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
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free Available

e3

RoHS* Available

HALOGEN FREE Available

Note

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING $P_{70\,°C}$ W	RESISTANCE RANGE Ω	TOLERANCE ± %
SR3	3.0	0.0025 to 0.10	1, 2, 3, 5, 10
SR5	5.0	0.0025 to 0.05	1, 2, 3, 5, 10

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	SR RESISTOR CHARACTERISTICS
Temperature Coefficient +25°C / -55°C; +25°C / +125°C	ppm/°C	± 400 = 0.0025 Ω to 0.0199 Ω; ± 300 = 0.02 Ω to 0.049 Ω; ± 250 = 0.05 Ω to 0.99 Ω; ± 200 = 0.1 Ω and above
Operating Temperature Range	°C	-65 to +275
Maximum Continuous Current	A	$(P/R)^{1/2}$

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: SR55L000JE66

S	R	5	5	L	0	0	0	J	E	6	6			

GLOBAL MODEL	VALUE	TOLERANCE	PACKAGING	SPECIAL
SR3 **SR5**	**L** = mΩ (below 0.01 Ω) **R** = decimal **5L000** = 0.005 Ω **R0100** = 0.01 Ω	**F** = ± 1.0 % **G** = ± 2.0 % **H** = ± 3.0 % **J** = ± 5.0 % **K** = ± 10 %	**E66** = lead (Pb)-free bulk	(dash number) (up to 3 digits) from **1 to 999** as applicable

For technical questions, contact: ww2aresistors@vishay.com

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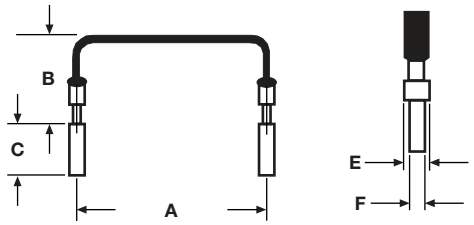
DIMENSIONS in inches [millimeters]



MODEL	DIMENSIONS in inches [millimeters]				
	A	B	C	E	F
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

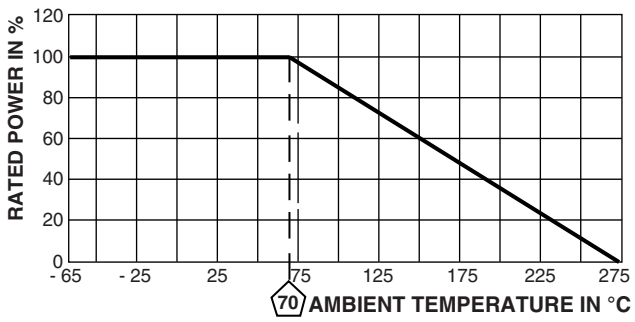
Element: nickel-chrome or copper-nickel alloy depending on resistance value

Terminals: tinned copper

Encapsulation: none

Marking: none

DERATING



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Temperature Cycling	-55 °C to +125 °C, 5 cycles, 15 min at each extreme	± (2.0 % + 0.0005 Ω) ΔR
Low Temperature Storage	-65 °C for 24 h	± (0.5 % + 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"	± (2.75 % + 0.0005 Ω) ΔR
Resistance to Solder Heat	+260 °C solder, 10 s to 12 s dwell	± (0.2 % + 0.0005 Ω) ΔR
Short Time Overload	5x rated power for 5 s	± (1.25 % + 0.0005 Ω) ΔR
Damp Heat	103B of MIL 202F and test condition "D", humidity chamber per 1300 h	± (0.5 % + 0.0005 Ω) ΔR no mechanical damage

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