

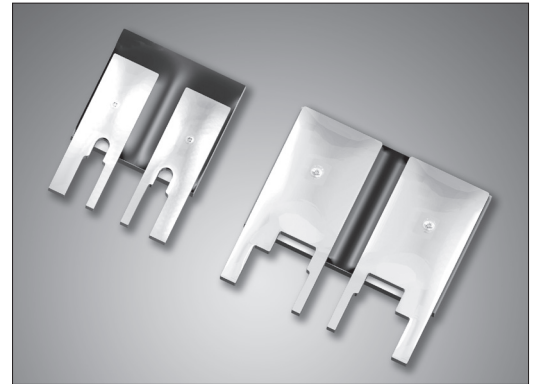
# Type SR Precision Current Sense Resistors

## Non-inductive Design - Compact Footprint Minimizes Circuit Board Space Kelvin Terminals (Four Wire) - Resistance Values 0.005Ω to 1.00Ω

Type SR Current Sense Resistors utilize Caddock's Micronox® resistance films to achieve a compact resistor with Non-inductive Performance. This compact construction with Kelvin Terminals makes this sense resistor ideal for many current monitoring or control applications.

The special performance features of these Type SR Current Sense Resistors include:

- Available in Standard Resistances down to 5 milliohm.
- Non-Inductive Design.
- Terminals are constructed for Kelvin connections to the circuit board.
- Compact footprint.



Model No.	Resistance		Power Rating at 70°C*	Voltage Rating	Terminal Material
	Min.	Max.			
SR10	0.008 Ω	1.00 Ω	1.0 Watt	$V = \sqrt{PxR}$	Solderable
SR20	0.005 Ω	1.00 Ω	2.0 Watts	$V = \sqrt{PxR}$	Solderable

### SR10 Standard Resistance Values:

0.008 Ω	0.020 Ω	0.040 Ω	0.15 Ω	0.40 Ω
0.010 Ω	0.025 Ω	0.050 Ω	0.20 Ω	0.50 Ω
0.012 Ω	0.030 Ω	0.075 Ω	0.25 Ω	0.75 Ω
0.015 Ω	0.033 Ω	0.10 Ω	0.30 Ω	1.00 Ω

### SR20 Standard Resistance Values:

0.005 Ω	0.020 Ω	0.040 Ω	0.15 Ω	0.40 Ω
0.008 Ω	0.025 Ω	0.050 Ω	0.20 Ω	0.50 Ω
0.010 Ω	0.030 Ω	0.075 Ω	0.25 Ω	0.75 Ω
0.015 Ω	0.033 Ω	0.10 Ω	0.30 Ω	1.00 Ω

Custom resistance values can be manufactured for high quantity applications. Please contact Caddock Applications Engineering.

### Specifications:

**Resistance Tolerance:** ±1%

**Temperature Coefficient:** TC referenced to +25°C, ΔR taken at -15°C and +105°C.

0.081 to 1.00 ohm	-50 to +100 ppm/°C
0.025 to 0.080 ohm	0 to +150 ppm/°C
0.008 to 0.024 ohm	0 to +200 ppm/°C
0.005 to 0.007 ohm	0 to +300 ppm/°C

**Load Life:** 1000 hours at rated power at +70°C, ΔR ±(0.2 percent + 0.00001 ohm) max.

**Thermal Shock:** Mil-Std-202, Method 107, Cond. A, ΔR ±(0.2 percent + 0.00001 ohm) max.

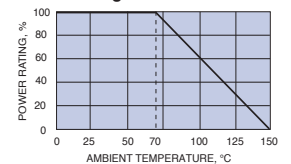
**Moisture Resistance:** Mil-Std-202, Method 106, ΔR ±(0.2 percent + 0.00001 ohm) max.

**Encapsulation:** Polymer over resistance element.

#### \* Power rating:

The Power Rating is based upon the natural convection of free-air up to +70°C. Above +70°C, the power is derated based on the maximum ambient temperature of the free-air.

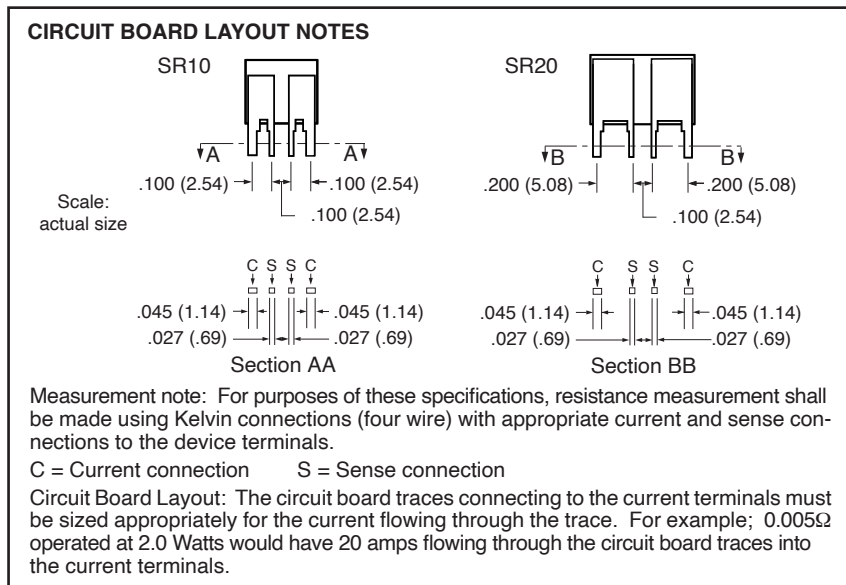
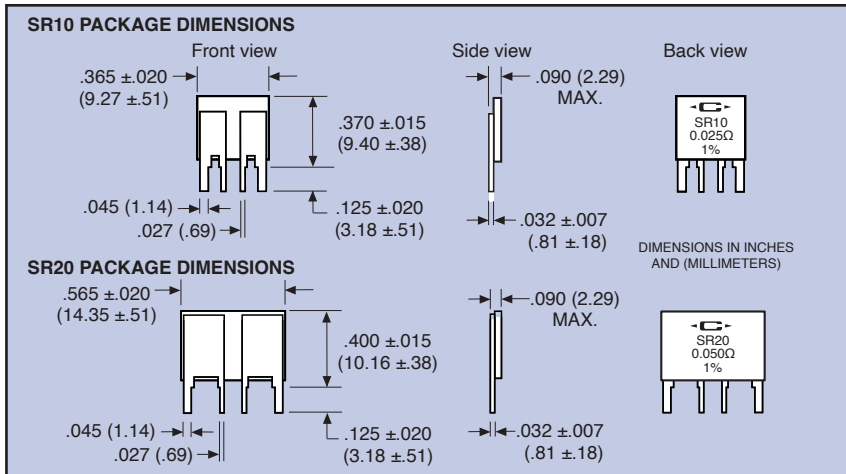
#### Derating Curve:



**Operating Temperature:** -40°C to +150°C

### Ordering Information:

Model Number: SR10 - 0.050 - 1% Tolerance  
Resistor Value: \_\_\_\_\_



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