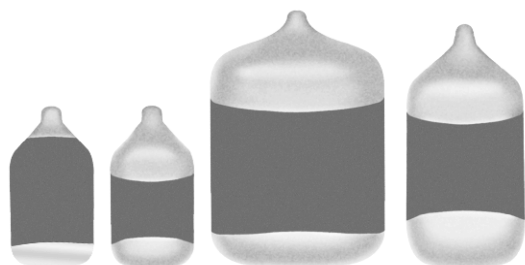


## Solid Tantalum Chip Capacitors

### TANTAMOUNT®, Low Profile, Conformal Coated, Maximum CV

P case  
topP case  
bottomB and T  
casesQ, S and  
A casesImages  
not to  
scale

#### FEATURES

- P case offers single-sided lead (Pb)-free terminations
- Wraparound lead (Pb)-free terminations: Q, S, A, B and T
- Low Impedance
- 8 mm and 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

RoHS  
COMPLIANT

#### PERFORMANCE CHARACTERISTICS

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

**Note:** Refer to Doc. 40088

**Capacitance Range:** 2.2 µF to 220 µF

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

**Voltage Rating:** 4 WVDC to 25 WVDC

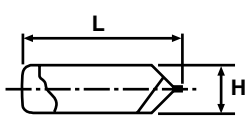
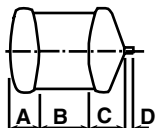
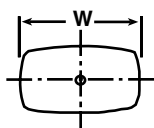
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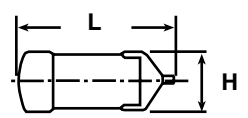
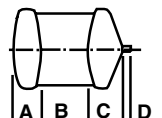
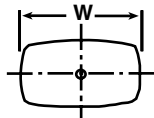
| 572D                                                                                                                           | 336         | X0                         | 6R3                                                                                                                                                    | 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. |             | 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 V). |           | 2 = 100 % Tin<br>4 = Gold Plated | T = Tape and Reel<br>7" [178 mm] Reel<br>W = 13" [330 mm] Reel |
|                                                                                                                                |             |                            | See Ratings and Case Codes Table                                                                                                                       |           |                                  |                                                                |

**Note:** 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

#### DIMENSIONS in inches [millimeters]

|  |                              |  |                              | Single-side electrodes<br>(Both electrodes at bottom side only) |                              |  |                |
|-------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------|----------------|
| CASE CODE                                                                           | L (MAX.)                     | W                                                                                   | H                            | A                                                               | B                            | C                                                                                     | D (REF.)       |
| P                                                                                   | 0.087 ± 0.012<br>[2.2 ± 0.3] | 0.049 ± 0.012<br>[1.25 ± 0.3]                                                       | 0.039 ± 0.008<br>[1.0 ± 0.2] | 0.024 ± 0.012<br>[0.6 ± 0.3]                                    | 0.031 ± 0.012<br>[0.8 ± 0.3] | 0.031 ± 0.012<br>[0.8 ± 0.3]                                                          | 0.008<br>[0.2] |

|  |                              |  |                              |                              |                              |  |                |
|-------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------|------------------------------|------------------------------|------------------------------|---------------------------------------------------------------------------------------|----------------|
| CASE CODE                                                                           | L (MAX.)                     | W                                                                                   | H                            | A                            | B                            | C                                                                                     | D (REF.)       |
| Q                                                                                   | 0.126 ± 0.008<br>[3.2 ± 0.2] | 0.063 ± 0.008<br>[1.6 ± 0.2]                                                        | 0.031 ± 0.008<br>[0.8 ± 0.2] | 0.031 ± 0.008<br>[0.8 ± 0.2] | 0.047 ± 0.008<br>[1.2 ± 0.2] | 0.031 ± 0.008<br>[0.8 ± 0.2]                                                          | 0.008<br>[0.2] |
| S                                                                                   | 0.126 ± 0.012<br>[3.2 ± 0.3] | 0.063 ± 0.012<br>[1.6 ± 0.3]                                                        | 0.039 ± 0.008<br>[1.0 ± 0.2] | 0.031 ± 0.012<br>[0.8 ± 0.3] | 0.047 ± 0.012<br>[1.2 ± 0.3] | 0.031 ± 0.012<br>[0.8 ± 0.3]                                                          | 0.008<br>[0.2] |
| A                                                                                   | 0.126 ± 0.012<br>[3.2 ± 0.3] | 0.067 ± 0.012<br>[1.7 ± 0.3]                                                        | 0.05 ± 0.012<br>[1.3 ± 0.3]  | 0.031 ± 0.012<br>[0.8 ± 0.3] | 0.047 ± 0.012<br>[1.2 ± 0.3] | 0.031 ± 0.012<br>[0.8 ± 0.3]                                                          | 0.008<br>[0.2] |
| B                                                                                   | 0.130 ± 0.012<br>[3.3 ± 0.3] | 0.106 ± 0.012<br>[2.7 ± 0.3]                                                        | 0.066 ± 0.012<br>[1.7 ± 0.3] | 0.031 ± 0.012<br>[0.8 ± 0.3] | 0.047 ± 0.012<br>[1.2 ± 0.3] | 0.043 ± 0.012<br>[1.1 ± 0.3]                                                          | 0.008<br>[0.2] |
| T                                                                                   | 0.138 ± 0.008<br>[3.5 ± 0.2] | 0.106 ± 0.008<br>[2.7 ± 0.2]                                                        | 0.039 ± 0.008<br>[1.0 ± 0.2] | 0.031 ± 0.008<br>[0.8 ± 0.2] | 0.047 ± 0.008<br>[1.2 ± 0.2] | 0.043 ± 0.008<br>[1.1 ± 0.2]                                                          | 0.008<br>[0.2] |



Solid Tantalum Chip Capacitors  
TANTAMOUNT®, Low Profile, Conformal Coated, Maximum CV

Vishay Sprague

| RATINGS AND CASE CODE |           |            |       |       |      |
|-----------------------|-----------|------------|-------|-------|------|
| µF                    | 4 V       | 6.3 V      | 10 V  | 16 V  | 25 V |
| 2.2                   |           |            |       |       | Q    |
| 4.7                   |           |            |       |       | A/S  |
| 6.8                   |           |            |       |       |      |
| 10                    |           |            | P     |       | A    |
| 15                    |           |            |       |       |      |
| 22                    |           |            |       | A/B/T |      |
| 33                    | P         | A/P/Q/S    | P/A/S |       |      |
| 47                    |           | Q/S        | S*    |       |      |
| 68                    |           | S          | B     |       |      |
| 100                   |           | A/B/T/S/Q* | B/T   |       |      |
| 220                   | B/B**/T/S | B          |       |       |      |
| 330                   | T*        |            |       |       |      |

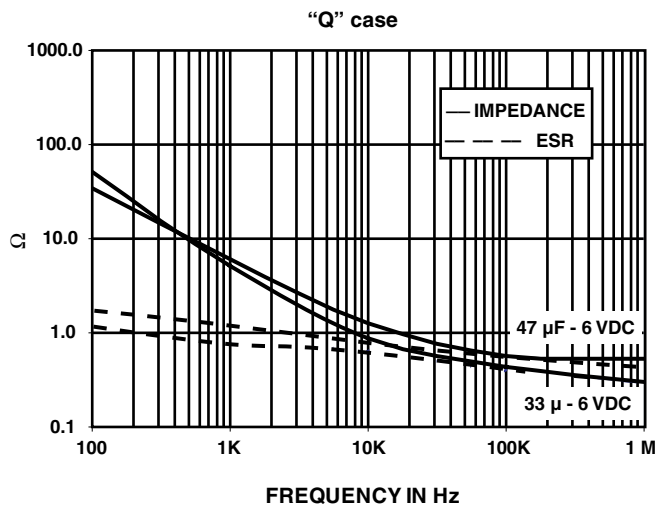
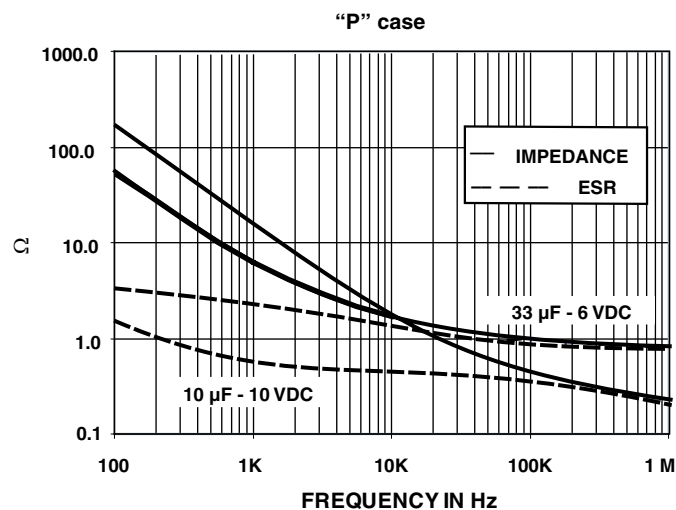
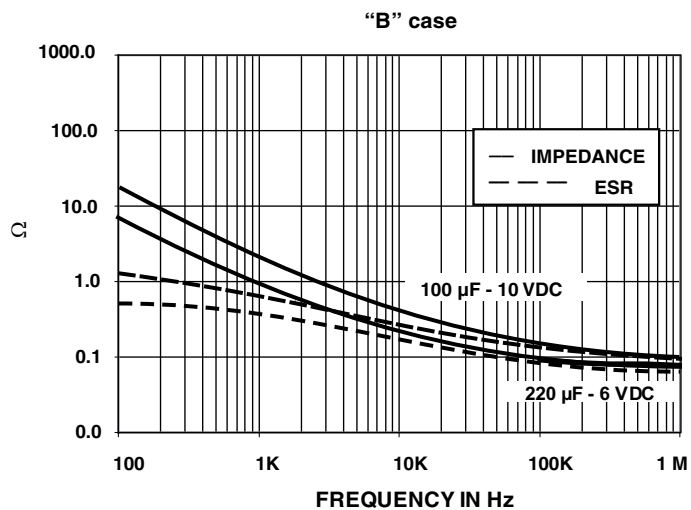
| STANDARD RATINGS                                                           |           |                      |                                |                                     |                                       |                                                |
|----------------------------------------------------------------------------|-----------|----------------------|--------------------------------|-------------------------------------|---------------------------------------|------------------------------------------------|
| CAPACITANCE<br>(µF)                                                        | CASE CODE | PART NUMBER          | MAX. DCL<br>AT + 25 °C<br>(µA) | MAX. DF<br>AT + 25 °C<br>120 Hz (%) | MAX. ESR<br>AT + 25 °C<br>100 kHz (Ω) | MAX. RIPPLE<br>100 kHz<br>I <sub>rms</sub> (A) |
| 4 WVDC AT + 85 °C, SURGE = 5.2 V . . . 2.7 WVDC AT + 125 °C, SURGE = 3.4 V |           |                      |                                |                                     |                                       |                                                |
| 33                                                                         | P         | 572D336X_004P2_001** | 1.32                           | 14                                  | 1.5                                   | 0.13                                           |
| 220                                                                        | B         | 572D227X_004B2_      | 8.8                            | 16                                  | 0.2                                   | 0.63                                           |
| 220                                                                        | B         | 572D227X_004B2_001** | 8.8                            | 16                                  | 0.2                                   | 0.63                                           |
| 220                                                                        | T         | 572D227X_004T2_      | 8.8                            | 26                                  | 0.6                                   | 0.37                                           |
| 220                                                                        | S         | 572D227X0004S2_      | 8.8                            | 25                                  | 0.8                                   | 0.26                                           |
| 330*                                                                       | T*        | 572D337X_004T2_*     | 13.2*                          | 26*                                 | 0.8*                                  | 0.56*                                          |
| 6.3 WVDC AT 85 °C, SURGE = 8 V . . . 4 WVDC AT + 125 °C, SURGE = 5 V       |           |                      |                                |                                     |                                       |                                                |
| 33                                                                         | A         | 572D336X_6R3A2_      | 2.1                            | 8                                   | 0.8                                   | 0.29                                           |
| 33                                                                         | P         | 572D336X06R3P2_      | 2.1                            | 14                                  | 1.5                                   | 0.13                                           |
| 33                                                                         | Q         | 572D336X_6R3Q2_      | 2.1                            | 10                                  | 2.0                                   | 0.17                                           |
| 33                                                                         | S         | 572D336X_6R3S2_      | 2.1                            | 10                                  | 1.0                                   | 0.24                                           |
| 47                                                                         | Q         | 572D476X_6R3Q2_      | 3.0                            | 10                                  | 1.1                                   | 0.22                                           |
| 47                                                                         | S         | 572D476X_6R3S2_      | 3.0                            | 10                                  | 0.9                                   | 0.25                                           |
| 68                                                                         | S         | 572D686X06R3S2_      | 4.3                            | 12                                  | 0.9                                   | 0.26                                           |
| 100                                                                        | A         | 572D107X_6R3A2_      | 6.3                            | 14                                  | 0.5                                   | 0.36                                           |
| 100                                                                        | B         | 572D107X_6R3B2_      | 6.3                            | 14                                  | 0.4                                   | 0.45                                           |
| 100                                                                        | T         | 572D107X_6R3T2_      | 6.3                            | 14                                  | 0.5                                   | 0.36                                           |
| 100                                                                        | S         | 572D107X_6R3S2_      | 6.3                            | 20                                  | 1.0                                   | 0.24                                           |
| 100*                                                                       | Q*        | 572D107X_6R3Q2_*     | 6.3*                           | 25*                                 | 1.5*                                  | 0.19*                                          |
| 220                                                                        | B         | 572D227X_6R3B2_      | 13.9                           | 16                                  | 0.2                                   | 0.63                                           |
| 10 WVDC AT + 85 °C, SURGE = 13 V . . . 7 WVDC AT + 125 °C, SURGE = 8 V     |           |                      |                                |                                     |                                       |                                                |
| 10                                                                         | P         | 572D106X_010P2_      | 1.0                            | 8                                   | 3.0                                   | 0.09                                           |
| 33                                                                         | P         | 572D336X0010P2_      | 3.3                            | 25                                  | 4.0                                   | 0.08                                           |
| 33                                                                         | A         | 572D336X0010A2_      | 3.3                            | 10                                  | 0.8                                   | 0.29                                           |
| 33                                                                         | S         | 572D336X0010S2_      | 3.3                            | 10                                  | 1.1                                   | 0.23                                           |
| 47*                                                                        | S*        | 572D476X0010S2_*     | 4.7*                           | 14*                                 | 1.1*                                  | 0.23*                                          |
| 68                                                                         | B         | 572D686X_010B2_      | 6.8                            | 6                                   | 0.45                                  | 0.42                                           |
| 100                                                                        | B         | 572D107X0010B2_      | 10                             | 14                                  | 0.4                                   | 0.45                                           |
| 100                                                                        | T         | 572D107X0010T2_      | 10.0                           | 18                                  | 0.5                                   | 0.40                                           |
| 16 WVDC AT + 85 °C, SURGE = 20 V . . . 10 WVDC AT + 125 °C, SURGE = 12 V   |           |                      |                                |                                     |                                       |                                                |
| 22                                                                         | A         | 572D226X_016A2_      | 3.5                            | 8                                   | 1.4                                   | 0.22                                           |
| 22                                                                         | B         | 572D226X_016B2_      | 3.5                            | 6                                   | 0.5                                   | 0.45                                           |
| 22                                                                         | T         | 572D226X_016T2_      | 3.5                            | 8                                   | 1.0                                   | 0.24                                           |
| 25 WVDC AT + 85 °C, SURGE = 32 V . . . 17 WVDC AT + 125 °C, SURGE = 20 V   |           |                      |                                |                                     |                                       |                                                |
| 2.2                                                                        | Q         | 572D225X_025Q2_      | 0.65                           | 6                                   | 5.0                                   | 0.10                                           |
| 4.7                                                                        | A         | 572D475X_025A2_      | 1.2                            | 6                                   | 2.0                                   | 0.18                                           |
| 4.7                                                                        | S         | 572D475X_025S2_      | 1.2                            | 8                                   | 4.0                                   | 0.12                                           |
| 10                                                                         | A         | 572D106X_025A2_      | 2.5                            | 10                                  | 3.5                                   | 0.15                                           |

**Note:**

\* Contact factory for availability

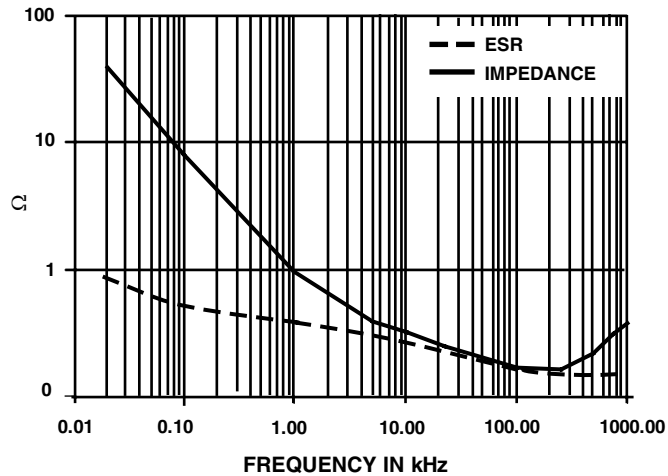
\*\* Special Height: 572D227X\_004B2\_001, height = 1.7 mm Max.; 572D336X\_004P2\_001, height = 1.0 mm Max.

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

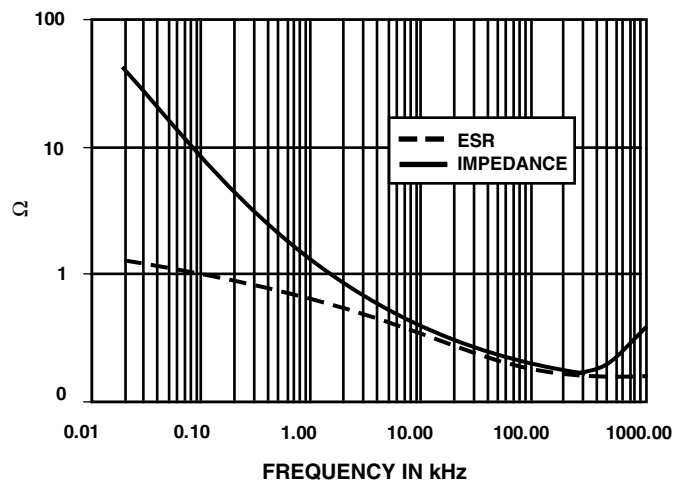


**TYPICAL CURVES AT + 25 °C, IMPEDANCE AND ESR VS. FREQUENCY**

220  $\mu$ F - 4 V T-Case  
ESR/Z vs. Freq.



220  $\mu$ F - 4 V S-Case  
ESR/Z vs. Freq.





### Disclaimer

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