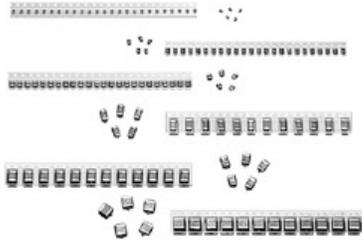


## Solid Tantalum Chip Capacitors TANTAMOUNT® Conformal Coated, Maximum CV



### FEATURES

- Large capacitance rating range
- Terminations: Tin (2) standard
- 8 mm, 12 mm tape and reel packaging available per EIA 481-1 and reeling per IEC 286-3. 7" [178 mm] standard. 13" [330 mm] available.
- Case code compatibility with EIA 535BAAC and CECC30801 molded chips



**RoHS\***  
COMPLIANT

### PERFORMANCE CHARACTERISTICS

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

**Note:** Refer to Doc. 40088

**Capacitance Range:** 0.1 µF to 1500 µF

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

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

| <b>ORDERING INFORMATION</b>  |  |                             |  |                                  |  |   |
|--|--|-----------------------------|--|----------------------------------|--|---|
| 595D<br>TYPE   | 106<br>CAPACITANCE   | X0<br>CAPACITANCE TOLERANCE | 010<br>DC VOLTAGE RATING AT + 85 °C  | A<br>CASE CODE                   | 2<br>TERMINATION   | T<br>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 %<br>X9 = ± 10 %  | 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 | 2 = 100 % Tin<br>4 = Gold Plated<br>8 = Solder Plated (60/40)<br>Special Order | T = Tape and Reel<br>7" [178 mm] Reel<br>W = 13" [330 mm] Reel<br>See Tape and Reel Specifications. |
| <p><b>Note:</b> 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.</p> |  |                             |  |                                  |  |   |

| <b>DIMENSIONS</b> in inches [millimeters] |                              |  |  |                                |                                |                |                |
|---|------------------------------|--|--|--------------------------------|--------------------------------|----------------|----------------|
|   |                              |  |  |                                |                                |                |                |
| CASE CODE                                 | L (Max.)                     | W  | H  | A                              | B                              | D (REF.)       | J (MAX.)       |
| T   | 0.087<br>[2.2]               | 0.045 ± 0.012<br>[1.1 ± 0.3]               | 0.045 ± 0.012<br>[1.1 ± 0.3]               | 0.016 ± 0.008<br>[0.4 ± 0.2]   | 0.042 ± 0.010<br>[1.07 ± 0.25] | 0.063<br>[1.6] | 0.004<br>[0.1] |
| S   | 0.126 ± 0.008<br>[3.2 ± 0.2] | 0.067 ± 0.008<br>[1.7 ± 0.2]               | 0.051 ± 0.008<br>[1.3 ± 0.2]               | 0.031 ± 0.012<br>[0.80 ± 0.30] | 0.078 ± 0.012<br>[2.0 ± 0.3]   | 0.086<br>[2.2] | 0.004<br>[0.1] |
| A   | 0.146<br>[3.7]               | 0.072 ± 0.012<br>[1.8 ± 0.3]               | 0.056 ± 0.012<br>[1.4 ± 0.3]               | 0.031 ± 0.012<br>[0.80 ± 0.30] | 0.085 ± 0.016<br>[2.2 ± 0.4]   | 0.115<br>[2.9] | 0.004<br>[0.1] |
| B   | 0.158<br>[4.0]               | 0.110 + 0.012 - 0.016<br>[2.8 + 0.3 - 0.4] | 0.075 + 0.012 - 0.024<br>[1.9 + 0.3 - 0.6] | 0.031 ± 0.012<br>[0.80 ± 0.30] | 0.097 ± 0.016<br>[2.5 ± 0.4]   | 0.138<br>[3.5] | 0.004<br>[0.1] |
| C   | 0.281<br>[7.1]               | 0.126 ± 0.012<br>[3.2 ± 0.3]               | 0.098 ± 0.012<br>[2.5 ± 0.3]               | 0.051 ± 0.012<br>[1.3 ± 0.30]  | 0.180 ± 0.024<br>[4.6 ± 0.6]   | 0.236<br>[6.0] | 0.004<br>[0.1] |
| G   | 0.205 ± 0.016<br>[5.2 ± 0.4] | 0.144 ± 0.016<br>[3.65 ± 0.4]              | 0.087<br>[2.2] Max.                        | 0.051 ± 0.012<br>[1.3 ± 0.3]   | 0.133 ± 0.016<br>[3.4 ± 0.4]   | 0.173<br>[4.4] | 0.004<br>[0.1] |
| H   | 0.205 ± 0.016<br>[5.2 ± 0.4] | 0.181 ± 0.016<br>[4.6 ± 0.4]               | 0.078<br>[2.0] Max.                        | 0.051 ± 0.012<br>[1.3 ± 0.30]  | 0.133 ± 0.016<br>[3.4 ± 0.4]   | 0.173<br>[4.4] | 0.004<br>[0.1] |
| D   | 0.293<br>[7.5]               | 0.170 ± 0.012/- 0.024<br>[4.3 ± 0.3/- 0.6] | 0.110 ± 0.012<br>[2.8 ± 0.3]               | 0.051 ± 0.012<br>[1.3 ± 0.30]  | 0.180 ± 0.024<br>[4.6 ± 0.6]   | 0.253<br>[6.4] | 0.004<br>[0.1] |
| M   | 0.129 ± 0.012<br>[3.3 ± 0.3] | 0.106 ± 0.012<br>[2.7 ± 0.3]               | 0.067 ± 0.012<br>[1.7 ± 0.3]               | 0.031 ± 0.012<br>[0.80 ± 0.3]  | 0.078 ± 0.012<br>[2.0 ± 0.3]   | 0.095<br>[2.5] | 0.004<br>[0.1] |
| R   | 0.283<br>[7.2]               | 0.235 ± 0.012/- 0.024<br>[6.0 ± 0.3/- 0.6] | 0.136 ± 0.012<br>[3.5 ± 0.3]               | 0.051 ± 0.012<br>[1.3 ± 0.30]  | 0.180 ± 0.024<br>[4.6 ± 0.6]   | 0.243<br>[6.2] | 0.004<br>[0.1] |

**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



Solid Tantalum Chip Capacitors  
TANTAMOUNT® Conformal Coated,  
Maximum CV

Vishay Sprague

| RATINGS AND CASE CODES |     |         |       |      |      |      |      |      |
|------------------------|-----|---------|-------|------|------|------|------|------|
| µF                     | 4 V | 6.3 V   | 10 V  | 16 V | 20 V | 25 V | 35 V | 50 V |
| 0.10                   |     |         |       |      |      |      |      | T    |
| 0.15                   |     |         |       |      |      |      |      | T    |
| 0.22                   |     |         |       |      |      |      |      | T    |
| 0.33                   |     |         |       |      |      |      | T    | A    |
| 0.47                   |     |         |       |      |      | T    | A    | A    |
| 0.68                   |     |         |       |      | T    |      | A    | A/B  |
| 1.0                    |     |         |       |      | T    | A    | A    | A/B  |
| 1.5                    |     |         |       | T    |      | A    | A/B  | C    |
| 2.2                    |     |         | T     | T/A  | A    | A    | B    | B/C  |
| 3.3                    |     | T       |       | T    | A    | B/C  | C    | C    |
| 4.7                    | T   |         | T     | A    | A/B  |      | B/C  | C    |
| 6.8                    |     | T       |       | A    | A/B  | B    | C    | C/D  |
| 10                     | T   |         | A     | A/B  | B    | B/C  | D    | D/R  |
| 15                     | A   | A       | A/B   | A/B  | B    | C    | C/D  | R    |
| 22                     |     | A/B     | A     | B/M  | B/C  | C/D  | D/R  | R    |
| 33                     | A/B | S/A/B   | A/B   | B/C  |      | C/D  | R    |      |
| 47                     | A   | A/B     | B     | B/C  | C/D  | D/R  | R    |      |
| 68                     | A   | A/B     | B/C   | C/D  | D    | D/R  |      |      |
| 100                    | A/B | B/C/M   | B/D   | C/D  | D/R  | R    |      |      |
| 120                    | C   | C       | D     | R    | R    |      |      |      |
| 150                    | B/C |         | C/D   | D/R  | R    |      |      |      |
| 180                    | D   | D       | D/R   | R    |      |      |      |      |
| 220                    | C/D | C/D/G/H | C/D/R | R    |      |      |      |      |
| 270                    | C/D |         | R     |      |      |      |      |      |
| 330                    | C*  | C/D/R   | D/R   | R    |      |      |      |      |
| 390                    | D   | R       | R     |      |      |      |      |      |
| 470                    | C/R | D/R     | R     |      |      |      |      |      |
| 560                    |     | R       |       |      |      |      |      |      |
| 680                    | D   | R       | R     |      |      |      |      |      |
| 1000                   | R   | R       |       |      |      |      |      |      |
| 1500                   | R   |         |       |      |      |      |      |      |

Note: \* Preliminary values, contact factory for availability

| STANDARD/EXTENDED 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 Irms (A) |  |
| 4 WVDC AT+ 85 °C, SURGE = 5.2 V . . . 2.7 WVDC AT + 125 °C, SURGE = 3.4 V |           |                 |                          |                               |                                 |                              |  |
| 4.7   | T         | 595D475X_004T2T | 0.5                      | 6                             | 7.8                             | 0.06                         |  |
| 10  | T         | 595D106X_004T2T | 0.5                      | 6                             | 7.8                             | 0.06                         |  |
| 15  | A         | 595D156X_004A2T | 0.6                      | 6                             | 1.4                             | 0.23                         |  |
| 33  | A         | 595D336X_004A2T | 1.3                      | 6                             | 1.4                             | 0.23                         |  |
| 33  | B         | 595D336X_004B2T | 1.3                      | 6                             | 0.47                            | 0.43                         |  |
| 47  | A         | 595D476X_004A2T | 1.9                      | 6                             | 1.40                            | 0.23                         |  |
| 68  | A         | 595D686X_004A2T | 2.7                      | 6                             | 1.30                            | 0.24                         |  |
| 100   | A         | 595D107X_004A2T | 4.0                      | 12                            | 0.60                            | 0.35                         |  |
| 100   | B         | 595D107X_004B2T | 4.0                      | 8                             | 0.45                            | 0.44                         |  |
| 120   | C         | 595D127X_004C2T | 4.8                      | 8                             | 0.19                            | 0.76                         |  |

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



| STANDARD/EXTENDED RATINGS   |           |                  |                                      |  |  |   |
|---|-----------|------------------|--------------------------------------|--|--|---|
| CAPACITANCE<br>( $\mu$ F)   | CASE CODE | PART NUMBER      | MAX. DCL<br>AT + 25 °C<br>( $\mu$ A) | MAX. DF<br>AT + 25 °C<br>120 Hz<br>(%) | MAX. ESR<br>AT + 25 °C<br>100 kHz ( $\Omega$ ) | MAX. RIPPLE<br>100 kHz<br>I <sub>rms</sub><br>(A) |
| <b>4 WVDC AT + 85 °C, SURGE = 5.2 V . . . 2.7 WVDC AT + 125 °C, SURGE = 3.4 V</b> |           |                  |                                      |  |  |   |
| 150   | B         | 595D157X_004B2T  | 6.0                                  | 8                                      | 0.45   | 0.44  |
| 150   | C         | 595D157X_004C2T  | 6.0                                  | 8                                      | 0.18   | 0.78  |
| 180   | D         | 595D187X_004D2T  | 7.2                                  | 8                                      | 0.14   | 1.04  |
| 220   | C         | 595D227X_004C2T  | 8.8                                  | 8                                      | 0.18   | 0.78  |
| 220   | D         | 595D227X_004D2T  | 8.8                                  | 8                                      | 0.14   | 1.04  |
| 270   | C         | 595D277X_004C2T  | 10.8                                 | 8                                      | 0.17   | 0.80  |
| 270   | D         | 595D277X_004D2T  | 10.8                                 | 8                                      | 0.13   | 1.07  |
| 330*  | C*        | 595D337X_004C2T* | 13.2*                                | 8*                                     | 0.17*  | 0.80*   |
| 390   | D         | 595D397X_004D2T  | 15.6                                 | 8                                      | 0.13   | 1.07  |
| 470   | C         | 595D477X_004C2T  | 18.8                                 | 10                                     | 0.16   | 0.83  |
| 470   | R         | 595D477X_004R2T  | 18.8                                 | 10                                     | 0.13   | 1.39  |
| 680   | D         | 595D687X_004D2T  | 27.2                                 | 12                                     | 0.13   | 1.07  |
| 1000  | R         | 595D108X_004R2T  | 40.0                                 | 16                                     | 0.07   | 1.88  |
| 1500  | R         | 595D158X_004R2T  | 60.0                                 | 20                                     | 0.07   | 1.88  |
| <b>6.3 WVDC AT + 85 °C, SURGE = 8 V . . . 4 WVDC AT + 125 °C, SURGE = 5 V</b>     |           |                  |                                      |  |  |   |
| 3.3   | T         | 595D335X_6R3T2T  | 0.5                                  | 6                                      | 8.5  | 0.06  |
| 6.8   | T         | 595D685X_6R3T2T  | 0.5                                  | 6                                      | 8.5  | 0.06  |
| 15  | A         | 595D156X_6R3A2T  | 0.9                                  | 6                                      | 1.7  | 0.20  |
| 22  | A         | 595D226X_6R3A2T  | 1.4                                  | 6                                      | 1.7  | 0.20  |
| 22  | B         | 595D226X_6R3B2T  | 1.4                                  | 6                                      | 0.57   | 0.37  |
| 33  | A         | 595D336X_6R3A2T  | 2.1                                  | 6                                      | 1.70   | 0.20  |
| 33  | B         | 595D336X_6R3B2T  | 1.7                                  | 5                                      | 0.57   | 0.39  |
| 33  | S         | 595D336X_6R3S2T  | 2.1                                  | 8                                      | 1.30   | 0.20  |
| 47  | A         | 595D476X_6R3A2T  | 2.8                                  | 6                                      | 1.50   | 0.22  |
| 47  | B         | 595D336X_6R3B2T  | 2.4                                  | 5                                      | 0.57   | 0.39  |
| 68  | A         | 595D686X_6R3A2T  | 4.3                                  | 12                                     | 0.5  | 0.19  |
| 68  | B         | 595D686X_6R3B2T  | 4.3                                  | 6                                      | 0.55   | 0.38  |
| 100   | B         | 595D107X_6R3B2T  | 6.3                                  | 8                                      | 0.55   | 0.39  |
| 100   | C         | 595D107X_6R3C2T  | 6.3                                  | 8                                      | 0.20   | 0.74  |
| 100   | M         | 595D107X_6R3M2T  | 6.3                                  | 14                                     | 0.40   | 0.49  |
| 120   | C         | 595D127X_6R3C2T  | 7.6                                  | 8                                      | 0.19   | 0.76  |
| 180   | D         | 595D187X_6R3D2T  | 11.3                                 | 8                                      | 0.14   | 1.04  |
| 220   | C         | 595D227X_6R3C2T  | 13.9                                 | 8                                      | 0.18   | 0.78  |
| 220   | D         | 595D227X_6R3D2T  | 13.9                                 | 8                                      | 0.14   | 1.04  |
| 220   | G         | 595D227X_6R3G2T  | 13.9                                 | 8                                      | 0.18   | 0.75  |
| 220   | H         | 595D227X_6R3H2T  | 13.9                                 | 8                                      | 0.18   | 0.75  |
| 330   | C         | 595D337X_6R3C2T  | 20.8                                 | 8                                      | 0.17   | 0.80  |
| 330   | C         | 595D337X_6W3C2T  | 20.8                                 | 8                                      | 0.17   | 0.80  |
| 330   | D         | 595D337X_6R3D2T  | 20.8                                 | 8                                      | 0.14   | 1.04  |
| 330   | R         | 595D337X_6R3R2T  | 20.8                                 | 8                                      | 0.13   | 1.39  |
| 390   | R         | 595D397X_6R3R2T  | 24.6                                 | 8                                      | 0.13   | 1.39  |
| 470   | D         | 595D477X_6R3D2T  | 29.6                                 | 8                                      | 0.13   | 1.07  |
| 470   | D         | 595D477X_6W3D2T  | 29.6                                 | 10                                     | 0.12   | 1.44  |
| 470   | R         | 595D477X_6R3R2T  | 29.6                                 | 10                                     | 0.12   | 1.44  |
| 560   | R         | 595D567X_6R3R2T  | 35.3                                 | 10                                     | 0.11   | 1.51  |
| 680   | R         | 595D687X_6R3R2T  | 42.8                                 | 10                                     | 0.09   | 1.66  |
| 680   | R         | 595D687X_6W3R2T  | 42.8                                 | 10                                     | 0.09   | 1.66  |
| 1000  | R         | 595D108X_6R3R2T  | 63.0                                 | 16                                     | 0.07   | 1.88  |
| 1000  | R         | 595D108X_6W3R2T  | 63.0                                 | 16                                     | 0.07   | 1.88  |

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



Solid Tantalum Chip Capacitors  
TANTAMOUNT® Conformal Coated,  
Maximum CV

Vishay Sprague

| <b>STANDARD/EXTENDED RATINGS</b>  |           |                 |                                      |  |  |   |  |
|---|-----------|-----------------|--------------------------------------|--|--|---|--|
| CAPACITANCE<br>( $\mu$ F)   | CASE CODE | PART NUMBER     | MAX. DCL<br>AT + 25 °C<br>( $\mu$ A) | MAX. DF<br>AT + 25 °C<br>120 Hz<br>(%) | MAX. ESR<br>AT + 25 °C<br>100 kHz ( $\Omega$ ) | MAX. RIPPLE<br>100 kHz<br>I <sub>rms</sub><br>(A) |  |
| <b>10 WVDC AT + 85 °C, SURGE = 13 V . . . 7 WVDC AT + 125 °C, SURGE = 8 V</b>   |           |                 |                                      |  |  |   |  |
| 2.2   | T         | 595D225X_010T2T | 0.5                                  | 6                                      | 8.6  | 0.06  |  |
| 4.7   | T         | 595D475X_010T2T | 0.5                                  | 6                                      | 8.6  | 0.06  |  |
| 10  | A         | 595D106X_010A2T | 1.0                                  | 6                                      | 1.9  | 0.19  |  |
| 15  | A         | 595D156X_010A2T | 1.5                                  | 6                                      | 1.8  | 0.20  |  |
| 15  | B         | 595D156X_010B2T | 1.5                                  | 6                                      | 0.67   | 0.35  |  |
| 22  | A         | 595D226X_010A2T | 2.2                                  | 6                                      | 1.80   | 0.20  |  |
| 33  | A         | 595D336X_010A2T | 3.3                                  | 8                                      | 3.0  | 0.16  |  |
| 33  | B         | 595D336X_010B2T | 3.3                                  | 6                                      | 1.90   | 0.21  |  |
| 47  | B         | 595D476X_010B2T | 4.7                                  | 6                                      | 0.65   | 0.35  |  |
| 68  | B         | 595D686X_010B2T | 6.8                                  | 6                                      | 0.65   | 0.36  |  |
| 68  | C         | 595D686X_010C2T | 6.8                                  | 6                                      | 0.24   | 0.68  |  |
| 100   | B         | 595D107X_010B2T | 10.0                                 | 12                                     | 0.4  | 0.46  |  |
| 100   | D         | 595D107X_010D2T | 8.0                                  | 7                                      | 0.15   | 1.00  |  |
| 120   | D         | 595D127X_010D2T | 12.0                                 | 8                                      | 0.14   | 1.04  |  |
| 150   | C         | 595D157X_010C2T | 15.0                                 | 8                                      | 0.22   | 0.71  |  |
| 150   | D         | 595D157X_010D2T | 15.0                                 | 8                                      | 0.14   | 1.04  |  |
| 180   | D         | 595D187X_010D2T | 18.0                                 | 8                                      | 0.38   | 0.63  |  |
| 180   | R         | 595D187X_010R2T | 18.0                                 | 8                                      | 0.13   | 1.39  |  |
| 220   | C         | 595D227X_010C2T | 22.0                                 | 8                                      | 0.20   | 0.74  |  |
| 220   | D         | 595D227X_010D2T | 22.0                                 | 8                                      | 0.14   | 1.04  |  |
| 220   | R         | 595D227X_010R2T | 22.0                                 | 8                                      | 0.13   | 1.39  |  |
| 270   | R         | 595D277X_010R2T | 27.0                                 | 8                                      | 0.13   | 1.39  |  |
| 330   | D         | 595D337X_010D2T | 33.0                                 | 8                                      | 0.14   | 1.04  |  |
| 330   | R         | 595D337X_010R2T | 33.0                                 | 8                                      | 0.13   | 1.39  |  |
| 390   | R         | 595D397X_010R2T | 39.0                                 | 8                                      | 0.12   | 1.44  |  |
| 470   | R         | 595D477X_010R2T | 47.0                                 | 8                                      | 0.12   | 1.44  |  |
| 680   | R         | 595D687X_010R2T | 68.0                                 | 14                                     | 0.09   | 1.66  |  |
| <b>16 WVDC AT + 85 °C, SURGE = 20 V . . . 10 WVDC AT + 125 °C, SURGE = 12 V</b> |           |                 |                                      |  |  |   |  |
| 1.5   | T         | 595D155X_016T2T | 0.5                                  | 6                                      | 8.7  | 0.06  |  |
| 2.2   | T         | 595D225X_016T2T | 0.5                                  | 6                                      | 8.7  | 0.06  |  |
| 2.2   | A         | 595D225X_010D2T | 0.4                                  | 5                                      | 3.9  | 0.14  |  |
| 3.3   | T         | 595D335X_016T2T | 0.5                                  | 6                                      | 8.6  | 0.06  |  |
| 4.7   | A         | 595D475X_016A2T | 0.8                                  | 6                                      | 2.9  | 0.16  |  |
| 6.8   | A         | 595D685X_016A2T | 1.1                                  | 6                                      | 2.8  | 0.16  |  |
| 10  | A         | 595D106X_016A2T | 1.6                                  | 6                                      | 2.5  | 0.17  |  |
| 10  | B         | 595D106X_016B2T | 1.6                                  | 6                                      | 0.76   | 0.32  |  |
| 15  | A         | 595D156X_016A2T | 2.4                                  | 6                                      | 2.40   | 0.17  |  |
| 15  | B         | 595D156X_016B2T | 2.4                                  | 6                                      | 0.75   | 0.33  |  |
| 22  | B         | 595D226X_016B2T | 3.5                                  | 6                                      | 0.75   | 0.32  |  |
| 22  | M         | 595D226X_016M2T | 3.5                                  | 6                                      | 0.50   | 0.44  |  |
| 33  | B         | 595D336X_016B2T | 5.3                                  | 6                                      | 0.72   | 0.33  |  |
| 33  | C         | 595D336X_016C2T | 5.3                                  | 6                                      | 0.29   | 0.62  |  |
| 47  | B         | 595D476X_016B2T | 7.5                                  | 6                                      | 0.72   | 0.33  |  |
| 47  | C         | 595D476X_016C2T | 7.5                                  | 6                                      | 0.28   | 0.63  |  |
| 68  | C         | 595D686X_016C2T | 10.9                                 | 6                                      | 0.26   | 0.64  |  |
| 68  | D         | 595D686X_016D2T | 10.9                                 | 6                                      | 0.14   | 1.04  |  |
| 100   | C         | 595D107X_016C2T | 16.0                                 | 8                                      | 0.27   | 0.64  |  |

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



| <b>STANDARD/EXTENDED RATINGS</b>  |           |                 |   |  |  |   |  |
|---|-----------|-----------------|---|--|--|---|--|
| CAPACITANCE<br>( $\mu\text{F}$ )  | CASE CODE | PART NUMBER     | MAX. DCL<br>AT + 25 °C<br>( $\mu\text{A}$ ) | MAX. DF<br>AT + 25 °C<br>120 Hz<br>(%) | MAX. ESR<br>AT + 25 °C<br>100 kHz ( $\Omega$ ) | MAX. RIPPLE<br>100 kHz<br>I <sub>rms</sub><br>(A) |  |
| <b>16 WVDC AT + 85 °C, SURGE = 20 V . . . 10 WVDC AT + 125 °C, SURGE = 12 V</b> |           |                 |   |  |  |   |  |
| 100   | D         | 595D107X_016D2T | 16.0  | 8                                      | 0.14   | 1.04  |  |
| 120   | R         | 595D127X_016R2T | 19.2  | 8                                      | 0.14   | 1.34  |  |
| 150   | D         | 595D157X_016D2T | 24.0  | 8                                      | 0.14   | 1.04  |  |
| 150   | R         | 595D157X_016R2T | 24.0  | 8                                      | 0.13   | 1.39  |  |
| 180   | R         | 595D187X_016R2T | 28.8  | 8                                      | 0.13   | 1.39  |  |
| 220   | R         | 595D227X_016R2T | 35.2  | 8                                      | 0.12   | 1.44  |  |
| 330   | R         | 595D337X_016R2T | 52.8  | 14                                     | 0.11   | 1.51  |  |
| <b>20 WVDC AT + 85 °C, SURGE = 26 V . . . 13 WVDC AT + 125 °C, SURGE = 16 V</b> |           |                 |   |  |  |   |  |
| 0.68  | T         | 595D684X_020T2T | 0.5   | 4                                      | 10.8   | 0.05  |  |
| 1.0   | T         | 595D105X_020T2T | 0.5   | 4                                      | 9.0  | 0.06  |  |
| 2.2   | A         | 595D225X_020A2T | 0.5   | 6                                      | 3.8  | 0.14  |  |
| 3.3   | A         | 595D335X_020A2T | 0.7   | 6                                      | 3.8  | 0.14  |  |
| 4.7   | A         | 595D475X_020A2T | 0.9   | 6                                      | 3.1  | 0.15  |  |
| 4.7   | B         | 595D475X_020B2T | 0.9   | 6                                      | 0.95   | 0.29  |  |
| 6.8   | A         | 595D685X_020A2T | 1.4   | 6                                      | 3.0  | 0.15  |  |
| 6.8   | B         | 595D685X_020B2T | 1.4   | 6                                      | 0.95   | 0.29  |  |
| 10  | B         | 595D106X_020B2T | 2.0   | 6                                      | 1.0  | 0.28  |  |
| 15  | B         | 595D156X_020B2T | 3.0   | 6                                      | 1.0  | 0.28  |  |
| 22  | B         | 595D226X_020B2T | 4.4   | 6                                      | 0.90   | 0.31  |  |
| 22  | C         | 595D226X_020C2T | 4.4   | 6                                      | 0.38   | 0.54  |  |
| 47  | C         | 595D476X_020C2T | 9.4   | 6                                      | 0.35   | 0.56  |  |
| 47  | D         | 595D476X_020D2T | 9.4   | 6                                      | 0.19   | 0.89  |  |
| 68  | D         | 595D686X_020D2T | 12.2  | 6                                      | 0.19   | 0.89  |  |
| 100   | D         | 595D107X_020D2T | 20.0  | 8                                      | 0.18   | 0.91  |  |
| 100   | R         | 595D107X_020R2T | 20.0  | 8                                      | 0.14   | 1.34  |  |
| 120   | R         | 595D127X_020R2T | 24.0  | 8                                      | 0.14   | 1.34  |  |
| 150   | R         | 595D157X_020R2T | 30.0  | 8                                      | 0.14   | 1.34  |  |
| <b>25 WVDC AT + 85 °C, SURGE = 32 V . . . 17 WVDC AT + 125 °C, SURGE = 20 V</b> |           |                 |   |  |  |   |  |
| 0.47  | T         | 595D474X_025T2T | 0.5   | 4                                      | 13.5   | 0.05  |  |
| 1   | A         | 595D105X_025A2T | 0.4   | 4                                      | 4.2  | 0.13  |  |
| 1.5   | A         | 595D155X_025A2T | 0.5   | 6                                      | 3.8  | 0.14  |  |
| 2.2   | A         | 595D225X_025A2T | 0.6   | 6                                      | 3.8  | 0.14  |  |
| 3.3   | B         | 595D335X_025B2T | 0.8   | 6                                      | 1.9  | 0.21  |  |
| 4.7   | C         | 595D475X_025C2T | 1.3   | 5                                      | 0.68   | 0.40  |  |
| 6.8   | B         | 595D685X_025B2T | 1.7   | 6                                      | 1.5  | 0.23  |  |
| 10  | B         | 595D106X_025B2T | 2.5   | 6                                      | 1.5  | 0.23  |  |
| 10  | C         | 595D106X_025C2T | 2.5   | 6                                      | 0.57   | 0.44  |  |
| 15  | C         | 595D156X_025C2T | 3.8   | 6                                      | 0.56   | 0.44  |  |
| 22  | C         | 595D226X_025C2T | 5.5   | 6                                      | 0.50   | 0.47  |  |
| 22  | D         | 595D226X_025D2T | 5.5   | 6                                      | 0.28   | 0.73  |  |
| 33  | C         | 595D336X_025C2T | 8.3   | 6                                      | 0.45   | 0.49  |  |
| 33  | D         | 595D336X_025D2T | 8.3   | 6                                      | 0.27   | 0.75  |  |
| 47  | D         | 595D476X_025D2T | 11.8  | 6                                      | 0.26   | 0.76  |  |
| 47  | R         | 595D476X_025R2T | 11.8  | 6                                      | 0.20   | 1.12  |  |
| 68  | D         | 595D686X_025D2T | 17.0  | 8                                      | 0.26   | 0.76  |  |
| 68  | R         | 595D686X_025R2T | 17.0  | 6                                      | 0.20   | 1.12  |  |
| 100   | R         | 595D107X_025R2T | 25.0  | 8                                      | 0.20   | 1.12  |  |

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



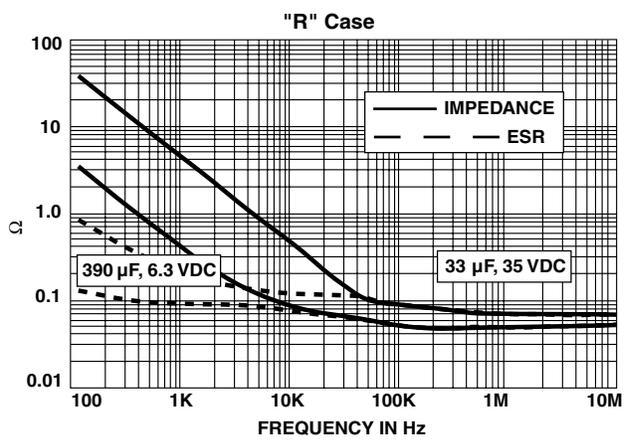
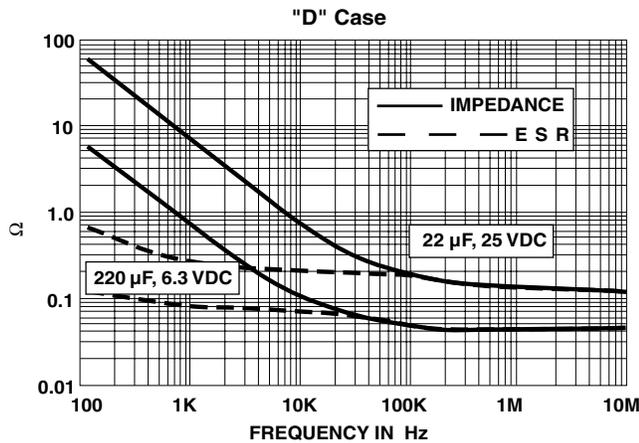
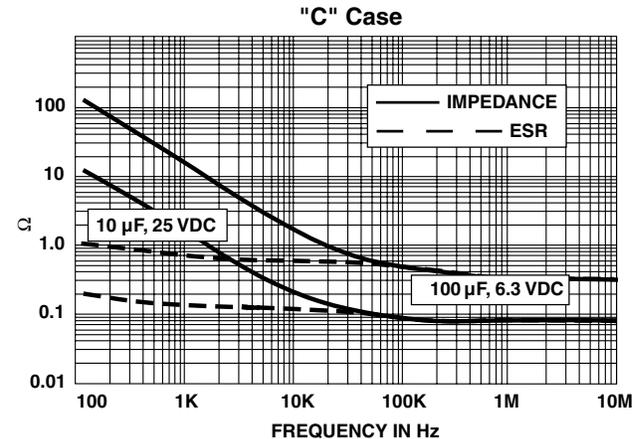
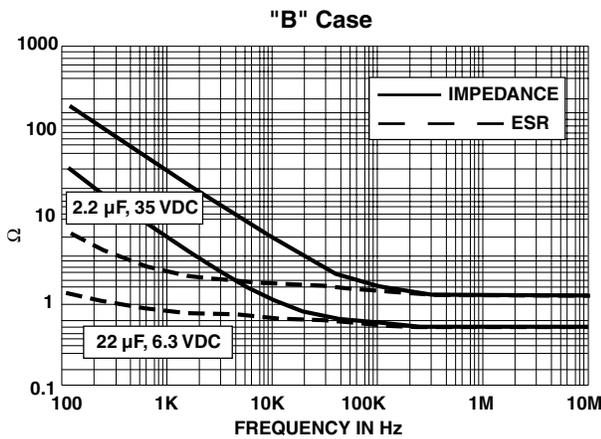
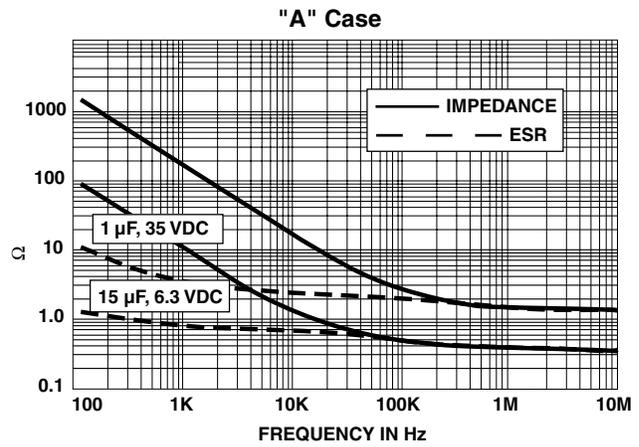
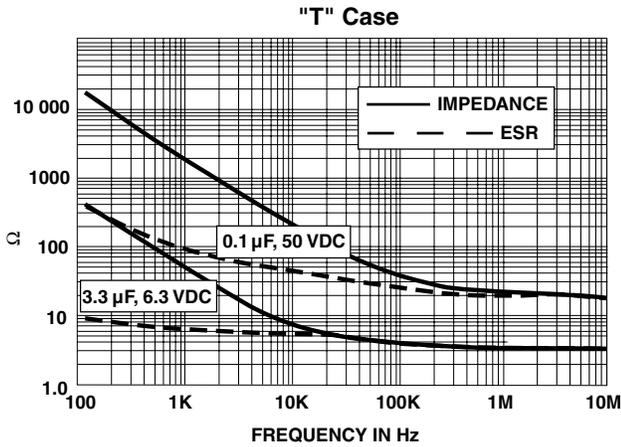
Solid Tantalum Chip Capacitors  
TANTAMOUNT® Conformal Coated,  
Maximum CV

Vishay Sprague

| <b>STANDARD/EXTENDED RATINGS</b>  |           |                 |                                      |  |  |   |
|---|-----------|-----------------|--------------------------------------|--|--|---|
| CAPACITANCE<br>( $\mu$ F)   | CASE CODE | PART NUMBER     | MAX. DCL<br>AT + 25 °C<br>( $\mu$ A) | MAX. DF<br>AT + 25 °C<br>120 Hz<br>(%) | MAX. ESR<br>AT + 25 °C<br>100 kHz ( $\Omega$ ) | MAX. RIPPLE<br>100 kHz<br>I <sub>rms</sub><br>(A) |
| <b>35 WVDC AT + 85 °C, SURGE = 46 V . . . 23 WVDC AT + 125 °C, SURGE = 28 V</b> |           |                 |                                      |  |  |   |
| 0.33  | T         | 595D334X_035T2T | 0.5                                  | 4                                      | 14.4   | 0.05  |
| 0.47  | A         | 595D474X_035A2T | 0.5                                  | 4                                      | 4.3  | 0.13  |
| 0.68  | A         | 595D684X_035A2T | 0.5                                  | 4                                      | 4.2  | 0.13  |
| 1.0   | A         | 595D105X_035A2T | 0.5                                  | 4                                      | 4.1  | 0.13  |
| 1.5   | A         | 595D155X_035A2T | 0.5                                  | 6                                      | 3.8  | 0.14  |
| 1.5   | B         | 595D155X_035B2T | 0.5                                  | 6                                      | 2.8  | 0.17  |
| 2.2   | B         | 595D225X_035B2T | 0.8                                  | 6                                      | 2.3  | 0.19  |
| 3.3   | C         | 595D335X_035C2T | 1.2                                  | 6                                      | 0.75   | 0.38  |
| 4.7   | B         | 595D475X_035B2T | 1.6                                  | 6                                      | 2.2  | 0.19  |
| 4.7   | C         | 595D475X_035C2T | 1.6                                  | 6                                      | 0.66   | 0.41  |
| 6.8   | C         | 595D685X_035C2T | 2.4                                  | 6                                      | 0.63   | 0.42  |
| 10  | D         | 595D106X_035D2T | 3.5                                  | 6                                      | 0.43   | 0.59  |
| 15  | C         | 595D156X_035C2T | 5.3                                  | 6                                      | 0.60   | 0.43  |
| 15  | D         | 595D156X_035D2T | 5.3                                  | 6                                      | 0.41   | 0.60  |
| 22  | D         | 595D226X_035D2T | 7.7                                  | 6                                      | 0.32   | 0.68  |
| 22  | R         | 595D226X_035R2T | 7.7                                  | 6                                      | 0.28   | 0.94  |
| 33  | R         | 595D336X_035R2T | 11.6                                 | 6                                      | 0.28   | 0.94  |
| 47  | R         | 595D476X_035R2T | 16.5                                 | 6                                      | 0.28   | 0.94  |
| <b>50 WVDC AT + 85 °C, SURGE = 65 V . . . 33 WVDC AT + 125 °C, SURGE = 38 V</b> |           |                 |                                      |  |  |   |
| 0.10  | T         | 595D104X_050T2T | 0.5                                  | 4                                      | 22.5   | 0.04  |
| 0.15  | T         | 595D154X_050T2T | 0.5                                  | 4                                      | 18.0   | 0.04  |
| 0.22  | T         | 595D224X_050T2T | 0.5                                  | 4                                      | 15.3   | 0.04  |
| 0.33  | A         | 595D334X_050A2T | 0.5                                  | 4                                      | 8.1  | 0.09  |
| 0.47  | A         | 595D474X_050A2T | 0.5                                  | 4                                      | 7.2  | 0.10  |
| 0.68  | A         | 595D684X_050A2T | 0.5                                  | 4                                      | 6.1  | 0.11  |
| 0.68  | B         | 595D684X_050B2T | 0.5                                  | 4                                      | 5.4  | 0.12  |
| 1.0   | A         | 595D105X_050A2T | 0.5                                  | 4                                      | 6.0  | 0.11  |
| 1.0   | B         | 595D105X_050B2T | 0.5                                  | 4                                      | 5.0  | 0.13  |
| 1.5   | C         | 595D155X_050C2T | 0.8                                  | 6                                      | 1.8  | 0.25  |
| 2.2   | B         | 595D225X_050B2T | 1.1                                  | 6                                      | 3.2  | 0.16  |
| 2.2   | C         | 595D225X_050C2T | 1.1                                  | 6                                      | 1.7  | 0.25  |
| 3.3   | C         | 595D335X_050C2T | 1.7                                  | 6                                      | 1.6  | 0.26  |
| 4.7   | C         | 595D475X_050C2T | 2.4                                  | 6                                      | 1.4  | 0.28  |
| 6.8   | C         | 595D685X_050C2T | 3.4                                  | 6                                      | 1.3  | 0.29  |
| 6.8   | D         | 595D685X_050D2T | 3.4                                  | 6                                      | 0.82   | 0.43  |
| 10  | D         | 595D106X_050D2T | 5.0                                  | 6                                      | 0.80   | 0.43  |
| 10  | R         | 595D106X_050R2T | 5.0                                  | 6                                      | 0.65   | 0.62  |
| 15  | R         | 595D156X_050R2T | 7.5                                  | 6                                      | 0.40   | 0.79  |
| 22  | R         | 595D226X_050R2T | 11.0                                 | 6                                      | 0.39   | 0.80  |



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





## 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.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)