

CSR Series

Ultra Low Ohm (Metal Strip) Chip Resistor



- Resistances from 0.5 mOhm to 15 mOhm
- Power Rating up to 3 Watts
- Resistance Tolerances to $\pm 1\%$
- Customized Resistance Available
- TCR's to ± 50 ppm/ $^{\circ}\text{C}$
- Sizes: 1206 / 2010 / 2512

SPECIFICATIONS

Type	Power Rating (W) at 80°C	Resistances (mΩ)	TCR (ppm/ $^{\circ}\text{C}$)	Tolerances	Operating Temperature Range	MAX Operating Voltage
CSR1206	1	0.5 - 10	± 50 ± 200 (0.5Ω)	1% 3% 5%	-55°C to +170°C	$\sqrt{(P \cdot R)}$
CSR2010	1.5	0.5 - 10	± 50 ± 100 (0.5Ω)			
CSR2512 ¹	1	0.5, 0.75, 1, 1.5, 2 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 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

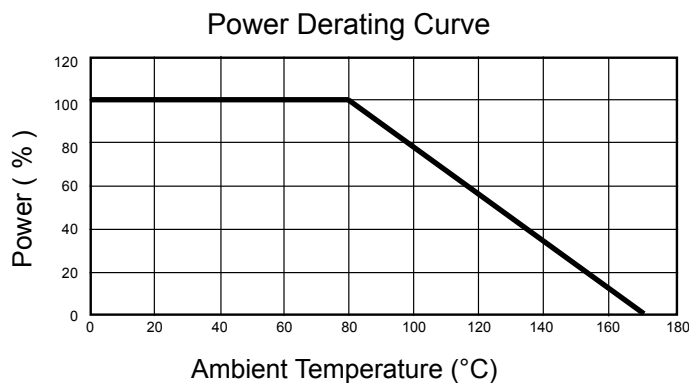
³ All values have green coating

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Specifications



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

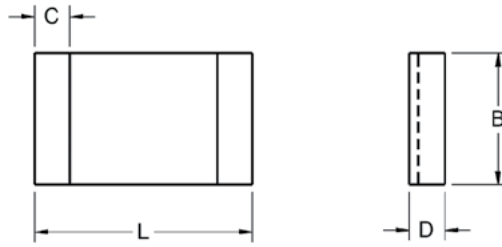
Reel Sizes	Type	Quantity
CSR1206	Embossed Tape	2000
CSR2010		
CSR2512		

Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR

Example: CSR2512 1mOhm 1% 50ppm

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