Product Features

<table>
<thead>
<tr>
<th>Case Size</th>
<th>Std. Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1209</td>
<td>100Ω</td>
</tr>
</tbody>
</table>

Mechanical Dimensions

\[
\begin{align*}
L &= 0.012'' \pm 0.001'' (0.305mm \pm 0.051mm) \\
W &= 0.009'' \pm 0.001'' (0.229mm \pm 0.051mm) \\
H &= 0.005'' \pm 0.001'' (0.127mm \pm 0.025mm)
\end{align*}
\]

Specifications

- **Operating Frequency**: DC to 67 GHz
- **Operating Temperature Range**: -55°C to +150°C
- **Resistive Material**: Tantalum Nitride (TaN)
- **Temperature Coefficient**: ±150 ppm/°C standard
- **Resistance Tolerance**: ±1% standard
- **Substrate**: Alumina (Al₂O₃)
- **Metallization**: A = Tantalum/Palladium/Gold (TaN/Pd/Au)  
  R = Titanium/Platinum/Gold (Ti/Pt/Au)
- **Power Derating**: Full power up to 70°C  
  Derated linearly to zero power at 150°C

Part Numbering

<table>
<thead>
<tr>
<th>R</th>
<th>35</th>
<th>1209</th>
<th>BB</th>
<th>100</th>
<th>R</th>
<th>0</th>
<th>F</th>
<th>R</th>
<th>1</th>
<th>Q</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistor</td>
<td>Case Size: 0.012” x 0.009”</td>
<td>Broadband: BB</td>
<td>Tolerance: F = ±1%</td>
<td>Metallization: R = For Soldering; A = For wirebonding</td>
<td>Power Handling: C = 50mW</td>
<td>TCR: Q = ±150ppm/°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Digits 1-4 are significant;  
Digit 5 is number of zeros to follow

1% standard tolerance (other tolerances available)

*All PPI Thin Film parts are Non-Magnetic*
Performance Curves - S21 and S11

Simulated Test Conditions / Pad Dimensions / Dielectric
Modelithics calculated data for 50 Ohm and 100 Ohm resistors from 0.1 to 67.0 GHz on 4 mil Rogers 4350B, Dielectric constant = 4.15. The pad dimensions used to develop the datasheet plots were: Length = 4.0 (0.102), Width = 10.0 (0.254), Gap = 13.0 (0.330). Units in mil (mm). Reference planes were at the pad edges.

Packaging
Parts are delivered in Waffle Packs.
Contact PPI for additional packaging options.