFORMANCE/ELECTRICAL CHARACTERISTICS

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

Capacitance Range: 1.0 μ F to 470 μ F

Voltage Rating: 4 WVDC to 50 WVDC

Capacitance Tolerance: $\pm 20\%$, $\pm 10\%$ standard

Note: References

Molded Guide:

<http://www.vishay.com/docs/40074/molded.pdf>

Performance Characteristics:

<http://www.vishay.com/docs/40088/perfchar.pdf>

FEATURES

- Terminations: 100 % Tin Standard, SnPb 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 second max with 5 amps min. applied current
- Compliant terminations 100 % surge current tested (D & E Case codes)



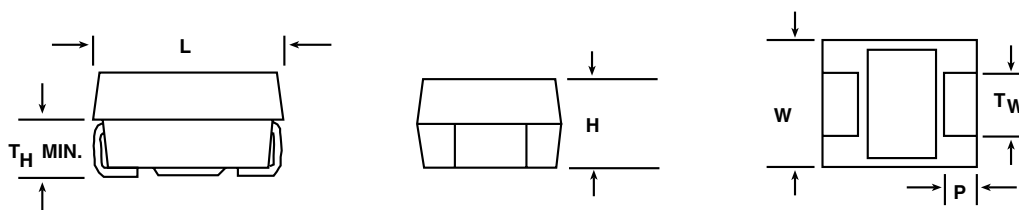
RoHS*
COMPLIANT

ORDERING INFORMATION

893D	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 = $\pm 20\%$ X9 = $\pm 10\%$ X5 = $\pm 5\%$ (Special Order)	This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating. A decimal point is indicated by an "R" (6R3 = 6.3 volts)	See Ratings and Case Codes Table	2TE3: 100 % tin terminations 7" (178 mm) reel 2WE3: 100 % tin terminations 13" (330 mm) reel 8T: 60/40 SnPb Solder Plate terminations, 7" (178 mm) reel 8W: 60/40 SnPb Solder Plate terminations, 13" (330 mm) reel ** 2T: Not recommended for new designs ** 2W: Not recommended for new designs

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 $\pm$ 0.012 [6.0 $\pm$ 0.30]	0.126 $\pm$ 0.012 [3.2 $\pm$ 0.30]	0.098 $\pm$ 0.012 [2.5 $\pm$ 0.30]	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.30]	0.087 $\pm$ 0.004 [2.2 $\pm$ 0.10]	0.039 [1.0]
D	7343 - 31	0.287 $\pm$ 0.012 [7.3 $\pm$ 0.30]	0.170 $\pm$ 0.012 [4.3 $\pm$ 0.30]	0.110 $\pm$ 0.012 [2.8 $\pm$ 0.30]	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.30]	0.095 $\pm$ 0.004 [2.4 $\pm$ 0.10]	0.039 [1.0]
E	7343 - 43	0.287 $\pm$ 0.012 [7.3 $\pm$ 0.30]	0.170 $\pm$ 0.012 [4.3 $\pm$ 0.30]	0.158 $\pm$ 0.012 [4.0 $\pm$ 0.30]	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.30]	0.095 $\pm$ 0.004 [2.4 $\pm$ 0.10]	0.039 [1.0]

Notes:

* Pb containing terminations are not RoHS compliant

** Termination and packaging codes 2T and 2W will be discontinued by January 2008.



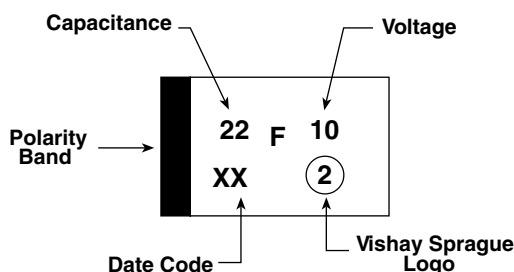
Solid Tantalum Chip Capacitors TANTAMOUNT®, Built-In-Fuse Miniature, Molded-Case

Vishay Sprague

RATINGS AND CASE CODES

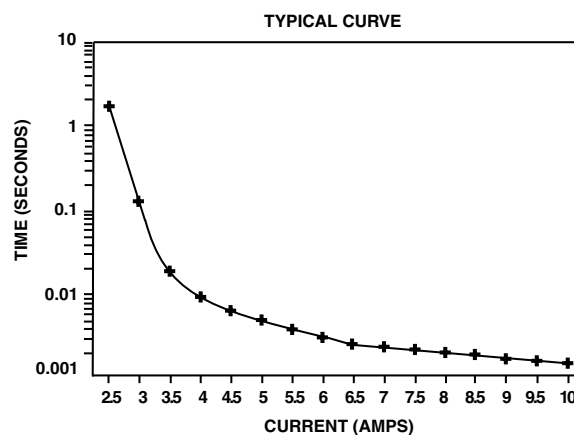
μF	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V
0.47								C
0.68								C
1.0								C
1.5								C
2.2						D	C	C/D
3.3						C	C	C/D
4.7					C	C	C/D	D
6.8				C	C	C	D	D/E
10			C	C	C	C/D	D	
15		C	C	C	C/D	D	E	
22		C	C	C/D	D	D/E	E	
33		C	C/D	C/D	D/E	E		
47		C/D	C/D	D/E	E			
68	C	C/D	D/E	D	E			
100	C	D/E	D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

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



RATINGS AND PART NUMBER REFERENCE

CAPACITANCE (μF)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μA)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz (Ohms)	MAX. RIPPLE 100 kHz Irms (Amps)
4 WVDC AT + 85 °C, SURGE = 5.2 V . . . 2.7 WVDC AT + 125 °C, SURGE = 3.4 V						
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

Notes:

- (1) Capacitance tolerance: Specify "X9" for 10 % and "X0" for 20 %
- (2) Termination and packaging: Specify 2TE3 or 2WE3 for lead (Pb)-free and 8T or 8W for SnPb

RATINGS AND PART NUMBER REFERENCE						
CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz (Ohms)	MAX. RIPPLE 100 kHz I _{rms} (Amps)
6.3 WVDC AT + 85 °C, SURGE = 8 V . . . 4 WVDC AT + 125 °C, SURGE = 5 V						
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
10 WVDC AT + 85 °C, SURGE = 13 V . . . 7 WVDC AT + 125 °C, SURGE = 8 V						
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)010D(2)	15.0	8	0.5	0.57
220	E	893D227(1)010E(2)	22	8	0.5	0.57
16 WVDC AT + 85 °C, SURGE = 20 V . . . 10 WVDC AT + 125 °C, SURGE = 12 V						
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
20 WVDC AT + 85 °C, SURGE = 26 V . . . 13 WVDC AT + 125 °C, SURGE = 16 V						
4.7	C	893D475(1)020C(2)	0.9	6	2.2	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

Notes:

(1) Capacitance tolerance: Specify "X9" for 10 % and "X0" for 20 %

(2) Termination and packaging: Specify 2TE3 or 2WE3 for lead (Pb)-free and 8T or 8W for SnPb



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RATINGS AND PART NUMBER REFERENCE						
CAPACITANCE (μ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz (Ohms)	MAX. RIPPLE 100 kHz Irms (Amps)
25 WVDC AT + 85 °C, SURGE = 32 V . . . 17 WVDC AT + 125 °C, SURGE = 20 V						
2.2	C	893D225(1)025C(2)	0.9	6	1.8	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	0.49
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
35 WVDC AT + 85 °C, SURGE = 46 V . . . 23 WVDC AT + 125 °C, SURGE = 28 V						
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	0.38
10	D	893D106(1)035D(2)	3.5	6	0.8	0.43
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
50 WVDC AT + 85 °C, SURGE = 65 V . . . 33 WVDC AT + 125 °C, SURGE = 40 V						
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	1.60
1.5	C	893D155(1)050C(2)	0.8	6	3.2	0.90
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) Capacitance tolerance: Specify "X9" for 10 % and "X0" for 20 %

(2) Termination and packaging: Specify 2TE3 or 2WE3 for lead (Pb)-free and 8T or 8W for SnPb



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