

Solid Tantalum Chip Capacitors TANTAMOUNT[®], Ultra-Low ESR, Conformal Coated, Maximum CV



FEATURES

- New case size offerings
- Low profile case: V case (2 mm)
- Terminations: Tin (2) standard
- Extremely low ESR
- Ripple current up to 4.1 A
- 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: 10 μF to 1500 μF

Capacitance Tolerance: ± 10 %, ± 20 % standard

Voltage Rating: 4 WV_{DC} to 75 WV_{DC}

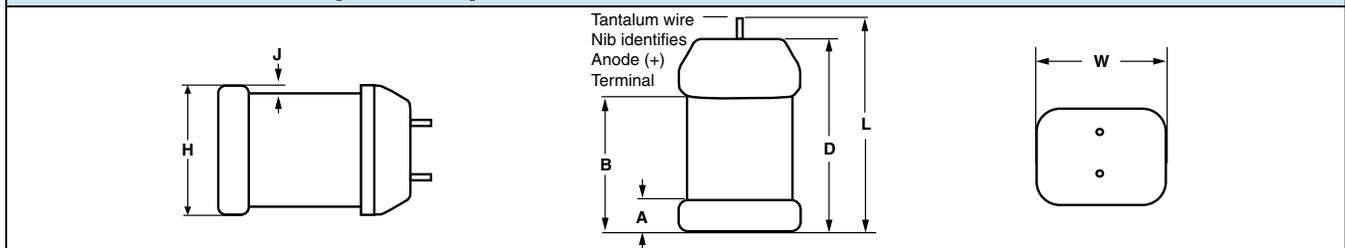
ORDERING INFORMATION

| 597D | 687 | X0 | 6R3 | E | 2 | T |
|------|--|--|--|---------------------------------|---|--|
| TYPE | CAPACITANCE | CAPACITANCE TOLERANCE | DC VOLTAGE RATING AT +85 °C | CASE CODE | TERMINATION | REEL SIZE AND PACKAGING |
| | This is expressed in pF. 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 V. 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 Code table | 2 = 100 % tin 8 = Solder plated (60/40) special order | T = Tape and reel 7" [500] reel W = 13" [N/A] reel |

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

DIMENSIONS in inches [millimeters]



| CASE CODE | L (MAX.) | W | H | A | B | D (REF.) | J (MAX.) |
|-----------|----------------|---|------------------------------|------------------------------|------------------------------|----------------|----------------|
| E | 0.299 [7.6] | 0.173 ± 0.016 [4.4 ± 0.4] | 0.157 ± 0.016 [4.0 ± 0.4] | 0.051 ± 0.012 [1.3 ± 0.3] | 0.180 ± 0.025 [4.6 ± 0.6] | 0.253 [6.4] | 0.004 [0.1] |
| F | 0.299 [7.6] | 0.238 ± 0.016 [6.0 ± 0.4] | 0.187 ± 0.016 [4.7 ± 0.4] | 0.056 ± 0.017 [1.4 ± 0.4] | 0.180 ± 0.025 [4.6 ± 0.6] | 0.243 [6.2] | 0.004 [0.1] |
| R | 0.299 [7.6] | 0.238 + 0.016/- 0.024 [6.0 + 0.4/- 0.6] | 0.142 ± 0.016 [3.6 ± 0.4] | 0.051 ± 0.012 [1.3 ± 0.3] | 0.180 ± 0.025 [4.6 ± 0.6] | 0.243 [6.2] | 0.004 [0.1] |
| V | 0.299 [7.6] | 0.173 ± 0.016 [4.4 ± 0.4] | 0.079 [2.0] Max. | 0.051 ± 0.012 [1.3 ± 0.3] | 0.180 ± 0.025 [4.6 ± 0.6] | 0.253 [6.4] | 0.004 [0.1] |
| Z | 0.299 [7.6] | 0.238 ± 0.016 [6.0 ± 0.4] | 0.238 ± 0.016 [6.0 ± 0.4] | 0.056 ± 0.017 [1.4 ± 0.4] | 0.180 ± 0.025 [4.6 ± 0.6] | 0.243 [6.2] | 0.004 [0.1] |
| D | 0.299 [7.6] | 0.173 ± 0.016 [4.4 ± 0.4] | 0.137 [3.5] Max. | 0.051 ± 0.012 [1.3 ± 0.3] | 0.180 ± 0.025 [4.6 ± 0.6] | 0.253 [6.4] | 0.004 [0.1] |
| M | 0.315 [8.0] | 0.259 + 0.016/-0.024 [6.6 + 0.4/-0.6] | 0.141 ± 0.016 [3.6 ± 0.4] | 0.051 ± 0.012 [1.3 ± 0.3] | 0.196 ± 0.025 [5.0 ± 0.6] | 0.259 [6.6] | 0.004 [0.1] |
| H | 0.315 [8.0] | 0.259 + 0.016/-0.024 [6.6 + 0.4/-0.6] | 0.204 ± 0.016 [5.2 ± 0.4] | 0.056 ± 0.017 [1.4 ± 0.4] | 0.196 ± 0.025 [5.0 ± 0.6] | 0.259 [6.6] | 0.004 [0.1] |
| N | 0.315 [8.0] | 0.259 + 0.016/-0.024 [6.6 + 0.4/-0.6] | 0.252 ± 0.016 [6.4 ± 0.4] | 0.056 ± 0.017 [1.4 ± 0.4] | 0.196 ± 0.025 [5.0 ± 0.6] | 0.259 [6.6] | 0.004 [0.1] |

Note

- The anode termination (D less B) will be a minimum of 0.012" [0.3 mm]
- * Pb containing terminations are not RoHS compliant, exemptions may apply

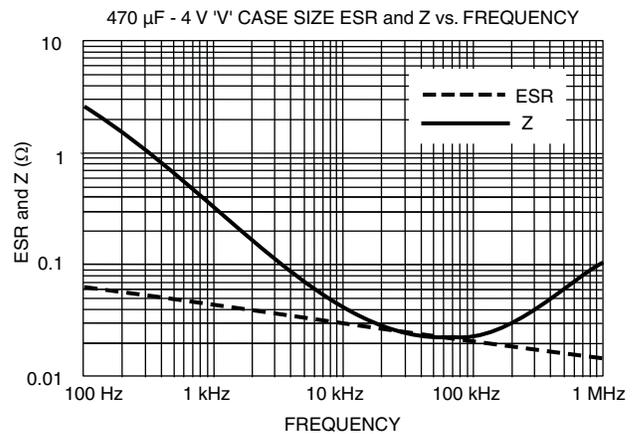
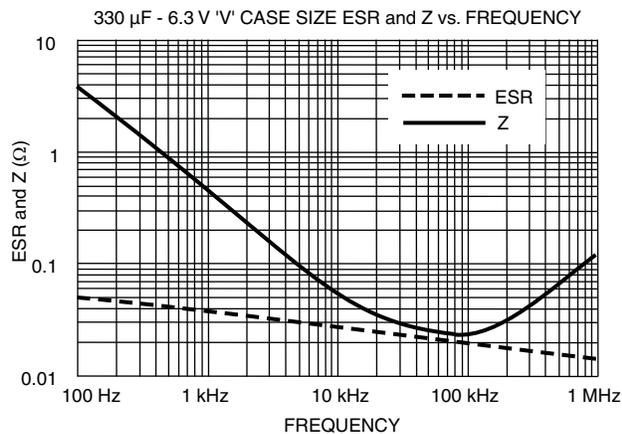
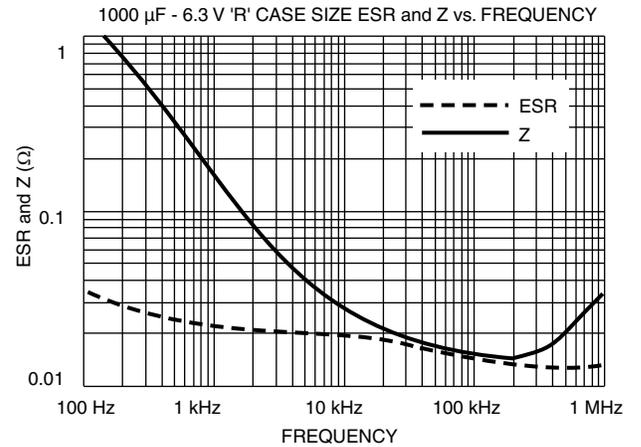
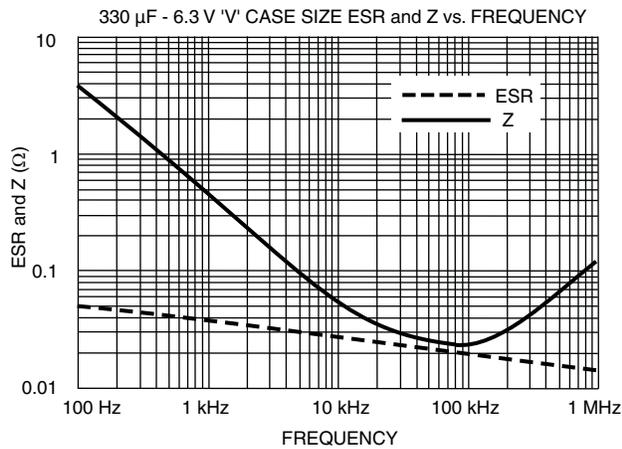
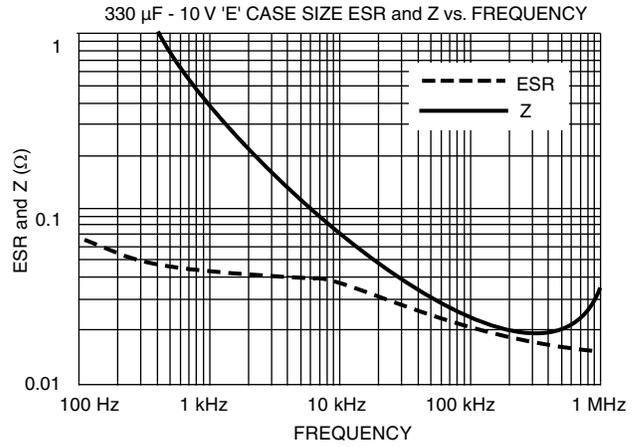
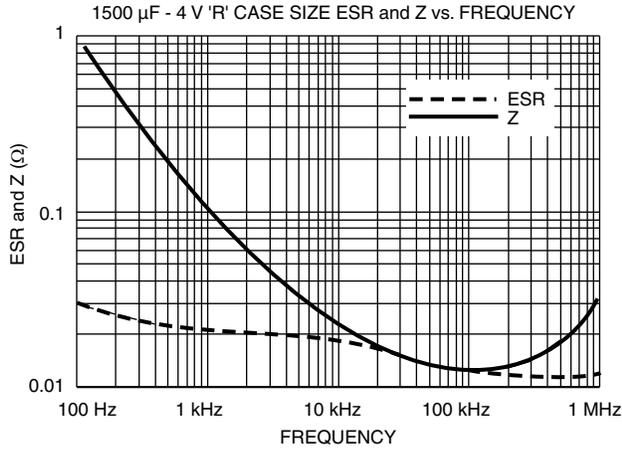
| RATINGS AND CASE CODE | | | | | | | | | | |
|-----------------------|-----|-------|------|------|------|------|------|------|------|------|
| μF | 4 V | 6.3 V | 10 V | 16 V | 20 V | 25 V | 35 V | 50 V | 63 V | 75 V |
| 10 | | | | | | | | | D | R* |
| 15 | | | | | | | | E/R | R | |
| 22 | | | | | | | | R | F | |
| 33 | | | | | | | | F | | |
| 47 | | | | | | | R | Z | | |
| 68 | | | | | | R | F | | | |
| 100 | | | | | | | F | | | |
| 150 | | | | | | F | | | | |
| 220 | | | | E | R | M | | | | |
| 330 | | V | E | | H | | | | | |
| 470 | V | E | E | H | | | | | | |
| 680 | E | E | R | | | | | | | |
| 1000 | E/R | R | F | | | | | | | |
| 1500 | R | | | | | | | | | |

| 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 (mΩ) | MAX. RIPPLE 100 kHz I _{RMS} (A) |
| 4 WV_{DC} AT + 85 °C, 2.7 WV_{DC} AT + 125 °C | | | | | | |
| 470 | V | 597D477X_004V__ | 19 | 8 | 30 | 2.2 |
| 680 | E | 597D687X_004E__ | 27 | 6 | 25 | 2.9 |
| 1000 | E | 597D108X_004E__ | 40 | 8 | 20 | 3.3 |
| 1000 | R | 597D108X_004R__ | 40 | 8 | 18 | 3.7 |
| 1500 | R | 597D158X_004R__ | 60 | 8 | 15 | 4.1 |
| 6.3 WV_{DC} AT + 85 °C, 4 WV_{DC} AT + 125 °C | | | | | | |
| 330 | V | 597D337X_6R3V__ | 21 | 8 | 38 | 2.0 |
| 470 | E | 597D477X_6R3E__ | 30 | 6 | 30 | 2.7 |
| 680 | E | 597D687X_6R3E__ | 43 | 6 | 25 | 2.9 |
| 1000 | R | 597D108X_6R3R__ | 63 | 8 | 20 | 3.5 |
| 10 WV_{DC} AT + 85 °C, 7 WV_{DC} AT + 125 °C | | | | | | |
| 330 | E | 597D337X_010E__ | 33 | 6 | 35 | 2.5 |
| 470 | E | 597D477X_010E__ | 47 | 6 | 28 | 2.8 |
| 680 | R | 597D687X_010R__ | 68 | 6 | 28 | 3.0 |
| 1000 | F | 597D108X_010F__ | 100 | 20 | 120 | 1.4 |
| 16 WV_{DC} AT + 85 °C, 10 WV_{DC} AT + 125 °C | | | | | | |
| 220 | E | 597D227X_016E__ | 35 | 8 | 60 | 2.3 |
| 470 | H | 597D477X_016H__ | 75 | 14 | 100 | 1.4 |
| 20 WV_{DC} AT + 85 °C, 13 WV_{DC} AT + 125 °C | | | | | | |
| 220 | R | 597D227X_020R__ | 44 | 8 | 80 | 1.8 |
| 330 | H | 597D337X_020H__ | 66 | 10 | 100 | 1.6 |
| 25 WV_{DC} AT + 85 °C, 17 WV_{DC} AT + 125 °C | | | | | | |
| 68 | R | 597D686X_025R__ | 17 | 6 | 100 | 1.6 |
| 150 | F | 597D157X_025F__ | 38 | 8 | 80 | 1.8 |
| 220 | M | 597D227X_025M__ | 55 | 8 | 100 | 1.6 |
| 35 WV_{DC} AT + 85 °C, 23 WV_{DC} AT + 125 °C | | | | | | |
| 47 | R | 597D476X_035R__ | 17 | 6 | 100 | 1.8 |
| 68 | F | 597D686X_035F__ | 24 | 6 | 100 | 1.6 |
| 100 | F | 597D107X0035F__ | 35 | 8 | 100 | 1.6 |
| 50 WV_{DC} AT + 85 °C, 33 WV_{DC} AT + 125 °C | | | | | | |
| 15 | E | 597D156X_050E__ | 8 | 6 | 350 | 0.9 |
| 15 | R | 597D156X_050R__ | 8 | 6 | 250 | 1.0 |
| 22 | R | 597D226X_050R__ | 11 | 6 | 220 | 1.2 |
| 33 | F | 597D336X_050F__ | 17 | 6 | 150 | 1.3 |
| 47 | Z | 597D476X_050Z__ | 24 | 6 | 240 | 1.4 |
| 63 WV_{DC} AT + 85 °C, 42 WV_{DC} AT + 125 °C | | | | | | |
| 10 | D | 597D106X_063D__ | 10 | 6 | 400 | 0.6 |
| 15 | R | 597D156X_063R__ | 10 | 6 | 400 | 0.8 |
| 22 | F | 597D226X_063F__ | 14 | 6 | 250 | 1.1 |
| 75 WV_{DC} AT + 85 °C, 50 WV_{DC} AT + 125 °C | | | | | | |
| 10 | R | 597D106X_075R__ | 8 | 6 | 500 | 0.7 |

Note

* Preliminary values, contact factory for availability

TYPICAL CURVES





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