Features
- Carbon element
- Standard surface mount profile compatibility
- Assorted resistances and tapers
- Flattened and knurled shaft styles
- Wide operating temperature range
- RoHS compliant*

PRS11S - 11 mm SMD Potentiometer

Electrical Characteristics

Standard Resistance Range
- 1K ohms to 1 megohm

Standard Resistance Tolerance

<table>
<thead>
<tr>
<th>Resistance (Ohms)</th>
<th>Code</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1K</td>
<td>102</td>
<td>±20%</td>
</tr>
<tr>
<td>2K</td>
<td>204</td>
<td>±20%</td>
</tr>
<tr>
<td>5K</td>
<td>502</td>
<td>±20%</td>
</tr>
<tr>
<td>10K</td>
<td>103</td>
<td>±20%</td>
</tr>
<tr>
<td>25K</td>
<td>503</td>
<td>±20%</td>
</tr>
<tr>
<td>50K</td>
<td>104</td>
<td>±20%</td>
</tr>
<tr>
<td>100K</td>
<td>254</td>
<td>±20%</td>
</tr>
<tr>
<td>250K</td>
<td>304</td>
<td>±20%</td>
</tr>
<tr>
<td>500K</td>
<td>504</td>
<td>±20%</td>
</tr>
<tr>
<td>1,000K</td>
<td>105</td>
<td>±20%</td>
</tr>
</tbody>
</table>

End Resistance
- R < 50K ohms: 30 ohms max.
- R ≥ 50K ohms: 0.1% of TR max.

Insulation Resistance @ 250 VDC
- 100 megohms min.

Dielectric Withstanding Voltage
- 300 VAC

Standard Taper
- Linear, audio

Power Rating
- Audio: 0.025 watts
- Max. Operating Voltage: 50 VAC / 30 VDC

Environmental Characteristics

Rotational Life
- 15,000 cycles

TR Shift
- ±15%

Operating Temperature Range
- -40 °C to +85 °C

Storage Temperature
- -10 °C to +70 °C

IP Rating
- IP 40

Mechanical Characteristics

Mechanical Angle
- 300 ° +10 °, -5 °

Running Torque
- 20 to 150 gf-cm

Stop Strength
- 5.1 kgf-cm min.

Shaft Push/Pull Strength
- 10.2 kgf max.

Weight
- 5 gm (0.17 oz.) max.

Terminals
- Printed circuit board surface mount

Soldering Condition
- Sn 95.5 / Ag 2.8 / Cu 0.7 solder with no clean flux profiles.
- Sn 95.5 / Ag 2.8 / Cu 0.7 solder with no clean flux profiles (see solder profiles for recommended time and temperature)

Manual Soldering
- Not recommended

Hardware
- No hardware supplied with this potentiometer

Packaging
- 40 pcs./tube

How To Order

Model Number
PRS11S - N 20 K - 103 B1

Switch Option
- N = No switch

Shaft Length (FMS)
- 20 = 20 mm

Shaft Style
- F = Flattened Metal
- K = Knurled Metal (18 tooth)

Resistance Code
- (See Standard Resistance Table)

Resistance Taper (See Taper Charts)
- Taper Series followed by Curve Number

Derating Curve

WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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Users should verify actual device performance in their specific applications.
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PRS11S - 11 mm SMD Potentiometer

Product Dimensions

Recommended Land Pattern

Schematic

Tolerances

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>TOLERANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10.0</td>
<td>±0.3</td>
</tr>
<tr>
<td>(≤.394)</td>
<td>(≤.012)</td>
</tr>
<tr>
<td></td>
<td>10.0 – 100</td>
</tr>
<tr>
<td></td>
<td>(≥.944 – 3.937)</td>
</tr>
</tbody>
</table>

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Solder Profiles

### A Series Tapers

- Processing Method: Reflow soldering with **infrared heat** (only once).

### B Series Tapers

- Processing Method: Reflow soldering with **hot air** (only once).

### C Series Tapers

Notes:
1. No clean solder paste is recommended.
2. Aqueous wash is not recommended.
3. Use of water soluble soldering flux shall be avoided due to possible corrosion.
4. Multiple passes through the soldering process is not recommended.
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