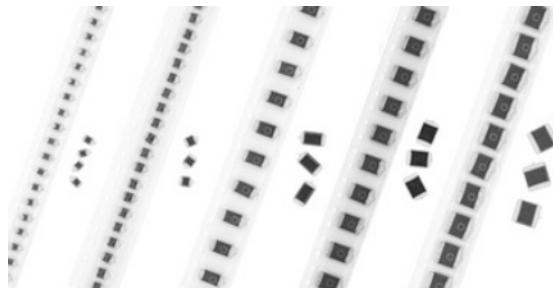


Solid Tantalum Chip Capacitors TANTAMOUNT[®], Low Profile, Conformal Coated, Maximum CV



FEATURES

- New robust 6.3 V ratings for battery operated wireless applications
- 1.0 mm to 2.5 mm height
- Terminations: Lead (Pb)-free (2) standard
- Low Impedance
- 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 compatible with EIA 535BAAC and CECC 30801 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: 1.0 µF to 2200 µF

Capacitance Tolerance: ± 10 %, ± 20 % standard

Voltage Rating: 6.3 WVDC

| ORDERING INFORMATION | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------|
| 592D | 106 | X0 | 010 | B | 2 | T | 15H |
| TYPE | CAPACITANCE | CAPACITANCE TOLERANCE | DC VOLTAGE RATING AT + 85 °C | CASE CODE | TERMINATION | REEL SIZE AND PACKAGING | SUFFIX |
| | This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow. | X0 = ± 20 % 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). | See Ratings and Case Codes Table | 2 = 100 % Tin 4 = Gold Plated 8 = Solder Plated 60/40 Special Order | T = Tape and Reel 7" [178 mm] Reel W = 13" [330 mm] Reel | Maximum Height (mm) See Dimensions |
| <p>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. Voltage substitutions will be marked with the higher voltage rating.</p> | | | | | | | |

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

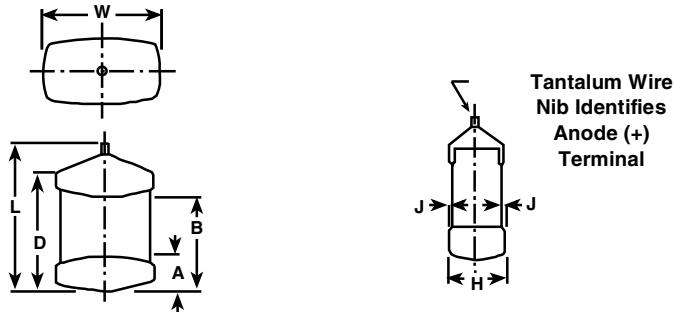
592D

Vishay Sprague

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



DIMENSIONS in inches [millimeters]



| CASE CODE | SUFFIX | H | L (MAX.) | W | A | B | D (REF.) | J (MAX.) |
|-----------|--------|---------------------------|------------------------------|--------------------------------|-------------------------------|-------------------------------|-----------------|----------------|
| A | 12H | 0.04 [1.2] Max | 0.146 | 0.072 ± 0.012 [1.8 ± 0.3] | 0.031 ± 0.012 [0.80 ± 0.3] | 0.087 ± 0.016 [2.2 ± 0.4] | 0.115 [2.9] | 0.004 [0.1] |
| A | 15H | 0.047 ± 0.012 [1.2 ± 0.3] | | | | | | |
| B | 15H | 0.047 ± 0.012 [1.2 ± 0.3] | 0.158 | 0.110 ± 0.012 [2.8 ± 0.3] | 0.031 ± 0.012 [0.80 ± 0.3] | 0.097 ± 0.016 [2.5 ± 0.4] | 0.139 [3.5] | 0.004 [0.1] |
| B | 20H | 0.079 [2.0] Max | | | | | | |
| B | 13H | 0.057 [1.3] Max | | | | | | |
| C | 14H | 0.055 [1.4] Max | | | | | | |
| C | 15H | 0.047 ± 0.012 [1.2 ± 0.3] | 0.281 | 0.126 ± 0.012 [3.2 ± 0.3] | 0.051 ± 0.012 [1.3 ± 0.3] | 0.180 ± 0.024 [4.4 ± 0.6] | 0.238 [6.0] | 0.004 [0.1] |
| C | 16H | 0.063 [1.6] Max | | | | | | |
| C | 20H | 0.079 [2.0] Max | | | | | | |
| D | 15H | 0.047 ± 0.012 [1.2 ± 0.3] | 0.298 | 0.170 ± 0.012 [4.3 ± 0.3] | 0.051 ± 0.012 [1.3 ± 0.3] | 0.180 ± 0.024 [4.6 ± 0.6] | 0.254 [6.4] | 0.004 [0.1] |
| D | 18H | 0.071 [1.8] Max | | | | | | |
| D | 20H | 0.079 [2.0] Max | | | | | | |
| R | 15H | 0.047 ± 0.012 [1.2 ± 0.3] | 0.285 | 0.235 ± 0.012 [6.0 ± 0.3] | 0.051 ± 0.012 [1.3 ± 0.3] | 0.180 ± 0.024 [4.6 ± 0.6] | 0.246 [6.2] | 0.004 [0.1] |
| R | 20H | 0.079 [2.0] Max | | | | | | |
| S | 13H | 0.040 ± 0.012 [1.0 ± 0.3] | 0.126 ± 0.012 [3.2 ± 0.3] | 0.063 ± 0.012 [1.6 ± 0.3] | 0.031 ± 0.012 [0.8 ± 0.3] | 0.079 ± 0.012 [2.0 ± 0.3] | 0.087 [2.2] | 0.004 [0.1] |
| X | 16H | 0.063 [1.6] Max | | | | | | |
| X | 18H | 0.071 [1.8] Max | | | | | | |
| X | 20H | 0.079 [2.0] Max | 0.575 | 0.290 ± 0.010 [7.37 ± 0.25] | 0.051 ± 0.016 [1.3 ± 0.4] | 0.470 ± 0.024 [11.9 ± 0.6] | 0.524 [13.2] | 0.004 [0.1] |
| X | 25H | 0.098 [2.5] Max | | | | | | |

Note: The anode termination (D less B) will be a minimum of 0.012" [0.3 mm].

RATINGS AND CASE CODES

| μF | 4 V | 6.3 V | 10 V | 16 V | 20 V | 25 V | 35 V |
|------|-----------|-----------|-------------|---------|------|------|------|
| 1.0 | | | | | | | A/B |
| 1.5 | | | | | | | B |
| 2.2 | | | | | | | A/B |
| 3.3 | | | | | | | B/C |
| 4.7 | | | | | | | C/D |
| 6.8 | A | | | | | | A/B |
| 10 | A | B | | | | | B/C |
| 15 | B | | | | | | B/D |
| 22 | A/B | C | | | | | C |
| 33 | B | B/C/S | B*/C/D | B/C/D/R | D*/R | | |
| 47 | B*/C | C/D | B/D/R | B/C/R | | | |
| 68 | B/C/D | C/D/B/R | B/C/C*/D/R/ | C/D | | | R |
| 100 | A/B/C/D/R | D/R | D/C | C/D | | | |
| 120 | | C | | | | | |
| 150 | B/C/D/R | D/C | D* | D | | | |
| 220 | C/D/R | C/D/R | D | R | | | |
| 330 | C/D/R | C/D/R | D | | | | |
| 470 | B/C/D/R | C/D/R | | | | | |
| 680 | D/R | R | | | | | |
| 1000 | R | R/X | | | | | |
| 1500 | X | R/X | | | | | |
| 2200 | X | X/X(25H)* | | | | | |

* Contact factory for availability



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

Vishay Sprague

| STANDARD/EXTENDED RATINGS | | | | | | |
|-----------------------------------------------------------------------------------|-----------|---------------------|--------------------------------------|-------------------------------------|------------------------------------------------|------------------------------------|
| CAPACITANCE (μ F) | CASE CODE | PART NUMBER | MAX. DCL AT + 25 °C (μ A) | 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 | | | | | | |
| 22 | A | 592D226X_004A2_15H | 0.9 | 6 | 2.40 | 0.16 |
| 22 | B | 592D226X_004B2_15H | 0.9 | 6 | 1.60 | 0.22 |
| 33 | B | 592D336X_004B2_15H | 1.3 | 6 | 1.60 | 0.22 |
| 47* | B* | 592D476X_004B2_15H* | 1.9* | 6* | 1.5* | 0.23* |
| 47 | C | 592D476X_004C2_15H | 1.9 | 6 | 0.40 | 0.50 |
| 68 | B | 592D686X_004B2_15H | 2.7 | 6 | 1.40 | 0.24 |
| 68 | C | 592D686X_004C2_15H | 2.7 | 6 | 0.35 | 0.53 |
| 68 | D | 592D686X_004D2_15H | 2.7 | 6 | 0.27 | 0.68 |
| 100 | A | 592D107X_004A2_12H | 4.0 | 24 | 1.00 | 0.24 |
| 100* | A* | 592D107X_004A2_15H* | 4.0* | 8* | 0.80* | 0.27* |
| 100 | B | 592D107X_004B2_20H | 4.0 | 8 | 0.20 | 0.87 |
| 100 | C | 592D107X_004C2_15H | 4.0 | 8 | 0.45 | 0.42 |
| 100 | D | 592D107X_004D2_15H | 4.0 | 8 | 0.35 | 0.53 |
| 100 | R | 592D107X_004R2_15H | 4.0 | 8 | 0.26 | 0.69 |
| 100 | B | 592D107X_004B2_20H | 4.0 | 8 | 0.45 | 0.42 |
| 150 | B | 592D157X_004B2_20H | 6.0 | 8 | 0.20 | 0.87 |
| 150 | C | 592D157X_004C2_15H | 6.0 | 8 | 0.45 | 0.42 |
| 150 | D | 592D157X_004D2_15H | 6.0 | 8 | 0.36 | 0.52 |
| 150 | R | 592D157X_004R2_15H | 6.0 | 8 | 0.25 | 0.71 |
| 150 | B | 592D157X_004B2_20H | 6.0 | 8 | 0.45 | 0.42 |
| 220 | C | 592D227X_004C2_20H | 8.3 | 8 | 0.20 | 0.87 |
| 220 | D | 592D227X_004D2_20H | 8.3 | 8 | 0.20 | 0.78 |
| 220 | R | 592D227X_004R2_15H | 8.3 | 8 | 0.19 | 0.76 |
| 330 | C | 592D337X_004C2_15H | 13.2 | 8 | 0.12 | 1.08 |
| 330 | D | 592D337X_004D2_20H | 13.2 | 8 | 0.12 | 1.12 |
| 330 | D | 592D337X_004D2_15H | 13.2 | 8 | 0.18 | 0.91 |
| 330 | R | 592D337X_004R2_15H | 13.2 | 8 | 0.15 | 0.86 |
| 470 | B | 592D477X_004B2_20H | 18.8 | 35 | 0.50 | 0.40 |
| 470 | D | 592D477X_004D2_15H | 18.8 | 8 | 0.14 | 0.94 |
| 470 | D | 592D477X_004D2_14H | 18.8 | 8 | 0.14 | 0.95 |
| 470 | C | 592D477X_004C2_20H | 18.8 | 8 | 0.10 | 1.05 |
| 470 | D | 592D477X_004D2_20H | 18.8 | 8 | 0.10 | 1.18 |
| 470 | R | 592D477X_004R2_20H | 18.8 | 10 | 0.10 | 1.32 |
| 680 | D | 592D687X_004D2_20H | 27.2 | 12 | 0.10 | 1.32 |
| 680 | R | 592D687X_004R2_20H | 27.2 | 12 | 0.10 | 1.18 |
| 1000 | R | 592D108X_004R2_20H | 40 | 14 | 0.20 | 0.94 |
| 1500 | X | 592D158X_004X2_20H | 60 | 20 | 0.04 | 2.10 |
| 2200 | X | 592D228X_004X2_25H | 88 | 25 | 0.04 | 2.30 |
| 2200 | X | 592D228X_004X2_20H | 88 | 25 | 0.055 | 2.30 |
| 6.3 WVDC AT + 85 °C, SURGE = 8 V . . . 4 WVDC AT + 125 °C, SURGE = 5 V | | | | | | |
| 6.8 | A | 592D685X_6R3A2_15H | 0.56 | 5 | 5.50 | 0.10 |
| 10 | A | 592D106X_6R3A2_15H | 0.48 | 5 | 2.70 | 0.15 |
| 15 | A | 592D156X_6R3A2_15H | 0.9 | 6 | 2.50 | 0.15 |
| 15 | B | 592D156X_6R3B2_15H | 0.9 | 6 | 1.70 | 0.22 |
| 22 | B | 592D226X_6R3B2_15H | 1.4 | 6 | 1.50 | 0.23 |
| 22 | A | 592D226X_6R3A2_10H | 1.4 | 12 | 4.00 | 0.39 |
| 22 | A | 592D226X_6R3A2_13H | 1.4 | 6 | 1.50 | 0.20 |
| 22 | B | 592D226X_6R3B2_15H | 1.4 | 6 | 1.50 | 0.20 |
| 33 | A | 592D336X_6R3A2_15H | 2.1 | 6 | 1.70 | 0.32 |
| 33 | B | 592D336X_6R3B2_15H | 2.1 | 6 | 1.40 | 0.24 |
| 33 | C | 592D336X_6R3C2_15H | 2.1 | 6 | 0.40 | 0.50 |
| 33 | S | 592D336X_6R3S2_12H | 2.1 | 10 | 2.00 | 0.17 |
| 33 | S | 592D336X_6R3S2_13H | 2.1 | 8 | 1.30 | 0.24 |
| 47 | A | 592D476X_6R3A2_13H | 2.7 | 14 | 2.00 | 0.17 |
| 47 | A | 592D476X_6R3A2_15H | 2.7 | 14 | 2.00 | 0.17 |
| 47 | B | 592D476X_6R3B2_15H | 3.0 | 8 | 1.40 | 0.24 |

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

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Vishay Sprague

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



| STANDARD/EXTENDED RATINGS | | | | | | |
|-------------------------------------------------------------------------------|-----------|--------------------|--------------------------------------|-------------------------------------|------------------------------------------------|------------------------------------|
| CAPACITANCE (μ F) | CASE CODE | PART NUMBER | MAX. DCL AT + 25 °C (μ A) | MAX. DF AT + 25 °C 120 Hz (%) | MAX. ESR AT + 25 °C 100 kHz (Ω) | MAX. RIPPLE 100 kHz Irms (A) |
| 6.3 WVDC AT + 85 °C, SURGE = 8 V . . . 4 WVDC AT + 125 °C, SURGE = 5 V | | | | | | |
| 47 | B | 592D476X_6R3B2_12H | 3.0 | 8 | 1.40 | 0.24 |
| 47 | C | 592D476X_6R3C2_15H | 3.0 | 6 | 0.40 | 0.50 |
| 47 | D | 592D476X_6R3D2_15H | 3.0 | 6 | 0.30 | 0.65 |
| 68 | B | 592D686X_6R3B2_20H | 4.3 | 6 | 0.50 | 0.40 |
| 68 | B | 592D686X_6R3B2_13H | 4.3 | 8 | 0.60 | 0.36 |
| 68 | C | 592D686X_6R3C2_14H | 3.87 | 6 | 0.38 | 0.46 |
| 68 | C | 592D686X_6R3C2_15H | 4.3 | 6 | 0.38 | 0.51 |
| 68 | D | 592D686X_6R3D2_15H | 4.3 | 6 | 0.27 | 0.68 |
| 68 | R | 592D686X_6R3R2_15H | 4.3 | 6 | 0.20 | 0.87 |
| 100 | B | 592D107X_6R3B2_15H | 4.3 | 6 | 1.00 | 0.28 |
| 100 | B | 592D107X_6R3B2_20H | 6.3 | 8 | 0.45 | 0.42 |
| 100 | C | 592D107X_6R3C2_15H | 6.3 | 8 | 0.38 | 0.51 |
| 100 | C | 592D107X_6W3C2_15H | 6.3 | 8 | 0.38 | 0.51 |
| 100 | D | 592D107X_6R3D2_15H | 6.3 | 8 | 0.26 | 0.69 |
| 100 | R | 592D107X_6R3R2_15H | 6.3 | 8 | 0.20 | 0.87 |
| 100 | R | 592D107X_6W3R2_15H | 6.3 | 8 | 0.20 | 0.87 |
| 120 | C | 592D127X_6R3C2_20H | 6.50 | 8 | 0.20 | 0.74 |
| 150 | C | 592D157X_6R3C2_20H | 9.5 | 8 | 0.19 | 0.76 |
| 150 | D | 592D157X_6R3D2_15H | 9.5 | 8 | 0.25 | 0.71 |
| 150 | R | 592D157X_6W3R2_15H | 9.5 | 8 | 0.20 | 0.87 |
| 150 | R | 592D157X_6R3R2_15H | 9.5 | 8 | 0.20 | 0.87 |
| 220 | C | 592D227X_6R3C2_18H | 13.9 | 8 | 0.15 | 0.86 |
| 220 | C | 592D227X_6R3C2_20H | 13.9 | 8 | 0.15 | 0.86 |
| 220 | C | 592D227X_6W3C2_20H | 13.9 | 8 | 0.15 | 0.86 |
| 220 | D | 592D227X_6R3D2_15H | 13.9 | 8 | 0.22 | 0.75 |
| 220 | D | 592D227X_6R3D2_20H | 13.9 | 8 | 0.12 | 1.08 |
| 220 | R | 592D227X_6R3R2_15H | 13.9 | 8 | 0.18 | 0.91 |
| 330 | C | 592D337X_6R3C2_20H | 20.8 | 8 | 0.10 | 1.05 |
| 330 | D | 592D337X_6R3D2_16H | 20.8 | 8 | 0.12 | 1.02 |
| 330 | D | 592D337X_6R3D2_20H | 20.8 | 8 | 0.10 | 1.18 |
| 330 | D | 592D337X_6W3D2_20H | 20.8 | 8 | 0.10 | 1.18 |
| 330 | D | 592D337X_6R3D2_19H | 20.8 | 8 | 0.10 | 1.18 |
| 330 | R | 592D337X_6R3R2_15H | 20.8 | 8 | 0.18 | 0.91 |
| 330 | R | 592D337X_6R3R2_20H | 20.8 | 8 | 0.10 | 1.32 |
| 470 | C | 592D477X_6R3C2_20H | 29.6 | 14 | 0.10 | 1.05 |
| 470 | C | 592D477X_6R3C2_16H | 29.6 | 14 | 0.20 | 0.71 |
| 470 | D | 592D477X_6R3D2_20H | 29.6 | 10 | 0.10 | 1.18 |
| 470 | R | 592D477X_6R3R2_20H | 29.6 | 10 | 0.10 | 1.32 |
| 470 | R | 592D477X_6W3R2_20H | 29.6 | 10 | 0.10 | 1.32 |
| 470 | R | 592D477X_6R3R2_16H | 29.6 | 10 | 0.12 | 1.32 |
| 680 | R | 592D687X_6R3R2_20H | 42.8 | 10 | 0.10 | 1.87 |
| 680 | R | 592D687X_6R3R2_16H | 42.8 | 10 | 0.10 | 1.87 |
| 1000 | R | 592D108X_6R3R2_20H | 63 | 20 | 0.20 | 0.94 |
| 1000 | X | 592D108X_6R3X2_20H | 63 | 16 | 0.04 | 2.10 |
| 1000 | X | 592D108X_6R3X2_18H | 63 | 16 | 0.04 | 2.10 |
| 1500 | R | 592D158X06R3R2_20H | 95 | 33 | 0.12 | 1.21 |
| 1500 | X | 592D158X_6R3X2_16H | 95 | 25 | 0.045 | 1.97 |
| 1500 | X | 592D158X_6R3X2_25H | 95 | 20 | 0.035 | 2.30 |
| 1500 | X | 592D158X_6W3X2_25H | 95 | 20 | 0.035 | 2.30 |
| 1500 | X | 592D158X_6R3X2_20H | 95 | 25 | 0.045 | 1.97 |
| 2200 | X | 592D228X_6R3X2_20H | 139 | 35 | 0.055 | 1.80 |
| 2200 | X | 592D228X_6R3X2_22H | 139 | 35 | 0.055 | 1.80 |

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



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

Vishay Sprague

STANDARD/EXTENDED RATINGS

| CAPACITANCE (μ F) | CASE CODE | PART NUMBER | MAX. DCL AT + 25 °C (μ A) | MAX. DF AT + 25 °C 120 Hz (%) | MAX. ESR AT + 25 °C 100 kHz (Ω) | MAX. RIPPLE 100 kHz Irms (A) |
|---------------------------------------------------------------------------------|-----------|---------------------|--------------------------------------|-------------------------------------|------------------------------------------------|------------------------------------|
| 10 WVDC AT + 85 °C, SURGE = 13 V . . . 7 WVDC AT + 125 °C, SURGE = 8 V | | | | | | |
| 10 | A | 592D106X_010A2_15H | 1.0 | 6 | 2.60 | 0.15 |
| 10 | B | 592D106X_010B2_15H | 1.0 | 6 | 1.70 | 0.22 |
| 22 | B | 592D226X_010B2_15H | 2.2 | 6 | 1.50 | 0.23 |
| 22 | B | 592D226X_010B2_13H | 2.2 | 6 | 1.50 | 0.23 |
| 22 | C | 592D226X_010C2_15H | 2.2 | 6 | 0.40 | 0.50 |
| 33 | C | 592D336X_010C2_15H | 3.3 | 6 | 0.40 | 0.50 |
| 33 | D | 592D336X_010D2_15H | 3.3 | 6 | 0.30 | 0.65 |
| 33* | B* | 592D336X_010B2_20H* | 3.3* | 6* | 0.50* | 0.40* |
| 47 | B | 592D476X_010B2_20H | 4.7 | 6 | 0.50 | 0.68 |
| 47 | D | 592D476X_010D2_15H | 4.7 | 6 | 0.27 | 0.87 |
| 47 | R | 592D476X_010R2_15H | 4.7 | 6 | 0.20 | 0.40 |
| 68 | B | 592D686X_010B2_20H | 6.8 | 6 | 0.45 | 0.84 |
| 68 | C | 592D686X_010C2_15H | 6.8 | 6 | 0.24 | 0.68 |
| 68* | C* | 592D686X_010C2_20H* | 6.8* | 6* | 0.25* | 0.66* |
| 68 | D | 592D686X_010D2_15H | 6.8 | 6 | 0.27 | 0.87 |
| 68 | R | 592D686X_010R2_15H | 6.8 | 6 | 0.20 | 0.42 |
| 100 | B | 592D107X_010B2T20H | 10 | 14 | 0.40 | 0.45 |
| 100 | C | 592D107X_010C2_20H | 10 | 8 | 0.19 | 1.11 |
| 100 | D | 592D107X_010D2_15H | 10 | 8 | 0.10 | 0.76 |
| 100 | R | 592D107X_010R2_15H | 10 | 6 | 0.22 | 0.83 |
| 150 | C | 592D157X_010C2_15H | 15 | 8 | 0.17 | 0.80 |
| 150 | C | 592D157X_010C2_20H | 15 | 8 | 0.17 | 0.80 |
| 150 | D | 592D157X_010D2_15H | 15 | 8 | 0.25 | 0.71 |
| 150 | D | 592D157X_010D2_20H | 15 | 8 | 0.14 | 1.00 |
| 220 | D | 592D227X_010D2_20H | 22 | 8 | 0.12 | 1.08 |
| 220 | D | 592D227X_010D2_19H | 22 | 8 | 0.12 | 1.08 |
| 220 | R | 592D227X_010R2_20H | 22 | 8 | 0.10 | 1.32 |
| 330 | D | 592D337X_010D2_18H | 33 | 8 | 0.10 | 1.12 |
| 330 | D | 592D337X_010D2_20H | 33 | 8 | 0.10 | 1.18 |
| 330 | R | 592D337X_010R2_20H | 33 | 8 | 0.10 | 1.32 |
| 16 WVDC AT + 85 °C, SURGE = 20 V . . . 10 WVDC AT + 125 °C, SURGE = 12 V | | | | | | |
| 4.7 | A | 592D475X_016A2_15H | 0.8 | 6 | 3.50 | 0.13 |
| 6.8 | A | 592D685X_016A2_15H | 1.1 | 6 | 3.30 | 0.13 |
| 6.8 | B | 592D685X_016B2_15H | 1.1 | 6 | 1.80 | 0.21 |
| 10 | B | 592D106X_016B2_15H | 1.6 | 6 | 1.60 | 0.22 |
| 10 | C | 592D106X_016C2_15H | 1.6 | 6 | 1.00 | 0.32 |
| 15 | B | 592D156X_016B2_15H | 2.4 | 6 | 1.40 | 0.24 |
| 15 | D | 592D156X_016D2_15H | 2.4 | 6 | 0.50 | 0.50 |
| 22 | B | 592D226X_016B2_20H | 3.5 | 6 | 0.60 | 0.36 |
| 22 | C | 592D226X_016C2_15H | 3.5 | 6 | 0.30 | 0.46 |
| 22 | D | 592D226X_016D2_15H | 3.5 | 6 | 0.40 | 0.60 |
| 33 | B | 592D336X_016B2_20H | 5.3 | 6 | 0.60 | 0.36 |
| 33 | C | 592D336X_016C2_15H | 5.3 | 6 | 0.25 | 0.66 |
| 33 | D | 592D336X_016D2_15H | 5.3 | 6 | 0.30 | 0.62 |
| 33 | R | 592D336X_016R2_15H | 5.3 | 6 | 0.27 | 0.75 |
| 47 | B | 592D476X_016B2_20H | 7.5 | 6 | 0.72 | 0.33 |
| 47 | C | 592D476X_016C2_16H | 7.5 | 6 | 0.25 | 0.66 |
| 47 | C | 592D476X_016C2_20H | 7.5 | 6 | 0.25 | 0.66 |
| 47 | R | 592D476X_016R2_15H | 7.5 | 6 | 0.25 | 0.77 |
| 68 | C | 592D686X_016C2_15H | 10.9 | 6 | 0.50 | 1.20 |
| 68 | C | 592D686X_016C2_20H | 10.9 | 6 | 0.25 | 0.66 |

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

592D

Vishay Sprague

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



| STANDARD/EXTENDED RATINGS | | | | | | |
|---------------------------------------------------------------------------------|-----------|---------------------|--------------------------------------|-------------------------------------|------------------------------------------------|------------------------------------|
| CAPACITANCE (μ F) | CASE CODE | PART NUMBER | MAX. DCL AT + 25 °C (μ A) | MAX. DF AT + 25 °C 120 Hz (%) | MAX. ESR AT + 25 °C 100 kHz (Ω) | MAX. RIPPLE 100 kHz Irms (A) |
| 16 WVDC AT + 85 °C, SURGE = 20 V . . . 10 WVDC AT + 125 °C, SURGE = 12 V | | | | | | |
| 68 | D | 592D686X_016D2_20H | 10.9 | 6 | 0.17 | 0.91 |
| 100 | C | 592D107X_016C2_20H | 16 | 8 | 0.15 | 0.85 |
| 100 | D | 592D107X_016D2_15H | 16 | 8 | 0.15 | 0.97 |
| 100 | C | 592D107X_016C2_20H | 16 | 8 | 0.15 | 0.97 |
| 100 | D | 592D107X_016D2_20H | 16 | 8 | 0.15 | 0.97 |
| 150 | D | 592D157X_016D2_20H | 24 | 8 | 0.10 | 1.18 |
| 150 | R | 592D157X_016R2_20H | 24 | 8 | 0.10 | 1.32 |
| 220 | R | 592D227X_016R2_20H | 35.2 | 9 | 0.12 | 1.30 |
| 20 WVDC AT + 85 °C, SURGE = 26 V . . . 13 WVDC AT + 125 °C, SURGE = 16 V | | | | | | |
| 4.7 | A | 592D475X_020A2_15H | 0.9 | 6 | 3.80 | 0.13 |
| 4.7 | B | 592D475X_020B2_15H | 0.9 | 6 | 3.20 | 0.16 |
| 6.8 | B | 592D685X_020B2_15H | 1.4 | 6 | 3.10 | 0.16 |
| 6.8 | C | 592D685X_020C2_15H | 1.4 | 6 | 1.10 | 0.30 |
| 10 | B | 592D106X_020B2_15H | 2.0 | 6 | 3.00 | 0.16 |
| 10 | D | 592D106X_020D2_15H | 2.0 | 6 | 0.50 | 0.48 |
| 15 | C | 592D156X_020C2_15H | 3.0 | 6 | 0.60 | 0.42 |
| 15 | R | 592D156X_020R2_15H | 3.0 | 6 | 0.40 | 0.65 |
| 22 | B | 592D226X_020B2_20H | 4.4 | 6 | 0.60 | 0.37 |
| 22* | C* | 592D226X_020C2_20H* | 4.4* | 6* | 0.30* | 0.61* |
| 22 | D | 592D226X_020D2_15H | 4.4 | 6 | 0.40 | 0.56 |
| 22 | R | 592D226X_020R2_15H | 4.4 | 6 | 0.28 | 0.73 |
| 33* | D* | 592D336X_020D2_20H* | 6.6* | 6* | 0.26* | 0.73* |
| 33 | R | 592D336X_020R2_15H | 6.6 | 6 | 0.28 | 0.73 |
| 25 WVDC AT + 85 °C, SURGE = 33 V . . . 17 WVDC AT + 125 °C, SURGE = 20 V | | | | | | |
| 2.2 | A | 592D225X_025A2_15H | 0.6 | 6 | 8.00 | 0.09 |
| 2.2 | B | 592D225X_025B2_15H | 0.6 | 6 | 6.00 | 0.12 |
| 3.3 | B | 592D335X_025B2_15H | 0.8 | 6 | 5.60 | 0.12 |
| 3.3 | C | 592D335X_025C2_15H | 0.8 | 6 | 2.00 | 0.22 |
| 4.7 | C | 592D475X_025C2_15H | 1.2 | 6 | 1.60 | 0.25 |
| 6.8 | C | 592D685X_025C2_15H | 1.7 | 6 | 1.30 | 0.26 |
| 6.8 | D | 592D685X_025D2_15H | 1.7 | 6 | 1.30 | 0.31 |
| 10 | B | 592D106X_025B2_15H | 2.5 | 6 | 2.00 | 0.29 |
| 10 | D | 592D106X_025D2_15H | 2.5 | 6 | 1.20 | 0.32 |
| 10 | R | 592D106X_025R2_15H | 2.5 | 6 | 0.48 | 0.56 |
| 15 | R | 592D156X_025R2_15H | 3.8 | 6 | 0.40 | 0.61 |
| 15* | C* | 592D156X_025C2_20H* | 3.8* | 6* | 0.40* | 0.52* |
| 22* | C* | 592D226X_025C2_20H* | 5.5* | 6* | 0.30* | 0.68* |
| 22* | D* | 592D226X_025D2_20H* | 5.5* | 6* | 0.30* | 0.68* |
| 68 | R | 592D686X_025R2_20H | 17 | 8 | 0.23 | 0.812 |
| 35 WVDC AT + 85 °C, SURGE = 46 V . . . 23 WVDC AT + 125 °C, SURGE = 28 V | | | | | | |
| 1.0 | A | 592D105X_035A2_15H | 0.5 | 4 | 10.0 | 0.08 |
| 1.0 | B | 592D105X_035B2_15H | 0.5 | 4 | 6.50 | 0.11 |
| 1.5 | B | 592D155X_035B2_15H | 0.5 | 4 | 4.2 | 0.14 |
| 2.2* | B* | 592D225X_035B2_15H* | 0.8* | 6* | 6.00* | 0.12* |
| 2.2 | C | 592D225X_035C2_15H | 0.8 | 6 | 3.50 | 0.17 |
| 3.3 | C | 592D335X_035C2_15H | 1.2 | 6 | 3.20 | 0.18 |
| 3.3 | D | 592D335X_035D2_15H | 1.2 | 6 | 2.10 | 0.24 |
| 4.7 | B | 592D475X_035B2_15H | 1.6 | 6 | 1.60 | 0.23 |
| 4.7 | C | 592D475X_035C2_15H | 1.6 | 6 | 2.60 | 0.20 |
| 4.7 | C | 592D475X_035C2_15H | 1.6 | 6 | 2.80 | 0.18 |
| 4.7 | D | 592D475X_035D2_15H | 1.6 | 6 | 1.80 | 0.24 |
| 4.7 | R | 592D475X_035R2_15H | 1.6 | 6 | 1.30 | 0.34 |
| 6.8 | D | 592D685X_035D2_15H | 2.4 | 6 | 1.30 | 0.31 |
| 6.8 | R | 592D685X_035R2_15H | 2.4 | 6 | 1.20 | 0.35 |
| 10 | R | 592D106X_035R2_15H | 3.5 | 6 | 1.20 | 0.35 |

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

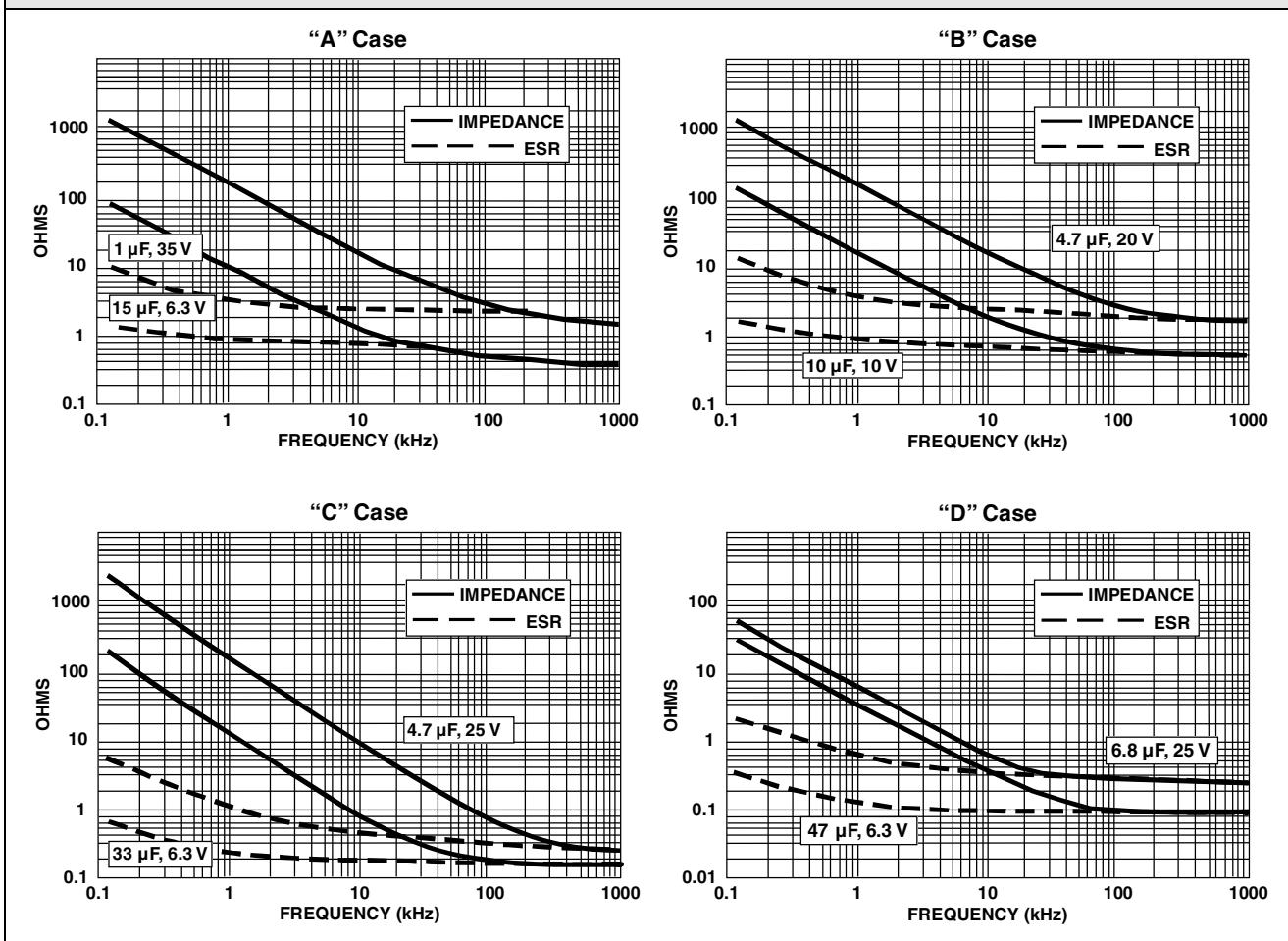
Solid Tantalum Chip Capacitors
TANTAMOUNT®, Low Profile,
 Conformal Coated, Maximum CV

Vishay Sprague

CASE CODE/PART NUMBER X-REF

| OLD | NEW |
|-----|--------|
| A2_ | A2_15H |
| B2_ | B2_15H |
| C2_ | C2_15H |
| D2_ | D2_15H |
| R2_ | R2_15H |
| S2_ | S2_13H |
| T2_ | B2_20H |
| U2_ | C2_20H |
| V2_ | D2_20H |
| W2_ | R2_20H |
| X2_ | X2_20H |
| Y2_ | X2_25H |

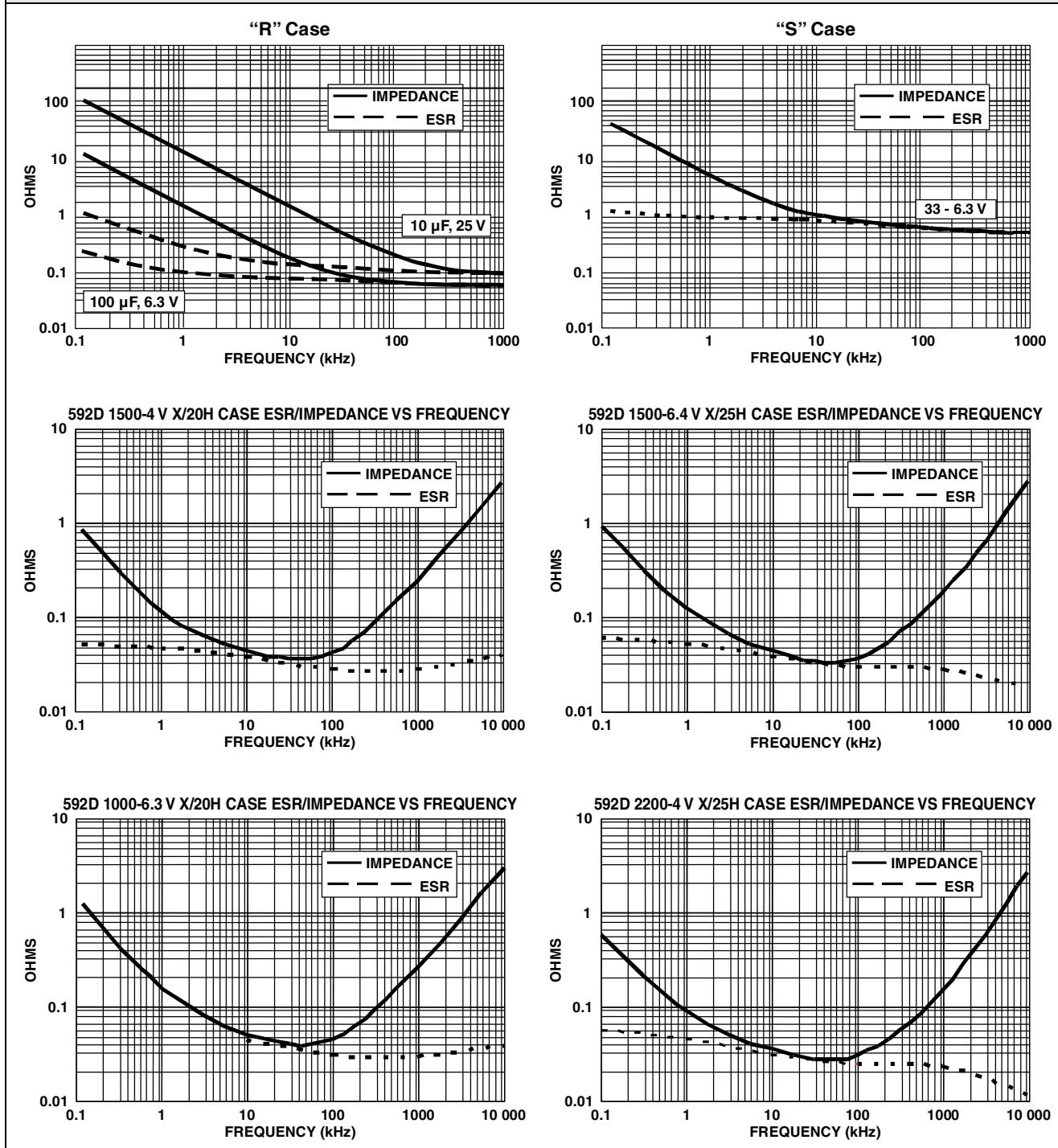
TYPICAL CURVES OF ESR - AS A FUNCTION OF FREQUENCY



592D

Vishay Sprague

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

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



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