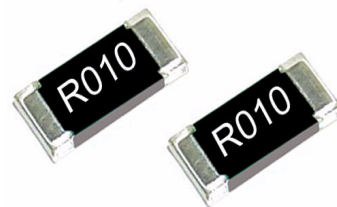


# CSR/CSRN Series — Current Sensing Chip Resistors

## Features

- 0402 to 2512 sizes available
- Power ratings to 3W
- Low inductance – less than 0.2nH typically
- RoHS compliant / lead-free
- Non-standard resistance values available
- 2010 and 2512 sizes available with narrow terminations (CSRN)



## Electrical Specifications

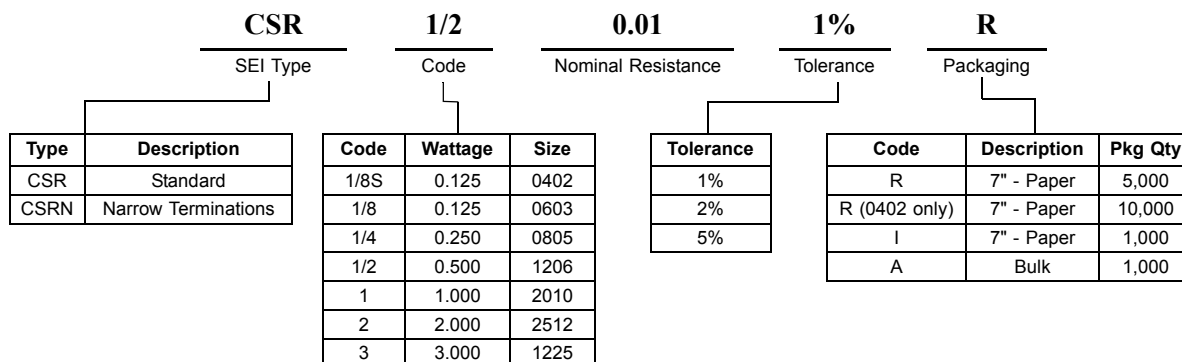
Type / Code	Package Type	Power Rating (Watts) @ 70°C	Dielectric Withstanding Voltage	Resistance Temperature Coefficient	Ohmic Range and Tolerance	
					1%	5%
CSR 1/8S	0402	0.125	200	±200 ppm/°C	0.051Ω – 1.000Ω	0.051Ω – 1.000Ω
CSR 1/8	0603	0.125	200	±300 ppm/°C	0.021Ω – 1.000Ω	0.021Ω – 1.000Ω
CSR 1/4	0805	0.250	200	±200 ppm/°C	0.021Ω – 1.000Ω	0.021Ω – 1.000Ω
CSR 1/2	1206	0.500	200	±100 ppm/°C *	0.010Ω – 1.000Ω	0.010Ω – 1.000Ω
CSR 1	2010	1.000	200	±100 ppm/°C *	0.010Ω – 1.000Ω	0.010Ω – 1.000Ω
CSRN 1	2010	1.000	200	±250 ppm/°C	0.010Ω – 1.000Ω	0.010Ω – 1.000Ω
CSR 2	2512	2.000	200	±200 ppm/°C	0.010Ω – 1.000Ω	0.010Ω – 1.000Ω
CSRN 2	2512	2.000	200	±200 ppm/°C	0.010Ω – 1.000Ω	0.010Ω – 1.000Ω
CSR 3	1225	3.000	200	±200 ppm/°C	0.005Ω – 0.200Ω	0.005Ω – 0.200Ω

\* Contact factory for TCR on values below 0.05Ω

## Performance Characteristics

Test	Test Specification	Typical
Moisture Resistance	±0.5%	≤0.5%
Load Life	±0.5%	≤0.5%
Leach Resistance	90 seconds min	>90 seconds
Resistance to Soldering Heat	±0.5%	≤0.25%
Solderability	min 95% coverage	≥95%
Temperature Cycling	±0.5%	≤0.5%
Thermal Shock	±0.5%	≤0.5%
Short Time Overload	±0.5%	≤0.5%
Insulation Resistance	1MΩ minimum	≥1MΩ

## How to Order



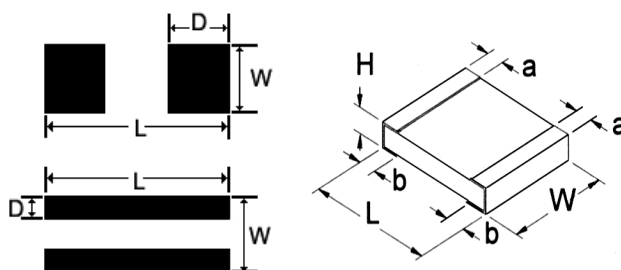
# CSR/CSRN Series — Current Sensing Chip Resistors

## Mechanical Specifications

Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Units
CSR 1/8S	0.039 ± 0.004 1.0 ± 0.1	0.020 ± 0.004 0.5 ± 0.1	0.014 ± 0.004 0.35 ± 0.1	0.006 ± 0.004 0.15 ± 0.1	0.006 ± 0.004 0.15 ± 0.1	inches mm
CSR 1/8	0.063 ± 0.004 1.6 ± 0.1	0.032 ± 0.004 0.8 ± 0.1	0.018 ± 0.004 0.45 ± 0.1	0.012 ± 0.008 0.3 ± 0.2	0.012 ± 0.008 0.3 ± 0.2	inches mm
CSR 1/4	0.079 ± 0.008 2.0 ± 0.2	0.049 ± 0.008 1.25 ± 0.2	0.016 ± 0.004 0.4 ± 0.1	0.016 ± 0.008 0.4 ± 0.2	0.016 ± 0.008 0.4 ± 0.2	inches mm
CSR 1/2	0.126 ± 0.008 3.20 ± 0.2	0.063 ± 0.008 1.6 ± 0.2	0.020 ± 0.006 0.50 ± 0.15	0.039 ± 0.006 1.0 ± 0.15	0.039 ± 0.006 1.0 ± 0.15	inches mm
CSR 1	0.197 ± 0.008 5.0 ± 0.2	0.100 ± 0.008 2.5 ± 0.2	0.020 ± 0.006 0.5 ± 0.15	0.067 ± 0.006 1.7 ± 0.15	0.067 ± 0.006 1.7 ± 0.15	inches mm
CSRN 1	0.197 ± 0.006 5.0 ± 0.15	0.100 ± 0.006 2.5 ± 0.15	0.024 ± 0.004 0.6 ± 0.1	0.024 ± 0.012 0.6 ± 0.3	0.020 ± 0.010 0.5 ± 0.25	inches mm
CSR 2	0.252 ± 0.008 6.4 ± 0.2	0.126 ± 0.008 3.2 ± 0.2	0.020 ± 0.006 0.5 ± 0.15	0.075 ± 0.006 1.9 ± 0.15	0.075 ± 0.006 1.9 ± 0.15	inches mm
CSRN 2	0.246 ± 0.006 6.3 ± 0.15	0.121 ± 0.006 3.1 ± 0.15	0.023 ± 0.004 0.6 ± 0.10	0.023 ± 0.012 0.6 ± 0.3	0.020 ± 0.010 0.5 ± 0.25	inches mm
CSR 3	0.121 ± 0.006 3.10 ± 0.15	0.246 ± 0.006 6.30 ± 0.15	0.039 ± 0.004 1.00 ± 0.10	0.023 ± 0.012 0.060 ± 0.30	0.02 ± 0.010 0.50 ± 0.25	inches mm

## Solder Pad Dimensions

Type / Code	L Total Length	W Total Width	D Pad Depth	Units
CSR 1/8S	0.049 1.25	0.025 0.63	0.015 0.38	inches mm
CSR 1/8	0.060 1.50	0.035 0.90	0.020 0.50	inches mm
CSR 1/4	0.099 2.50	0.059 1.50	0.055 1.40	inches mm
CSR 1/2	0.158 4.00	0.079 2.00	0.071 1.80	inches mm
CSRN 1	0.250 6.35	0.145 3.68	0.055 1.40	inches mm
CSR 1	0.258 6.54	0.130 3.30	0.071 1.80	inches mm
CSR 2	0.315 8.00	0.158 4.00	0.079 2.00	inches mm
CSRN 2	0.315 8.00	0.158 4.00	0.055 1.40	inches mm
CSR 3	0.30 7.60	0.20 5.08	0.080 2.00	inches mm



CSR3 (1225)

4 Terminal Bottom

