

Wirewound Resistors, Open Air, Current Sense, Low Value



FEATURES

- Open air design
- Low resistance values for all types of current sensing, voltage division and pulse applications including switching and linear supplies, instrumentation and power amplifiers
- All welded construction
- Solid metal nickel-chrome or copper-nickel alloy resistive element
- Solderable terminations
- Very low inductance
- AEC-Q200 qualified available ⁽¹⁾
- Compliant to RoHS Directive 2002/95/EC

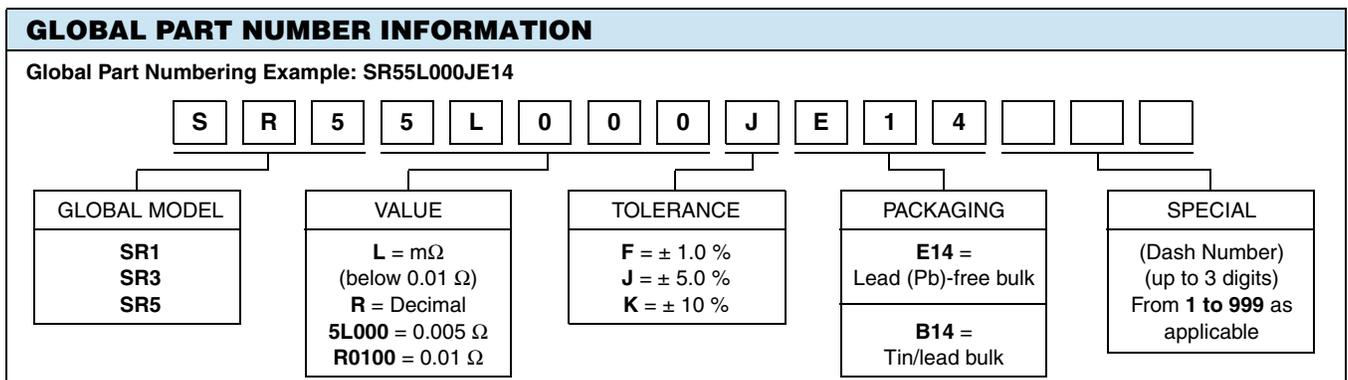


Note

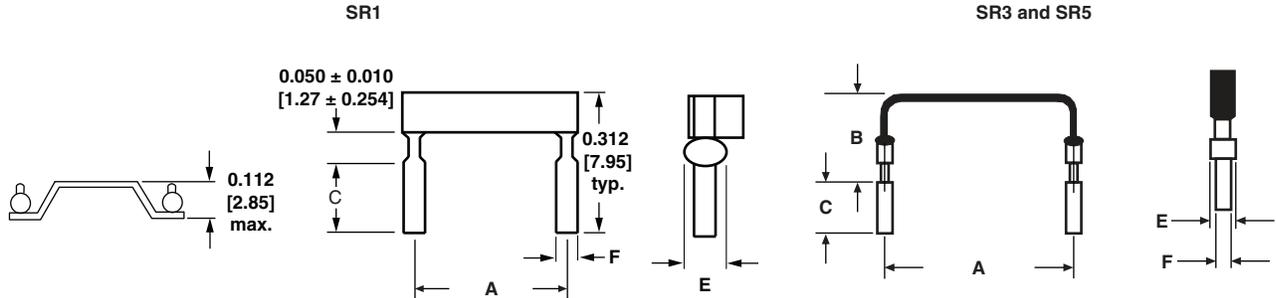
⁽¹⁾ Flame retardance test may not be applicable to some resistor technologies.

STANDARD ELECTRICAL SPECIFICATIONS			
MODEL	POWER RATING <i>P</i> _{70 °C} W	TOLERANCE ± %	RESISTANCE RANGE Ω
SR1	1.0	1, 5	0.005 to 0.03
SR3	3.0	1, 5	0.005 to 0.05
SR5	5.0	1, 5	0.004 to 0.05

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	SR Resistor Characteristics
Temperature Coefficient	ppm/°C	0.004 Ω to 0.005 Ω = ± 300 0.0051 Ω to 0.0099 Ω = ± 175 0.01 Ω to 0.05 Ω = ± 100
Operating Temperature Range	°C	- 65 to + 275
Maximum Continuous Current	A	(<i>P/R</i>) ^{1/2}



* Pb containing terminations are not RoHS compliant, exemptions may apply
 ** Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902

DIMENSIONS in inches [millimeters]


MODEL	DIMENSIONS in inches [millimeters]				
	A	B	C	E	F
SR1	$0.450 + 0.020$ [11.43 + 0.508]	-		0.070 [1.78]	
SR3	$0.600 + 0.040/- 0.020$ [15.24 + 1.020/- 0.508]	1.0 maximum [25.4 maximum]	0.125 ± 0.030 [3.18 ± 0.762]	$0.065 + 0.010/- 0.005$ [1.65 + 0.254/- 0.127]	0.040 ± 0.002 [1.02 ± 0.051]
SR5	$0.800 + 0.040/- 0.020$ [20.32 + 1.020/- 0.508]				

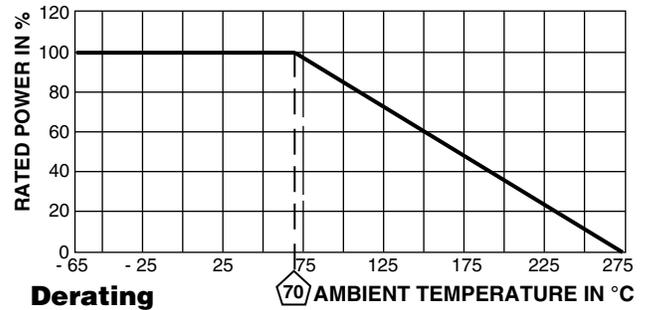
MATERIAL SPECIFICATIONS

Element: Nickel-chrome or copper-nickel alloy depending on resistance value

Terminals: Tinned copper

Encapsulation: None

Marking: None



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Temperature Cycling	- 55 °C to + 125 °C, 1000 cycles, 15 min at each extreme	± (1.0 % + 0.0005 Ω) ΔR
Low Temperature Storage	- 65 °C for 24 h	± (0.5 % + 0.0005 Ω) ΔR
High Temperature Exposure	1000 h at + 275 °C	± (2.0 % + 0.0005 Ω) ΔR
Bias Humidity	+ 85 °C, 85 % RH, 10 % bias, 1000 h	± (1.0 % + 0.0005 Ω) ΔR
Mechanical Shock	100 g's for 11 ms, 5 pulses	± (0.2 % + 0.0005 Ω) ΔR
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± (0.2 % + 0.0005 Ω) ΔR
Load Life	1000 h at rated power, + 70 °C, 1.5 h "ON", 0.5 h "OFF"	± (2.0 % + 0.0005 Ω) ΔR
Resistance to Solder Heat	+ 260 °C solder, 10 s to 12 s dwell, 25 mm/s emergence	± (0.5 % + 0.0005 Ω) ΔR
Moisture Resistance	MIL-STD-202 Method 106, 0 % power, 7a and 7b not required	± (0.5 % + 0.0005 Ω) ΔR



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