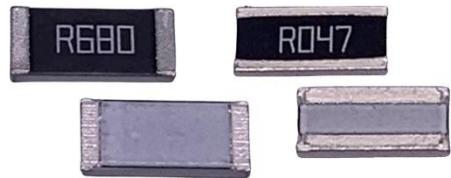


Features:

- 0201 to 2512 standard terminations and 0508 to 1225 long side terminations available
- Low resistance, TCR and inductance
- Excellent long-term stability
- High precision current sensing
- “-UP” High power version
- RoHS compliant, REACH compliant, lead free, and halogen free
- AEC-Q200 compliant
- [For anti-sulfur version, see CSRT-AS Series – Anti-sulfur Metal Film Low Resistance Chip Resistor](#)

**Electrical Specifications**

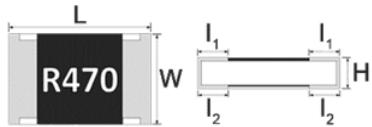
| Type/Code | Power Rating (W) @ 70°C | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance | |
|-------------|----------------------------|--------------|-------------------------------|--------------|
| | | | 0.5% | 1% and 5% |
| CSRT0201 | 0.2 | ± 100 | 0.05 - 0.091 | |
| | | ± 50 | 0.1 - 10 | |
| CSRT0402 | 0.25 | ± 100 | 0.05 - 0.091 | |
| | | ± 50 | 0.1 - 10 | |
| CSRT0603 | 0.4 | ± 100 | 0.05 - 0.091 | |
| | | ± 50 | 0.1 - 10 | |
| CSRT0805 | 0.5 | ± 150 | 0.039 - 0.047 | |
| | | ± 100 | 0.05 - 0.091 | |
| | | ± 50 | 0.1 - 10 | |
| CSRT1206 | 0.5 | ± 200 | - | 0.01 - 0.036 |
| | | ± 150 | 0.039 - 0.047 | |
| | | ± 100 | 0.05 - 0.091 | |
| | | ± 50 | 0.1 - 10 | |
| CSRT1210 | 1 | ± 150 | 0.039 - 0.047 | |
| | | ± 100 | 0.05 - 0.091 | |
| | | ± 50 | 0.1 - 10 | |
| CSRT2010 | 1.5 | ± 50 | 0.1 - 10 | |
| CSRT2512 | 3 | ± 50 | 0.1 - 10 | |
| CSRT2512-UP | 3.5 | ± 50 | 0.05 - 50 | |

Electrical Specifications

| Type/Code | Power Rating (W) @ 70°C | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance | |
|-----------|----------------------------|--------------|-------------------------------|-----------|
| | | | 0.5% | 1% and 5% |
| CSRT0508 | 1 | ± 100 | 0.1 - 2 | 0.01 - 2 |
| CSRT0612 | 1 | ± 100 | 0.1 - 2 | 0.01 - 2 |
| CSRT1020 | 2 | ± 100 | 0.1 - 2 | 0.01 - 2 |
| CSRT1225 | 3 | ± 100 | 0.1 - 2 | 0.01 - 2 |

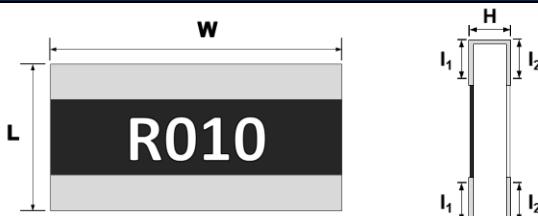
$$V = \sqrt{P \cdot R}$$

Mechanical Specifications



| Type/Code | Weight (mg) | L Body Length | W Body Width | H Body Height | I ₁ Top Termination | I ₂ Bottom Termination | Unit |
|--------------------------------|-------------|------------------------------|------------------------------|------------------------------|-----------------------------------|--------------------------------------|--------------|
| CSRT0201 | 0.18 | 0.024 ± 0.001 0.60 ± 0.03 | 0.012 ± 0.001 0.30 ± 0.03 | 0.010 ± 0.002 0.26 ± 0.05 | 0.006 ± 0.002 0.15 ± 0.05 | 0.006 ± 0.002 0.15 ± 0.05 | inches mm |
| CSRT0402 | 0.58 | 0.039 ± 0.004 1.00 ± 0.10 | 0.020 ± 0.002 0.50 ± 0.05 | 0.014 ± 0.002 0.35 ± 0.05 | 0.008 ± 0.004 0.20 ± 0.10 | 0.010 ± 0.004 0.25 ± 0.10 | inches mm |
| CSRT0603 | 2.1 | 0.063 ± 0.004 1.60 ± 0.10 | 0.031 ± 0.004 0.80 ± 0.10 | 0.018 ± 0.004 0.45 ± 0.10 | 0.010 ± 0.006 0.25 ± 0.15 | 0.012 ± 0.006 0.30 ± 0.15 | inches mm |
| CSRT0805 | 4.9 | 0.079 ± 0.004 2.00 ± 0.10 | 0.049 ± 0.004 1.25 ± 0.10 | 0.022 ± 0.004 0.55 ± 0.10 | 0.014 ± 0.008 0.35 ± 0.20 | 0.016 ± 0.008 0.40 ± 0.20 | inches mm |
| CSRT1206 (0.01 Ω - 0.036 Ω) | 8.6 | 0.130 ± 0.008 3.30 ± 0.20 | 0.067 ± 0.008 1.70 ± 0.20 | 0.026 ± 0.008 0.65 ± 0.20 | 0.008 ± 0.006 0.20 ± 0.15 | 0.027 ± 0.008 0.68 ± 0.20 | inches mm |
| CSRT1206 (0.039 Ω - 10 Ω) | 8.6 | 0.122 ± 0.004 3.10 ± 0.10 | 0.063 ± 0.004 1.60 ± 0.10 | 0.022 ± 0.004 0.55 ± 0.10 | 0.016 ± 0.008 0.40 ± 0.20 | 0.018 ± 0.008 0.45 ± 0.20 | inches mm |
| CSRT1210 | 14.3 | 0.122 ± 0.004 3.10 ± 0.10 | 0.098 ± 0.006 2.50 ± 0.15 | 0.022 ± 0.004 0.55 ± 0.10 | 0.020 ± 0.008 0.50 ± 0.20 | 0.020 ± 0.008 0.50 ± 0.20 | inches mm |
| CSRT2010 | 22.4 | 0.197 ± 0.008 5.00 ± 0.20 | 0.098 ± 0.006 2.50 ± 0.15 | 0.022 ± 0.004 0.55 ± 0.10 | 0.024 ± 0.010 0.60 ± 0.25 | 0.024 ± 0.010 0.60 ± 0.25 | inches mm |
| CSRT2512 | 40.9 | 0.248 ± 0.008 6.30 ± 0.20 | 0.126 ± 0.008 3.20 ± 0.20 | 0.028 ± 0.006 0.70 ± 0.15 | 0.026 ± 0.010 0.65 ± 0.25 | 0.026 ± 0.010 0.65 ± 0.25 | inches mm |
| CSRT2512 (-UP) | 52.3 | 0.248 ± 0.008 6.30 ± 0.20 | 0.126 ± 0.008 3.20 ± 0.20 | 0.030 ± 0.006 0.75 ± 0.15 | 0.026 ± 0.010 0.65 ± 0.25 | 0.026 ± 0.010 0.65 ± 0.25 | inches mm |

Mechanical Specifications - Long Side Termination



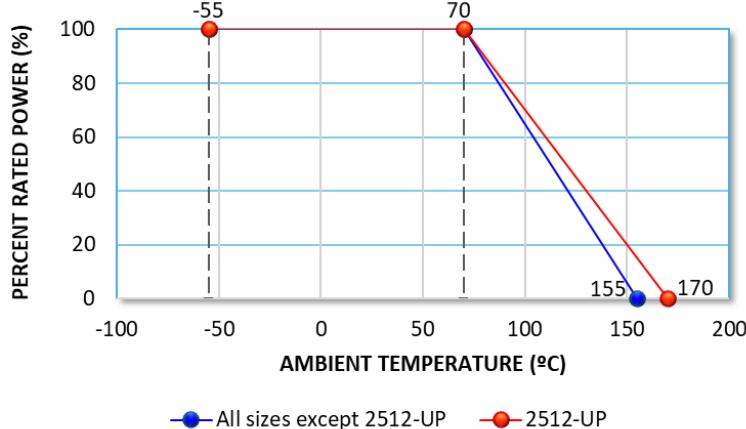
| Type/Code | Weight (mg) | L Body Length | W Body Width | H Body Height | I ₁ Top Termination | I ₂ Bottom Termination | Unit |
|-----------|-------------|------------------------------|------------------------------|------------------------------|-----------------------------------|--------------------------------------|--------------|
| CSRT0508 | 5.2 | 0.049 ± 0.004 1.25 ± 0.10 | 0.079 ± 0.004 2.00 ± 0.10 | 0.022 ± 0.006 0.55 ± 0.15 | 0.010 ± 0.006 0.25 ± 0.15 | 0.014 ± 0.006 0.35 ± 0.15 | inches mm |
| CSRT0612 | 9.3 | 0.063 ± 0.006 1.60 ± 0.15 | 0.126 ± 0.008 3.20 ± 0.20 | 0.022 ± 0.006 0.55 ± 0.15 | 0.012 ± 0.008 0.30 ± 0.20 | 0.020 ± 0.008 0.50 ± 0.20 | inches mm |
| CSRT1020 | 24.4 | 0.098 ± 0.006 2.50 ± 0.15 | 0.197 ± 0.006 5.00 ± 0.15 | 0.022 ± 0.006 0.55 ± 0.15 | 0.016 ± 0.008 0.40 ± 0.20 | 0.020 ± 0.008 0.50 ± 0.20 | inches mm |
| CSRT1225 | 41.2 | 0.126 ± 0.008 3.20 ± 0.20 | 0.248 ± 0.008 6.30 ± 0.20 | 0.022 ± 0.006 0.55 ± 0.15 | 0.024 ± 0.010 0.60 ± 0.25 | 0.031 ± 0.010 0.80 ± 0.25 | inches mm |

| Performance Characteristics | | | |
|---|--|--|--|
| Test Item | Test Method | Test Condition | Test Limits |
| Temperature Coefficient of Resistance (TCR) | JIS C-5201-1 4.8 IEC-60115-1 4.8 | TCR +125°C, 25°C is the reference temperature | Refer to Electrical Specifications table |
| Short Time Overload | JIS C-5201-1 4.13 IEC-60115-1 4.13 | Standard Power: 6.25 times rated power whichever is less for 5 seconds High Power and wide terminal type: 5 times rated power whichever is less for 5 seconds | ± (1% + 0.001Ω) |
| Insulation Resistance | JIS C-5201-1 4.8 IEC-60115-1 4.8 | 100 VDC for 1 minute | ≥ 10GΩ |
| Dielectric Withstanding Voltage | JIS C-5201-1 4.7 | 0805, 0508, 0612 and above applied 500 VAC, 1 minute 0201, 0402, 0603 applied 300 VAC, 1 minute | No short or burned on the appearance |
| Core Body Strength | JIS C-5201-1 4.15 | Central part pressurizing force: 10 N, 10 seconds | No breakage. |
| Solderability | JIS C-5201-1 4.17 IEC-60115-1 4.17 | 245 ± 5°C for 3 ± 0.5 seconds | >95% coverage - no visual damage |
| Resistance to Soldering Heat | JIS C-5201-1 4.18 IEC-60115-1 4.18 | 260 ± 5°C for 10 seconds | ± (1% + 0.001Ω) No visual damage |
| Leaching | JIS C5201-1 4.18 IEC-60068-2-58 8.2.1 | 260 ± 5°C for 30 seconds | >95% coverage - no visual damage |
| Rapid Change of Temperature | JIS C-5201-1 4.19 IEC-60115-1 4.19 | -55 to +155°C, 300 cycles | ± (1% + 0.001Ω) No visual damage |
| Damp Heat with Load | JIS C-5201-1 4.24 IEC-60115-1 4.24 | 40 ± 2°C, 90 ~ 95% R.H., rated power or max. working current whichever is less for 1000 hours with 1.5 hours "ON" and 0.5 hours "OFF" | ± (1% + 0.001Ω) |
| Biased Humidity | MIL-STD-202 Method 103 | 1000 hours; 85°C/85% RH, 10% of operating power. Measurement at 24 ± 4 hours after test conclusion. | ± (0.5% + 0.05Ω) |
| Load Life (Endurance) | JIS C-5201-1 4.25 IEC-60115-1 4.25.1 | 70 ± 2°C, rated power or max. working current whichever is less for 1000 hours with 1.5 hours "ON" and 0.5 hours "OFF" | ± (1% + 0.001Ω) |
| High Temperature Exposure | JIS C-5201-1 4.25 IEC 60068-2-2 | At +155 ± 5°C for 1000 + 48/- 0 hours all sizes, except 2512-UP At +170 ± 5°C for 1000 + 48/- 0 hours for 2512-UP | ± (1% + 0.001Ω) |
| Resistance to Solvent | JIS C-5201-1 clause 4.29 | The tested resistor be immersed into isopropyl alcohol of 20 ~ 25°C for 60 seconds. Then the resistor is left in room for 48 hours | ± (1% + 0.001Ω) No visual damage |
| Terminal Strength | JIS C-5201-1 4.32 AEC Q200-006 | Pressurizing force for 10 seconds. 0201: 3.4 N; 0402 and 0603: 8 N; 0805, 0612 and above: 17.7 N | No breakage |
| Bending Strength | JIS C-5201-1 4.33 IEC-60115-1 4.33 | Bending once for 5 seconds. D: 0201, 0402, 0603, 0805 = 5 mm 1206, 1210, 0508, 0612 = 3 mm 2010, 2512, 1020, 1225 = 2 mm | ± (1% + 0.001Ω) No visual damage |

Operating temperature range is -55 to +155°C for all sizes except 2512-UP

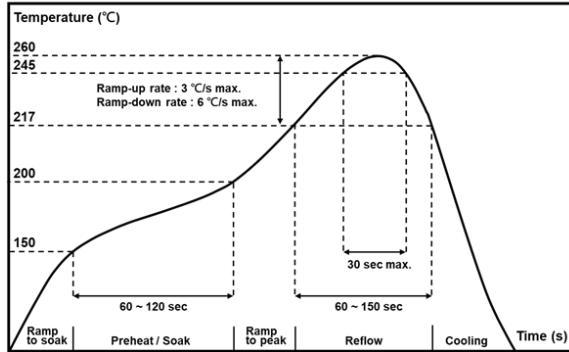
Operating temperature range for 2512-UP is -55 to +170°C

Power Derating Curve:

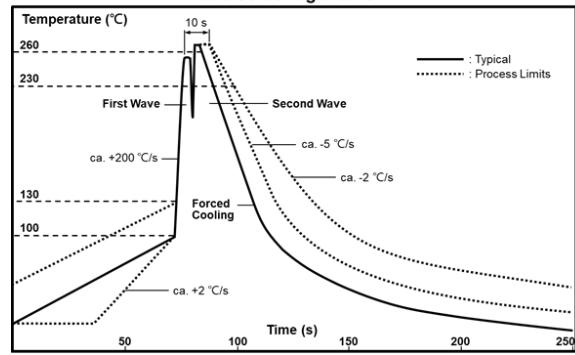


Soldering Profile

Reflow Soldering Profile



Wave Soldering Profile



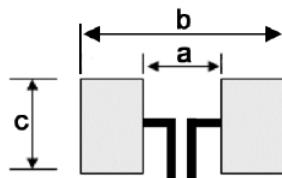
Rework temperature (hot air equipment): 350°C, 3 ~ 5 seconds

Recommended reflow methods:

IR, vapor phase oven, hot air oven

If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Recommended Pad Layout

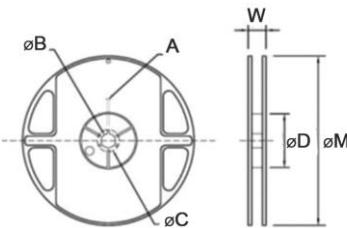


| Type/Code | a | b | c | Unit |
|------------------------------|---------------|---------------|---------------|--------------|
| CSRT0201 | 0.010 0.25 | 0.033 0.85 | 0.014 0.35 | inches mm |
| CSRT0402 | 0.020 0.50 | 0.063 1.60 | 0.028 0.70 | inches mm |
| CSRT0603 | 0.031 0.80 | 0.094 2.40 | 0.039 1.00 | inches mm |
| CSRT0805 | 0.051 1.30 | 0.114 2.90 | 0.057 1.45 | inches mm |
| CSRT1206 (0.01Ω - 0.036Ω) | 0.047 1.20 | 0.189 4.80 | 0.072 1.84 | inches mm |
| CSRT1206 (0.039Ω - 10Ω) | 0.087 2.20 | 0.165 4.20 | 0.071 1.80 | inches mm |
| CSRT1210 | 0.079 2.00 | 0.173 4.40 | 0.106 2.70 | inches mm |
| CSRT2010 | 0.150 3.80 | 0.260 6.60 | 0.106 2.70 | inches mm |

Recommended Pad Layout (cont.)

| Type/Code | a | b | c | Unit |
|----------------|---------------|---------------|---------------|--------------|
| CSRT2512 (-UP) | 0.193 4.90 | 0.319 8.10 | 0.134 3.40 | inches mm |
| CSRT0508 | 0.016 0.40 | 0.071 1.80 | 0.079 2.00 | inches mm |
| CSRT0612 | 0.020 0.50 | 0.102 2.60 | 0.126 3.20 | inches mm |
| CSRT1020 | 0.039 1.00 | 0.159 4.05 | 0.217 5.50 | inches mm |
| CSRT1225 | 0.047 1.20 | 0.205 5.20 | 0.276 7.00 | inches mm |

Reel Specifications



| Type/Code | A | B | C | D | W | M | Unit |
|----------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|--------------|
| CSRT0201 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.453 ± 0.079 11.50 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT0402 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.453 ± 0.079 11.50 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT0603 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.453 ± 0.079 11.50 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT0805 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.453 ± 0.079 11.50 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT1206 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.453 ± 0.079 11.50 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT1210 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.453 ± 0.079 11.50 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT2010 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.630 ± 0.079 16.00 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT2512 (-UP) | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.630 ± 0.079 16.00 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |

CSRT Series

Thin Film Current Sensing Resistor

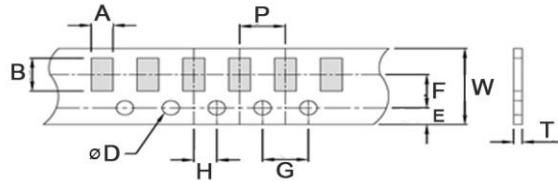
Stackpole Electronics, Inc.

Resistive Product Solutions

Reel Specifications (cont.)

| Type/Code | A | B | C | D | W | M | Unit |
|-----------|--------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--|--------------|
| CSRT0508 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.453 ± 0.079 11.50 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT0612 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.453 ± 0.079 11.50 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT1020 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.630 ± 0.079 16.00 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |
| CSRT1225 | 0.079 ± 0.020 2.00 ± 0.50 | 0.531 ± 0.039 13.50 ± 1.00 | 0.827 ± 0.039 21.00 ± 1.00 | 2.362 ± 0.039 60.00 ± 1.00 | 0.630 ± 0.079 16.00 ± 2.00 | 7.008 ± 0.079 178.00 ± 2.00 | inches mm |

Packaging Specifications - Paper Tape

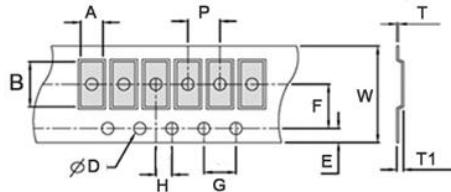


| Type/Code | A | B | W | E | F | Unit |
|-----------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------|
| CSRT0201 | 0.018 ± 0.004 0.45 ± 0.10 | 0.030 ± 0.004 0.75 ± 0.10 | 0.315 ± 0.008 8.00 ± 0.20 | 0.069 ± 0.004 1.75 ± 0.10 | 0.138 ± 0.002 3.50 ± 0.05 | inches mm |
| CSRT0402 | 0.028 ± 0.004 0.70 ± 0.10 | 0.047 ± 0.004 1.20 ± 0.10 | 0.315 ± 0.008 8.00 ± 0.20 | 0.069 ± 0.004 1.75 ± 0.10 | 0.138 ± 0.002 3.50 ± 0.05 | inches mm |
| CSRT0603 | 0.041 ± 0.008 1.05 ± 0.20 | 0.071 ± 0.008 1.80 ± 0.20 | 0.315 ± 0.008 8.00 ± 0.20 | 0.069 ± 0.004 1.75 ± 0.10 | 0.138 ± 0.002 3.50 ± 0.05 | inches mm |
| CSRT0805 | 0.061 ± 0.008 1.55 ± 0.20 | 0.091 ± 0.008 2.30 ± 0.20 | 0.315 ± 0.008 8.00 ± 0.20 | 0.069 ± 0.004 1.75 ± 0.10 | 0.138 ± 0.002 3.50 ± 0.05 | inches mm |
| CSRT1206 | 0.075 ± 0.008 1.90 ± 0.20 | 0.120 ± 0.008 3.05 ± 0.20 | 0.315 ± 0.008 8.00 ± 0.20 | 0.069 ± 0.004 1.75 ± 0.10 | 0.138 ± 0.002 3.50 ± 0.05 | inches mm |
| CSRT1210 | 0.112 ± 0.008 2.85 ± 0.20 | 0.120 ± 0.008 3.05 ± 0.20 | 0.315 ± 0.008 8.00 ± 0.20 | 0.069 ± 0.004 1.75 ± 0.10 | 0.138 ± 0.002 3.50 ± 0.05 | inches mm |
| CSRT0508 | 0.061 ± 0.008 1.55 ± 0.20 | 0.091 ± 0.008 2.30 ± 0.20 | 0.315 ± 0.008 8.00 ± 0.20 | 0.069 ± 0.004 1.75 ± 0.10 | 0.138 ± 0.002 3.50 ± 0.05 | inches mm |
| CSRT0612 | 0.075 ± 0.008 1.90 ± 0.20 | 0.120 ± 0.008 3.05 ± 0.20 | 0.315 ± 0.008 8.00 ± 0.20 | 0.069 ± 0.004 1.75 ± 0.10 | 0.138 ± 0.002 3.50 ± 0.05 | inches mm |

Packaging Specifications - Paper Tape (cont.)

| Type/Code | G | H | T | P | D | Unit |
|-----------|------------------------------|------------------------------|------------------------------|------------------------------|----------------------------------|--------------|
| CSRT0201 | 0.157 ± 0.004 4.00 ± 0.10 | 0.079 ± 0.002 2.00 ± 0.05 | 0.014 ± 0.004 0.35 ± 0.10 | 0.079 ± 0.004 2.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | inches mm |
| CSRT0402 | 0.157 ± 0.004 4.00 ± 0.10 | 0.079 ± 0.002 2.00 ± 0.05 | 0.018 ± 0.004 0.45 ± 0.10 | 0.079 ± 0.004 2.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | inches mm |
| CSRT0603 | 0.157 ± 0.004 4.00 ± 0.10 | 0.079 ± 0.002 2.00 ± 0.05 | 0.024 ± 0.004 0.60 ± 0.10 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | inches mm |
| CSRT0805 | 0.157 ± 0.004 4.00 ± 0.10 | 0.079 ± 0.002 2.00 ± 0.05 | 0.030 ± 0.004 0.75 ± 0.10 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | inches mm |
| CSRT1206 | 0.157 ± 0.004 4.00 ± 0.10 | 0.079 ± 0.002 2.00 ± 0.05 | 0.030 ± 0.004 0.75 ± 0.10 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | inches mm |
| CSRT1210 | 0.157 ± 0.004 4.00 ± 0.10 | 0.079 ± 0.002 2.00 ± 0.05 | 0.030 ± 0.004 0.75 ± 0.10 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | inches mm |
| CSRT0508 | 0.157 ± 0.004 4.00 ± 0.10 | 0.079 ± 0.002 2.00 ± 0.05 | 0.030 ± 0.004 0.75 ± 0.10 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | inches mm |
| CSRT0612 | 0.157 ± 0.004 4.00 ± 0.10 | 0.079 ± 0.002 2.00 ± 0.05 | 0.030 ± 0.004 0.75 ± 0.10 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | inches mm |

Packaging Specifications - Plastic Tape



| Type/Code | A | B | W | E | F | G | Unit |
|----------------|------------------------------|------------------------------|-------------------------------|------------------------------|----------------------------------|------------------------------|--------------|
| CSRT2010 | 0.110 ± 0.008 2.80 ± 0.20 | 0.220 ± 0.008 5.60 ± 0.20 | 0.472 ± 0.004 12.00 ± 0.10 | 0.069 ± 0.004 1.75 ± 0.10 | 0.217 ± 0.002 5.50 ± 0.05 | 0.157 ± 0.004 4.00 ± 0.10 | inches mm |
| CSRT2512 (-UP) | 0.134 ± 0.008 3.40 ± 0.20 | 0.264 ± 0.008 6.70 ± 0.20 | 0.472 ± 0.004 12.00 ± 0.10 | 0.069 ± 0.004 1.75 ± 0.10 | 0.217 ± 0.002 5.50 ± 0.05 | 0.157 ± 0.004 4.00 ± 0.10 | inches mm |
| CSRT1020 | 0.110 ± 0.008 2.80 ± 0.20 | 0.220 ± 0.008 5.60 ± 0.20 | 0.472 ± 0.004 12.00 ± 0.10 | 0.069 ± 0.004 1.75 ± 0.10 | 0.217 ± 0.002 5.50 ± 0.05 | 0.157 ± 0.004 4.00 ± 0.10 | inches mm |
| CSRT1225 | 0.134 ± 0.008 3.40 ± 0.20 | 0.264 ± 0.008 6.70 ± 0.20 | 0.472 ± 0.004 12.00 ± 0.10 | 0.069 ± 0.004 1.75 ± 0.10 | 0.217 ± 0.002 5.50 ± 0.05 | 0.157 ± 0.004 4.00 ± 0.10 | inches mm |
| Type/Code | H | T | T1 | P | D | D1 | Unit |
| CSRT2010 | 0.079 ± 0.002 2.00 ± 0.05 | 0.009 ± 0.004 0.23 ± 0.10 | 0.033 ± 0.006 0.85 ± 0.15 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | 0.059 ± 0.004 1.50 ± 0.10 | inches mm |
| CSRT2512 (-UP) | 0.079 ± 0.002 2.00 ± 0.05 | 0.009 ± 0.004 0.23 ± 0.10 | 0.033 ± 0.006 0.85 ± 0.15 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | 0.059 ± 0.004 1.50 ± 0.10 | inches mm |
| CSRT1020 | 0.079 ± 0.002 2.00 ± 0.05 | 0.009 ± 0.004 0.23 ± 0.10 | 0.033 ± 0.006 0.85 ± 0.15 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | 0.059 ± 0.004 1.50 ± 0.10 | inches mm |
| CSRT1225 | 0.079 ± 0.002 2.00 ± 0.05 | 0.009 ± 0.004 0.23 ± 0.10 | 0.033 ± 0.006 0.85 ± 0.15 | 0.157 ± 0.004 4.00 ± 0.10 | 0.059 +0.004/-0 1.50 +0.10/-0 | 0.059 ± 0.004 1.50 ± 0.10 | inches mm |

CSRT Series

Thin Film Current Sensing Resistor

Stackpole Electronics, Inc.

Resistive Product Solutions

RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

| RoHS Compliance Status | | | | | | |
|-------------------------|------------------------------------|----------------------------|--------------------------------|-----------------------------------|--|---------------------------------------|
| Standard Product Series | Description | Package / Termination Type | Standard Series RoHS Compliant | Lead-Free Termination Composition | Lead-Free Mfg. Effective Date (Std Product Series) | Lead-Free Effective Date Code (YY/WW) |
| CSRT | Thin Film Current Sensing Resistor | SMD | YES | 100% Matte Sn over Ni | Always | Always |

"Conflict Metals" Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the "conflict region" of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

Compliance to "REACH"

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, "The Registration, Evaluation, Authorization and Restriction of Chemicals", otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

Environmental Policy

It is the policy of Stackpole Electronics, Inc. to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

How to Order

| C | S | R | T | 2 | 5 | 1 | 2 | F | T | 1 | R | 0 | 0 | - | U | P |
|----------------|------------|------|---------------------------------|------|---------|-----------|----------------------|--|-----------------------|---|------------------|-------------|------|-------------|------|-------------|
| | | | | | | | | | | | | | | | | |
| Product Series | Size | | Tolerance | | | Packaging | | | | | Resistance Value | | | Special | | |
| CSRT | Code | W | Code | Tol | Values* | Code | Description | Size | Quantity | Four characters with the multiplier used as the decimal holder. "L" used as multiplier of 10^{-3} for any value under 0.1 ohm. 0.01 ohm = 10L0 0.068 ohm = 68L0 10 ohm = 10R0 | Code | Description | Code | Description | Code | Description |
| | 0201 | 0.2 | D | 0.5% | E24 | T | 7" Reel Paper Tape | 0201, 0402 0603, 0805, 1206 1210, 0508, 0612 | 10000 5000 4000 | | | | | | | |
| | 0402 | 0.25 | F | 1% | | | 7" Reel Plastic Tape | 2010, 2512 1020, 1225 | | | | | | | | |
| | 0603 | 0.4 | J | 5% | | | | | | | | | | | | |
| | 0805 | 0.5 | (*) E96 values may be available | | | | | | | | | | | | | |
| | 1206 | 0.5 | | | | | | | | | | | | | | |
| | 1206 | 1 | | | | | | | | | | | | | | |
| | 1210 | 1 | | | | | | | | | | | | | | |
| | 2010 | 1.5 | | | | | | | | | | | | | | |
| | 2512 | 3 | | | | | | | | | | | | | | |
| | 2512 (-UP) | 3.5 | | | | | | | | | | | | | | |
| | 0508 | 1 | | | | | | | | | | | | | | |
| | 0612 | 1 | | | | | | | | | | | | | | |
| | 1020 | 2 | | | | | | | | | | | | | | |
| | 1225 | 3 | | | | | | | | | | | | | | |