S & SL Series

Surface Mount Wirewound Resistors

- **Resistance: 0.005 to 50kOhms**
- **High Power: to 4 Watts**
- **Tolerance to ±0.05%**
- **High Temperature Rating up to 275°C**
- **Low Temperature Coefficient to ±20ppm/°C**
- **Superior Surge Handling Capability**
- **Non-Inductive Windings are Available (Type SN)**
- **Flame Resistant UL 94V-0**

RoHS compliant

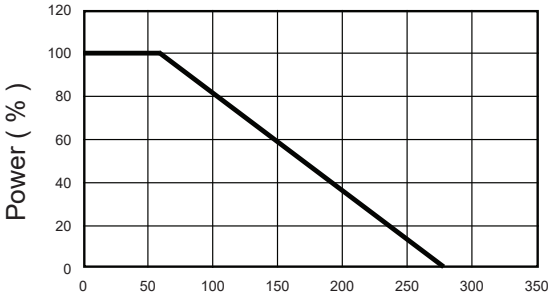
SPECIFICATIONS

Type	Power Rating Watts @ 70°C	Resistance Range (Ω)	Non-Inductive Winding Resistance Range (Ω)[1]	Maximum Working Voltage
S-1	0.5	0.01 to 400	0.1 to 200	$\sqrt{P * R}$
S-2	1	0.005 to 3k	0.1 to 1.5K	
S-4	2	0.01 to 15k	0.1 to 7.5K	
S-3	3	0.01 to 25k	0.1 to 12.5K	
S-5	4	0.01 to 50k	0.1 to 25K	
SL-2	1	0.005 to 0.01	N/A [1]	
SL-4	2	0.005 to 0.07	N/A [1]	

Specification	Value
Tolerances	S: greater than 100Ω, ±0.05% to ±5% S: from 1Ω to 100Ω, ±0.1% to ±5% S: below 1Ω, ±1% to ±5% SL: ±1% to ±5%
Temperature Coefficient	S: greater than 10Ω : ±20ppm/°C S: from 1Ω to 10Ω : ±50ppm/°C S: less than 1Ω : Call Factory SL: ±200ppm/°C, For Lower Call Factory
Temperature Range	-55°C to +275°C
Dielectric Strength	S: 1000 VAC SL: 500 VAC
Insulation Resistance	>1000 MOhms / Dry
Terminal Finish	100% Electroless Tin (matte) over Copper

Environmental Performance (MIL-STD 202)	Δ R MAX
Dielectric	±0.5% + 0.05Ω
Load Life	±1.0% + 0.05Ω
Storage	±0.5% + 0.05Ω
Moisture Resistance	±1.0% + 0.05Ω
Thermal Shock	±0.5% + 0.05Ω
5X Overload (5s)	±0.5% + 0.05Ω
Shock	±0.5% + 0.05Ω
Solder Heat Resistance (260C, 10s)	±0.5% + 0.05Ω

Power Derating Curve



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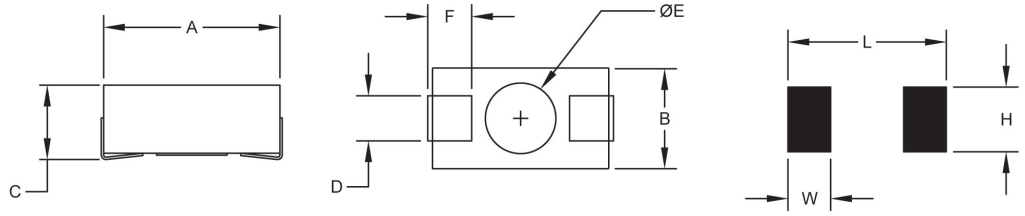
Revised: 201810_003

SPECIFICATIONS
(continued)



Solder Pad Dimensions

Type	Dimensions						Stand-Off		Footprint		
	A ±0.015" [±0.4mm]	B ±0.015" [±0.4mm]	C ±0.015" [±0.4mm]	D ±0.015" [±0.4mm]	F ±0.015" [±0.4mm]	Lead Thickness ±0.002" [±0.05mm]	E ±0.015" [±0.4mm]	Height ±0.005" [±0.13mm]	W ±0.015" [±0.4mm]	H ±0.015" [±0.4mm]	L ±0.015" [±0.4mm]
S-1	0.190 [4.8]	0.130 [3.3]	0.110 [2.8]	0.060 [1.5]	0.040 [1.0]	0.006 [0.15]	0.100 [2.5]	0.005 [0.13]	0.062 [1.6]	0.100 [2.5]	0.250 [6.4]
S-2	0.260 [6.6]	0.155 [3.9]	0.125 [3.2]	0.070 [1.8]	0.070 [1.8]	0.006 [0.15]	0.120 [3.0]	0.005 [0.13]	0.096 [2.4]	0.150 [3.8]	0.337 [8.6]
S-4	0.450 [11.4]	0.250 [6.4]	0.180 [4.6]	0.120 [3.0]	0.100 [2.5]	0.006 [0.15]	0.190 [4.8]	0.005 [0.13]	0.150 [3.8]	0.200 [5.1]	0.540 [13.7]
S-3	0.625 [15.9]	0.270 [6.9]	0.250 [6.4]	0.120 [3.0]	0.135 [3.4]	0.006 [0.15]	0.150 [3.8]	0.005 [0.13]	0.200 [5.1]	0.220 [5.6]	0.700 [17.8]
S-5	0.820 [20.8]	0.295 [7.5]	0.305 [7.7]	0.150 [3.8]	0.190 [4.8]	0.006 [0.15]	0.245 [6.2]	0.005 [0.13]	0.220 [5.6]	0.250 [6.4]	0.900 [22.9]
SL-2	0.260 [6.6]	0.155 [3.9]	0.100 [2.5]	0.070 [1.8]	0.070 [1.8]	0.006 [0.15]	0.120 [3.0]	0.005 [0.13]	0.096 [2.4]	0.150 [3.8]	0.337 [8.6]
SL-4	0.450 [11.4]	0.250 [6.4]	0.100 [2.5]	0.120 [3.0]	0.100 [2.5]	0.006 [0.15]	0.190 [4.8]	0.005 [0.13]	0.150 [3.8]	0.200 [5.1]	0.540 [13.7]

Standard Package Quantities							
	S-1	S-2	S-4	S-3	S-5	SL-2	SL-4
Small Reel	650	600	250	125	180	600	250
Large Reel	3000	2000	1000	500	500	2000	1000
Reel/Tape Width	12mm	16mm	24mm	24mm	32mm	16mm	24mm
Approximate Unit Mass for shipping	0.11g	0.21g	0.71g	1.5g	2.8g	0.12g	0.36g

Surface Mount Humidity Packaging:

Per Riedon Customer Change Notice dated August 8, 2018 (CCN1832) all Riedon Surface Mount wirewound resistors now have a Moisture Sensitivity Level (MSL) rating of 1. Surface Mount parts are packaged in a Moisture Barrier Bag (MBB) with a Humidity Indicator Card and desiccant to ensure solderability. The MBB is marked with a Moisture-Sensitive Identification Label.

Ordering Information

Part Description: Part Type Resistance Tolerance TCR (if not standard)
Example: S-4 100 OHM 1%

For non-inductive windings (Resistance > 0.1Ω) insert the letter "N" (i.e. SN-4)

[1] Below 0.1Ω the inductance of a single winding, or the metal element (SL) is negligible

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