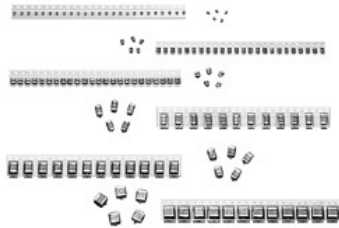


## Solid Tantalum Chip Capacitors, TANTAMOUNT<sup>®</sup>, Conformal Coated



### FEATURES

- Pad compatible with 194D and MIL-C-55365/4 (CWR06)
- 8 mm, 12 mm 16 mm Tape to EIA-481-2 and reeling per IEC 286-3. 7" [178 mm] standard 13" [330 mm] available.
- Terminations: Tin (2) standard
- Compliant to RoHS directive 2002/95/EC



**RoHS\***  
COMPLIANT

### PERFORMANCE CHARACTERISTICS

**Operating Temperature:** - 55 °C to + 85 °C  
(To + 125 °C with voltage derating)

#### Note

- Refer to Doc. 40088

**Capacitance Range:** 1.0 µF to 270 µF

**Capacitance Tolerance:** ± 10 %, ± 20 % standard

**Voltage Rating:** 4 WVDC to 50 WVDC

ORDERING INFORMATION						
695D	475	X0	004	A	2	T
TYPE	CAPACITANCE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING AT + 85 °C	CASE CODE	TERMINATION	REEL SIZE AND PACKAGING
	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	<b>X0 = ± 20 %</b> <b>X9 = ± 10 %</b>	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 V).	See ratings and case codes table	<b>2 = 100 % Tin</b> <b>4 = Gold plated</b> <b>8 = Solder plated (60/40)</b> Special order	<b>T = Tape and reel*</b> <b>7" [178 mm] reel</b> <b>W = 13" [330 mm] reel</b> See tape and reel specifications

#### Notes

- Preferred tolerance and reel sizes are in bold
- 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	L (MAX.)	D (REF.)	W	H	A	B	J (MAX.)
A	0.135 [3.4]	0.100 [2.54]	0.050 ± 0.015 [1.27 ± 0.38]	0.050 ± 0.015 [1.27 ± 0.38]	0.023 ± 0.010 [0.584 ± 0.25]	0.067 ± 0.015 [1.70 ± 0.38]	0.004 [0.10]
B	0.185 [4.7]	0.150 [3.81]	0.050 ± 0.015 [1.27 ± 0.38]	0.050 ± 0.015 [1.27 ± 0.38]	0.040 ± 0.015 [1.02 ± 0.38]	0.120 ± 0.015 [3.05 ± 0.38]	0.004 [0.10]
D	0.185 [4.7]	0.140 [3.56]	0.095 ± 0.015 [2.41 ± 0.38]	0.050 ± 0.015 [1.27 ± 0.38]	0.040 ± 0.015 [1.02 ± 0.38]	0.110 ± 0.020 [2.79 ± 0.51]	0.004 [0.10]
E	0.235 [6.0]	0.200 [5.08]	0.095 ± 0.015 [2.41 ± 0.38]	0.050 ± 0.015 [1.27 ± 0.38]	0.040 ± 0.015 [1.02 ± 0.38]	0.170 ± 0.020 [4.32 ± 0.51]	0.004 [0.10]
F	0.255 [6.5]	0.220 [5.59]	0.135 ± 0.015 [3.43 ± 0.38]	0.070 ± 0.015 [1.78 ± 0.38]	0.040 ± 0.015 [1.02 ± 0.38]	0.185 ± 0.020 [4.70 ± 0.51]	0.004 [0.10]
G	0.300 [7.6]	0.260 [6.60]	0.100 ± 0.015 [2.54 ± 0.38]	0.100 ± 0.015 [2.54 ± 0.38]	0.040 ± 0.015 [1.02 ± 0.38]	0.220 ± 0.020 [5.59 ± 0.51]	0.004 [0.10]
H	0.303 [7.7]	0.265 [6.73]	0.150 ± 0.015 [3.81 ± 0.38]	0.110 ± 0.015 [2.79 ± 0.38]	0.050 ± 0.015 [1.27 ± 0.38]	0.220 ± 0.020 [5.59 ± 0.51]	0.004 [0.10]

#### Note

- The anode termination (D less B) will be a minimum of 0.010" (0.3 mm). T Case = 0.005 (0.13 mm) minimum.

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

RATINGS AND CASE CODES								
μF	4 V	6 V	10 V	15 V	20 V	25 V	35 V	50 V
0.10								A
0.15								A
0.22							A	B
0.33							A	B
0.47						A	B	D
0.68						A	B	D
1.0					A	B	D	D
1.5				A	B	D	D	E
2.2				A	B	D	E	F
3.3			A	B	D	D	F	F
4.7	A	A	B	D	D	E	F	G
6.8	B	B	D	D	E	F	F	H
10	B	D	D	D	F	F	G	H
15	D	D	D	E	F	G	H	
22	D	D	E	F	G	H		
33	E	E	F	F	G	H		
47	F	F	F	G	H			
68	F	F	G	H				
100	F	G	G	H				
120	G	G	H					
150	G	H	H					
180	H	H						
220	H	H						
270	H							

STANDARD RATINGS							
CAPACITANCE (μF)	CASE CODE	PART NUMBER*	MAX. DCL AT + 25 °C (μA)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I <sub>rms</sub> (A)	
<b>4 WVDC AT + 85 °C, 2.7 WVDC AT + 125 °C</b>							
4.7	A	695D475X_004A2T	0.5	6	11	0.07	
6.8	B	695D685X_004B2T	0.5	6	9.0	0.09	
10	B	695D106X_004B2T	0.5	6	8.5	0.09	
15	D	695D156X_004D2T	0.6	6	2.2	0.20	
22	D	695D226X_004D2T	0.9	6	2	0.21	
33	E	695D336X_004E2T	1.3	6	1.5	0.25	
47	F	695D476X_004F2T	1.9	6	1.0	0.33	
68	F	695D686X_004F2T	2.7	6	0.9	0.35	
100	F	695D107X_004F2T	4.0	8	0.9	0.35	
120	G	695D127X_004G2T	4.8	8	0.7	0.41	
150	G	695D157X_004G2T	6.0	8	0.65	0.43	
180	H	695D187X_004H2T	7.2	8	0.40	0.61	
220	H	695D227X_004H2T	8.8	8	0.35	0.65	
270	H	695D277X_004H2T	10.8	8	0.35	0.65	
<b>6 WVDC AT + 85 °C, 4 WVDC AT + 125 °C</b>							
4.7	A	695D475X_006A2T	0.5	6	11	0.07	
6.8	B	695D685X_006B2T	0.5	6	9.0	0.07	

**Note**

\* For 10 % tolerance, specify "9"; for 20 % tolerance, change to "0".

Solid Tantalum Chip Capacitors,  
TANTAMOUNT® Leadframeless Molded

Vishay Sprague

STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER*	MAX. DCL 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 <sub>rms</sub> (A)
<b>6 WVDC AT + 85 °C, 4 WVDC AT + 125 °C</b>						
10	D	695D106X_006D2T	0.6	6	8.5	0.1
15	D	695D156X_006D2T	0.9	6	2.2	0.2
22	D	695D226X_006D2T	1.3	6	2.0	0.32
33	E	695D336X_006E2T	2.0	6	1.5	0.25
47	F	695D476X_006F2T	2.8	6	1.0	0.33
68	F	695D686X_006F2T	4.1	6	0.9	0.35
100	G	695D107X_006G2T	6.0	8	0.9	0.37
120	G	695D127X_006G2T	7.2	8	0.7	0.41
150	H	695D157X_006H2T	9.0	8	0.65	0.48
180	H	695D187X_006H2T	10.8	8	0.40	0.61
220	H	695D227X_006H2T	13.2	8	0.35	0.65
<b>10 WVDC AT + 85 °C, 7 WVDC AT + 125 °C</b>						
3.3	A	695D335X_010A2T	0.5	6	11.5	0.07
4.7	B	695D475X_010B2T	0.5	6	10.6	0.08
6.8	D	695D685X_010D2T	0.7	6	2.6	0.18
10	D	695D106X_010D2T	1.0	6	2.5	0.18
15	D	695D156X_010D2T	1.5	6	2.2	0.20
22	E	695D226X_010E2T	2.2	6	2.0	0.22
33	F	695D336X_010F2T	3.3	6	1.2	0.30
47	F	695D476X_010F2T	4.7	6	1.0	0.33
68	G	695D686X_010G2T	6.8	6	0.75	0.40
100	G	695D107X_010G2T	10	8	0.75	0.40
120	H	695D127X_010H2T	12	8	0.45	0.58
150	H	695D157X_010H2T	15	8	0.40	0.61
<b>15 WVDC AT + 85 °C, 10 WVDC AT + 125 °C</b>						
1.5	A	695D155X_015A2T	0.5	6	14	0.07
2.2	A	695D225X_015A2T	0.5	6	12	0.07
3.3	B	695D335X_015B2T	0.5	6	10.8	0.08
4.7	D	695D475X_015D2T	0.7	6	2.8	0.17
6.8	D	695D685X_015D2T	1	6	2.6	0.18
10	D	695D106X_015D2T	1.5	6	2.5	0.18
15	E	695D156X_015E2T	2.3	6	2.3	0.20
22	F	695D226X_015F2T	3.3	6	1.4	0.28
33	F	695D336X_015F2T	5	6	1.2	0.30
47	G	695D476X_015G2T	7.1	6	0.8	0.39
68	H	695D686X_015H2T	10.2	6	0.5	0.55
100	H	695D107X_015H2T	15	8	0.45	0.58
<b>20 WVDC AT + 85 °C, 13 WVDC AT + 125 °C</b>						
1.0	A	695D105X_020A2T	0.5	4	15	0.06
1.5	B	695D155X_020B2T	0.5	6	12	0.08
2.2	B	695D225X_020B2T	0.5	6	11	0.08
3.3	D	695D335X_020D2T	0.7	6	3.0	0.17

**Note**

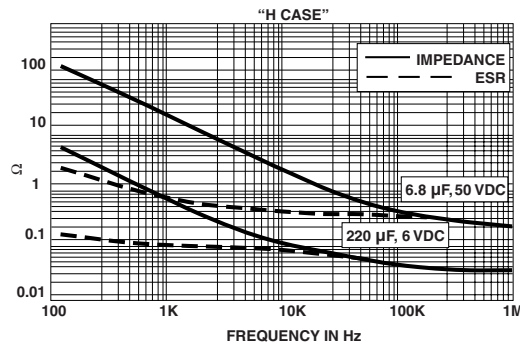
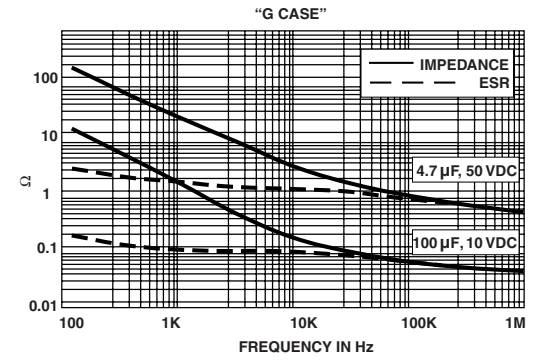
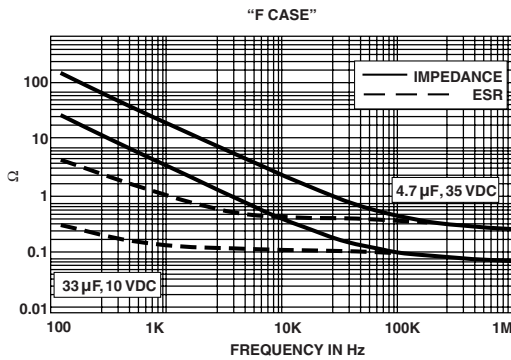
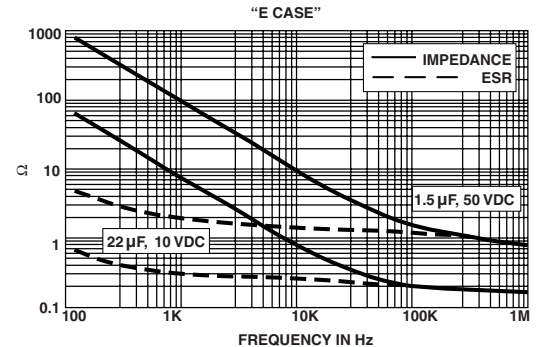
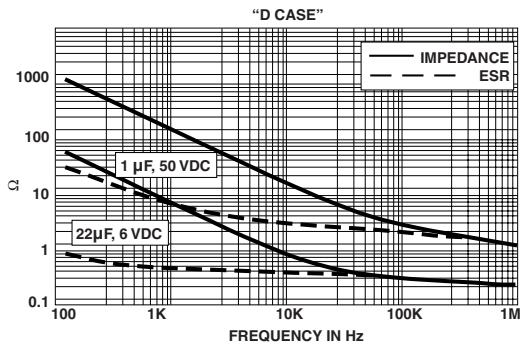
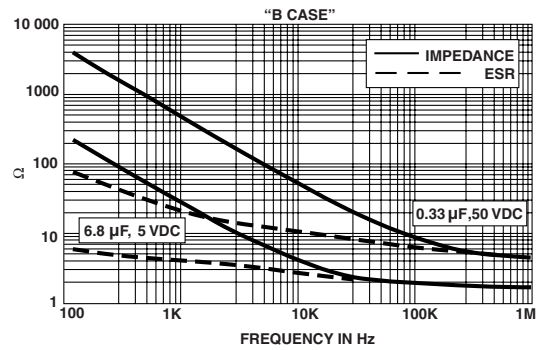
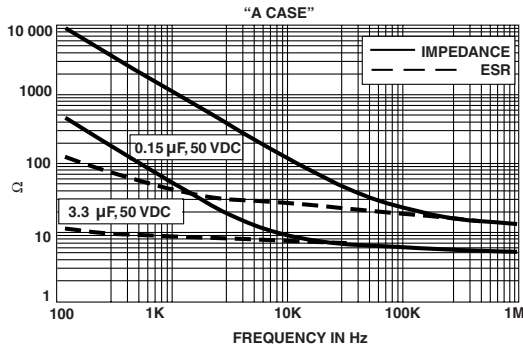
\* For 10 % tolerance, specify "9"; for 20 % tolerance, change to "0".

<b>STANDARD RATINGS</b>							
CAPACITANCE ( $\mu\text{F}$ )	CASE CODE	PART NUMBER*	MAX. DCL AT + 25 °C ( $\mu\text{A}$ )	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz I <sub>rms</sub> (A)	
<b>20 WVDC AT + 85 °C, 13 WVDC AT + 125 °C</b>							
4.7	D	695D475X_020D2T	0.9	6	2.8	0.17	
6.8	E	695D685X_020E2T	1.4	6	2.55	0.19	
10	F	695D106X_020F2T	2.0	6	1.8	0.25	
15	F	695D156X_020F2T	3.0	6	1.5	0.27	
22	G	695D226X_020G2T	4.4	6	0.9	0.37	
33	G	695D336X_020G2T	6.6	6	0.8	0.39	
47	H	695D476X_020H2T	9.4	6	0.5	0.55	
<b>25 WVDC AT + 85 °C, 17 WVDC AT + 125 °C</b>							
0.47	A	695D474X_025A2T	0.5	4	17	0.06	
0.68	A	695D684X_025A2T	0.5	4	15	0.06	
1.0	B	695D105X_025B2T	0.5	4	13	0.08	
1.5	D	695D155X_025D2T	0.5	6	4.2	0.14	
2.2	D	695D225X_025D2T	0.6	6	3.5	0.16	
3.3	D	695D335X_025D2T	0.8	6	3.0	0.17	
4.7	E	695D475X_025E2T	1.2	6	2.75	0.19	
6.8	F	695D685X_025F2T	1.7	6	2.0	0.23	
10	F	695D106X_025F2T	2.5	6	1.8	0.25	
15	G	695D156X_025G2T	3.8	6	1.0	0.35	
22	H	695D226X_025H2T	5.5	6	0.7	0.46	
33	H	695D336X_025H2T	8.3	6	0.8	0.50	
<b>35 WVDC AT + 85 °C, 23 WVDC AT + 125 °C</b>							
0.22	A	695D224X_035A2T	0.5	4	20	0.05	
0.33	A	695D334X_035A2T	0.5	4	18	0.06	
0.47	B	695D474X_035B2T	0.5	4	15	0.07	
0.68	B	695D684X_035B2T	0.5	4	14	0.07	
1.0	D	695D105X_035D2T	0.5	4	8.0	0.10	
1.5	D	695D155X_035D2T	0.5	6	4.2	0.14	
2.2	E	695D225X_035E2T	0.8	6	4.0	0.15	
3.3	F	695D335X_035F2T	1.2	6	3.2	0.19	
4.7	F	695D475X_035F2T	1.6	6	2.7	0.20	
6.8	F	695D685X_035F2T	2.4	6	2.0	0.23	
10	G	695D106X_035G2T	3.5	6	1.3	0.30	
15	H	695D156X_035H2T	5.3	6	0.8	0.43	
<b>50 WVDC AT + 85 °C, 33 WVDC AT + 125 °C</b>							
0.10	A	695D104X_050A2T	0.5	4	32	0.04	
0.15	A	695D154X_050A2T	0.5	4	30	0.04	
0.22	B	695D224X_050B2T	0.5	4	18	0.06	
0.33	B	695D334X_050B2T	0.5	4	16	0.07	
0.47	D	695D474X_050D2T	0.5	4	9.0	0.10	
0.68	D	695D684X_050D2T	0.5	4	8.5	0.10	
1.0	D	695D105X_050D2T	0.5	4	8.0	0.10	
1.5	E	695D155X_050E2T	0.8	6	5.5	0.13	
2.2	F	695D225X_050F2T	1.1	6	3.9	0.17	
3.3	F	695D335X_050F2T	1.7	6	3.2	0.19	
4.7	G	695D475X_050G2T	2.4	6	2.5	0.22	
6.8	H	695D685X_050H2T	3.4	6	1.2	0.35	
10	H	695D106X_050H2T	5.0	6	1.0	0.39	

**Note**

\* Preliminary values, contact factory for availability. For 10 % tolerance, specify "9"; for 20 % tolerance, change to "0".

**TYPICAL CURVES AT + 25 °C, IMPEDANCE AND ESR VS. FREQUENCY**





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