

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



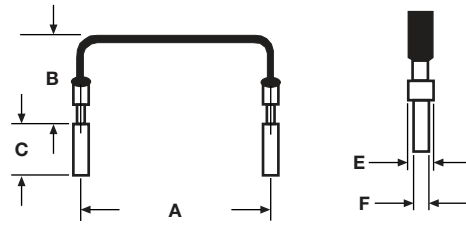
Note

* 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 $P_{70^{\circ}\text{C}}$ W | RESISTANCE RANGE Ω | TOLERANCE $\pm \%$ |
| 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 = m Ω (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 | | | | |

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] | | | | |

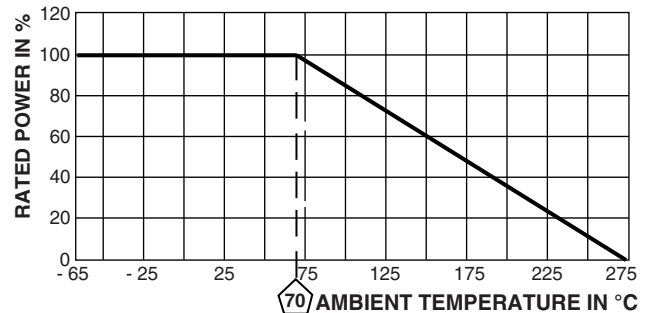
MATERIAL SPECIFICATIONS

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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