# CSR Series

Ultra Low Ohm (Metal Strip) Chip Resistor

RoHS compliant




- **Resistances from 0.5 mOhm to 15 mOhm**
- **Power Rating up to 3 Watts**
- **Resistance Tolerances to ± 1%**
- **Customized Resistance Available**
- **TCR's to ±50 ppm/°C**
- **Sizes: 1206 / 2010 / 2512**

## SPECIFICATIONS

| Type | Power Rating ( W ) at 80°C | Resistances ( mΩ ) | TCR ( ppm/°C ) | Tolerances | Operating Temperature Range | MAX Operating Voltage |
|---|---|---|---|---|---|---|
| **CSR1206** | 1 | 0.5 - 10 | ±50<br>±200 (0.5Ω) | 1%<br>3%<br>5% | -55°C<br>to<br>+170°C | √(P*R) |
| **CSR2010** | 1.5 | 0.5 - 10 | ±50<br>±100 (0.5Ω) | | | |
| **CSR2512[1]** | 1 | 0.5, 0.75, 1, 1.5, 2<br>11, 12, 13, 14, 15 | ±50 | | | |
| | | 6, 6.5, 7 | ±75 | | | |
| | | 4, 5, 10 | ±100 | | | |
| | | 2.5, 3 | ±150 | | | |
| **CSR2512A[2]** | 2 | 0.5, 0.75, 1, 1.5, 2<br>6.5, 7, 8, 9, 10 | ±50 | | | |
| | | 6, 6.5, 7 | ±75 | | | |
| | | 4, 5, 10 | ±100 | | | |
| | | 2.5, 3 | ±150 | | | |
| **CSR2512B[3]** | 2.5 | 4, 4.5, 5, 6 | ±50 | | | |
| **CSR2512C[3]** | 3 | 0.5, 0.75 | ±100 | | | |
| | | 1, 1.5, 2, 3 | ±50 | | | |

[1] 11, 12, 13, 14, 15 mΩ have green coating
[2] 6.5, 7, 8, 9, 10 mΩ at 50ppm have green coating
[3] All values have green coating

**Riedon Inc.** 300 Cypress Avenue Alhambra CA 91801 ☎ (626) 284-9901 (626) 284-1704
**www.riedon.com**

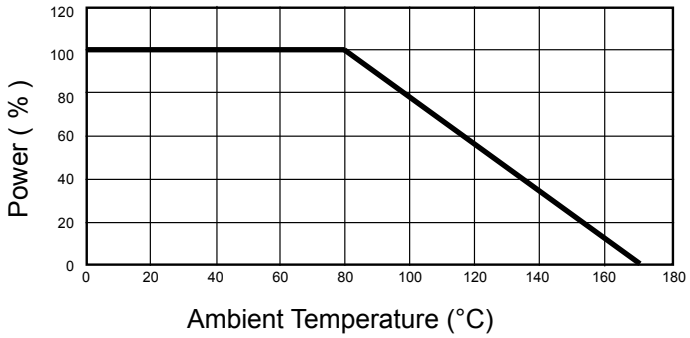
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Ultra Low Ohm (Metal Strip) Chip Resistor

## Specifications

Power Derating Curve




| Test | Specification | | Test Method |
|---|---|---|---|
| | Black Coating | Green Coating | |
| **Temperature Coefficient of Resistance** | As Spec. | | +25/-55/+25/+125/+25°C |
| **Short Time Overload** | ±0.5% | ±1.0% | 5x rated power for 5 seconds |
| **Load Life** | ±1.0% | ±1.0% | 70±2°C, Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF" |
| **Dry Heat** | ±1.0% | ±1.0% | at +170°C for 1000 hrs |
| **Solderability** | 95% min. coverage | | 245±5°C for 3 seconds |
| **Resistance to Soldering Heat** | ±0.5% | ±1.0% | 260±5°C for 10 seconds |
| **Thermal Shock** | ±0.5% | ±(0.5%+0.05Ω) | -55°C ~ 150°C, 100 cycles |

*Green Coating can't be used in solder bath

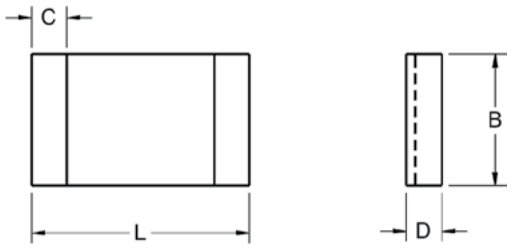
| Reel Sizes | Type | Quantity |
|---|---|---|
| CSR1206 | Embossed Tape | 2000 |
| CSR2010 | | |
| CSR2512 | | |

## Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR
Example: CSR2512 1mOhm 1% 50ppm

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# Specifications




| Part | Power Rating | Resistance Value | L (mm) | B (mm) | D (mm) | C (mm) |
|---|---|---|---|---|---|---|
| CSR1206 | 1 | 0.5 | 3.20±0.25 | 1.60±0.10 | 0.60±0.20 | 1.35±0.25 |
| CSR1206 | 1 | 0.75 | 3.20±0.25 | 1.60±0.10 | 0.60±0.20 | 1.23±0.25 |
| CSR1206 | 1 | 1, 4, 5, 6 | 3.20±0.25 | 1.60±0.10 | 0.60±0.20 | 1.10±0.25 |
| CSR1206 | 1 | 2, 3, 10 | 3.20±0.25 | 1.60±0.10 | 0.60±0.20 | 0.60±0.25 |
| CSR1206 | 1 | 7, 8, 9 | 3.20±0.25 | 1.60±0.10 | 0.60±0.20 | 0.90±0.25 |
| CSR2010 | 1.5 | 0.5 | 5.08±0.25 | 2.54±0.15 | 0.60±0.20 | 2.17±0.25 |
| CSR2010 | 1.5 | 0.75 | 5.08±0.25 | 2.54±0.15 | 0.60±0.20 | 2.04±0.25 |
| CSR2010 | 1.5 | 1 | 5.08±0.25 | 2.54±0.15 | 0.60±0.20 | 1.84±0.25 |
| CSR2010 | 1.5 | 2, 6, 7, 8 | 5.08±0.25 | 2.54±0.15 | 0.60±0.20 | 1.54±0.25 |
| CSR2010 | 1.5 | 3 | 5.08±0.25 | 2.54±0.15 | 0.60±0.20 | 1.04±0.25 |
| CSR2010 | 1.5 | 4, 5 | 5.08±0.25 | 2.54±0.15 | 0.60±0.20 | 1.84±0.25 |
| CSR2010 | 1.5 | 9, 10 | 5.08±0.25 | 2.54±0.15 | 0.60±0.20 | 1.29±0.25 |
| CSR2512 | 1 | 0.5 | 6.35±0.254 | 3.18±0.254 | 1.25±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 0.75 | 6.35±0.254 | 3.18±0.254 | 0.75±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 1 | 6.35±0.254 | 3.18±0.254 | 0.65±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 1.5 | 6.35±0.254 | 3.18±0.254 | 0.45±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 2 | 6.35±0.254 | 3.18±0.254 | 0.35±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 2.5 | 6.35±0.254 | 3.18±0.254 | 0.65±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 3 | 6.35±0.254 | 3.18±0.254 | 0.55±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 4 | 6.35±0.254 | 3.18±0.254 | 0.45±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 5 | 6.35±0.254 | 3.18±0.254 | 0.35±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 6 | 6.35±0.254 | 3.18±0.254 | 0.32±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 6.5 | 6.35±0.254 | 3.18±0.254 | 0.30±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 7 | 6.35±0.254 | 3.18±0.254 | 0.27±0.20 | 1.30±0.38 |
| CSR2512 | 1 | 10 | 6.35±0.254 | 3.18±0.254 | 0.25±0.20 | 1.30±0.38 |
| CSR2512 w/ Green Coating | 1 to 3 | 0.5 | 6.35±0.25 | 3.00±0.20 | 0.60±0.20 | 2.68±0.25 |
| CSR2512 w/ Green Coating | 1 to 3 | 0.75 | 6.35±0.25 | 3.00±0.20 | 0.60±0.20 | 2.48±0.25 |
| CSR2512 w/ Green Coating | 1 to 3 | 1, 5, 6 | 6.35±0.25 | 3.00±0.20 | 0.60±0.20 | 1.93±0.25 |
| CSR2512 w/ Green Coating | 1 to 3 | 1.5, 6.5, 7 | 6.35±0.25 | 3.00±0.20 | 0.60±0.20 | 1.43±0.25 |
| CSR2512 w/ Green Coating | 1 to 3 | 2, 3 | 6.35±0.25 | 3.00±0.20 | 0.60±0.20 | 1.18±0.25 |
| CSR2512 w/ Green Coating | 1 to 3 | 4, 4.5 | 6.35±0.25 | 3.00±0.20 | 0.60±0.20 | 2.18±0.25 |
| CSR2512 w/ Green Coating | 1 to 3 | 8 to 15 | 6.35±0.25 | 3.00±0.20 | 0.60±0.20 | 1.18±0.25 |

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