

# S & SL Series

Surface Mount Wirewound Resistors



- Resistance: 0.005 to 50kOhms
- High Power: to 4 Watts
- Tolerance to  $\pm 0.01\%$
- High Temperature Rating up to 275°C
- Low Temperature Coefficient to  $\pm 20\text{ppm}/^\circ\text{C}$
- Superior Surge Handling Capability
- Non-Inductive Windings are Available (Type SN)
- Flame Resistant UL 94V-0

## SPECIFICATIONS

| Type | Power Rating<br>Watts @ 70°C | Resistance <sup>1</sup><br>Range ( $\Omega$ ) | Maximum<br>Working Voltage |
|------|------------------------------|-----------------------------------------------|----------------------------|
| S-1  | 0.5                          | 0.01 to 400                                   | $\sqrt{P * R}$             |
| S-2  | 1                            | 0.005 to 3k                                   |                            |
| S-4  | 2                            | 0.01 to 15k                                   |                            |
| S-3  | 3                            | 0.01 to 25k                                   |                            |
| S-5  | 4                            | 0.01 to 50k                                   |                            |
| SL-2 | 1                            | 0.005 to 0.05                                 |                            |
| SL-4 | 2                            | 0.005 to 0.07                                 |                            |

<sup>1</sup> For non-inductive windings / divide maximum resistance by 2

| Specification           | Value                                                                                                                                                                                                                   |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tolerances              | S: $\pm 0.01\%$ to $\pm 5\%$<br>SL: $\pm 0.1\%$ to $\pm 5\%$                                                                                                                                                            |
| Temperature Coefficient | S: $>10\Omega$ : $\pm 20\text{ppm}/^\circ\text{C}$<br>S: $1\Omega$ to $10\Omega$ : $\pm 50\text{ppm}/^\circ\text{C}$<br>S: $<1\Omega$ : Call Factory<br>SL: $\pm 200\text{ppm}/^\circ\text{C}$ , For Lower Call Factory |
| Temperature Range       | -55°C to +275°C                                                                                                                                                                                                         |
| Dielectric Strength     | S: 1000 VAC<br>SL: 500 VAC                                                                                                                                                                                              |
| Insulation Resistance   | $>1000$ MOhms / Dry                                                                                                                                                                                                     |
| Reel / Tape Width (mm)  | S-1: 12 / S-2: 16 / S-3: 24 / S-4: 24 / S-5: 32 / SL-2: 16 / SL-4: 24                                                                                                                                                   |

| Environmental Performance<br>(MIL-STD 202) | $\Delta R$ MAX           |
|--------------------------------------------|--------------------------|
| Dielectric                                 | $\pm 0.5\% + 0.05\Omega$ |
| Load Life                                  | $\pm 1\% + 0.05\Omega$   |
| Storage                                    | $\pm 0.5\% + 0.05\Omega$ |
| Moisture Resistance                        | $\pm 1\% + 0.05\Omega$   |
| Thermal Shock                              | $\pm 0.5\% + 0.05\Omega$ |
| 5X Overload ( 5s )                         | $\pm 0.5\% + 0.05\Omega$ |
| Shock                                      | $\pm 0.5\% + 0.05\Omega$ |
| Solder Heat Resistance ( 260C, 10s )       | $\pm 0.5\% + 0.05\Omega$ |

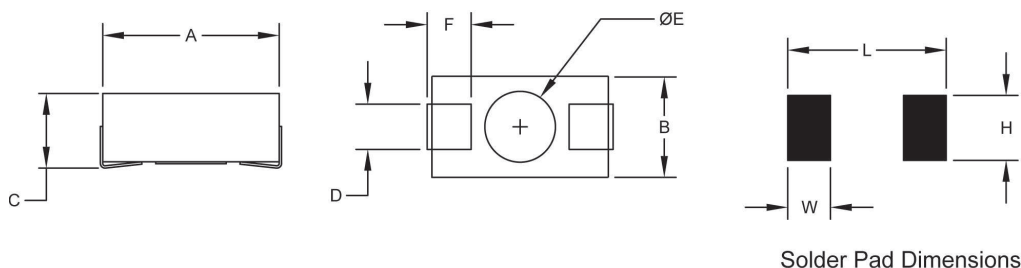


# S & SL Series

Surface Mount Wirewound Resistors



## SPECIFICATIONS (continued)



| Type | Dimensions               |                          |                          |                          |                          |                                             | Stand-Off                |                                | Footprint                |                          |                          |
|------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------------------------|--------------------------|--------------------------------|--------------------------|--------------------------|--------------------------|
|      | A<br>±0.015"<br>[±0.4mm] | B<br>±0.015"<br>[±0.4mm] | C<br>±0.015"<br>[±0.4mm] | D<br>±0.015"<br>[±0.4mm] | F<br>±0.015"<br>[±0.4mm] | Lead Thick-<br>ness<br>±0.002"<br>[±0.05mm] | E<br>±0.015"<br>[±0.4mm] | Height<br>±0.005"<br>[±0.13mm] | W<br>±0.015"<br>[±0.4mm] | H<br>±0.015"<br>[±0.4mm] | L<br>±0.015"<br>[±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 |

Surface Mount Humidity Packaging:

All Riedon Surface Mount wirewound resistors have a Moisture Sensitivity Level (MSL) rating of 2 (1-year floor life). Surface Mount parts are packaged in a Moisture Barrier Bag (MBB) with a Humidity Indicator Card and desiccant to monitor and protect the parts from humidity. The MBB is marked with a Moisture-Sensitive Identification Label.

## Ordering Information

For Non-Inductive Windings / insert the letter "N" ( i.e. SN-4 )

Part Description: Part Type - Resistance - Tolerance - TCR ( If not standard )

Example: S-4 100 Ohm 1%