FEATURES
- 8 Watt
- DC – 6.0 GHz
- Al₂O₃ Ceramic
- Low VSWR
- Small Size
- Lead-Free and Lead bearing

GENERAL SPECIFICATIONS
- Operating Temp. Range: -60 °C to 155 °C
- Package: Chip
- Case Size: 1206

STANDARD ELECTRICAL SPECIFICATION

<table>
<thead>
<tr>
<th>Model</th>
<th>Size inch</th>
<th>Power Rating (W)</th>
<th>Resistance Value, (Ohms)</th>
<th>Resistance Tolerance (± %)</th>
<th>TCR (ppm/K)</th>
<th>Frequency (GHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1-156</td>
<td>1206</td>
<td>8</td>
<td>50, 100</td>
<td>2, 5</td>
<td>±250</td>
<td>0–6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>L</th>
<th>B</th>
<th>H</th>
<th>a</th>
<th>b</th>
<th>I</th>
<th>Weight (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1206</td>
<td>3.0±0.2</td>
<td>1.6±0.15</td>
<td>0.4±0.2</td>
<td>0.5±0.2</td>
<td>0.9±0.15</td>
<td>0.3±0.2</td>
<td>≤20</td>
</tr>
</tbody>
</table>

MOUNTING PROCEDURE

1. In order to remove the dissipated power from this type chip they must be provided with adequate conductive cooling. This will prevent excessive chip temperatures leading to damage and early failure of the device. High Frequency performance is also dependent on proper mounting. Since these devices are being mounted to a P.C.B, inductance to ground is introduced by the vias to the ground plane. To reduce this effect and lower the thermal resistance between the component and ground plane, the following items are recommended:
   a. Maximize the use of thermally conductive vias around and under the device.
   b. Use of heavy copper cladding on the circuit board as a heat spreader.
2. Actual performance could be limited by the solder properties of the application
3. ** FOR MORE DETAILS CONTACT FACTORY **

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**R1-156**

High Frequency Chip Resistor

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### PACKAGING

![Diagram of resistor packaging]

- **W, mm**: 8
- **D**: 7" (7"
- **Nmin, mm**: 50
- **N, mm**: 13.0±0.2
- **W1, mm**: 8.4±1.5
- **W2max, mm**: 14.4

<table>
<thead>
<tr>
<th>Size</th>
<th>Type of tape, W (D)</th>
<th>Pieces per reel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1206</td>
<td>Paper, 8 mm (7&quot;)</td>
<td>5000</td>
</tr>
</tbody>
</table>

### MARKING

- **Nominal value**
  - 50 Ω
  - 100 Ω
- **Marking**
  - 50R0
  - 1000

### PART NUMBER CODE

Part number: R1-156120650R0JQT2

- **model**: R
- **size**: 1206
- **value**: 50R0 = 50 Ω
  - 1000 = 100 Ω
- **tolerance**: G = 2 %
  - J = 5 %
- **TCR**: Q = 250 ppm
- **packaging**
  - E1 - tape (Lead-Free)
  - E2 - tape & reel (Lead-Free)
  - T1 - tape (SnPb)
  - T2 - tape & reel (SnPb)

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## TEST PROCEDURES AND REQUIREMENTS

<table>
<thead>
<tr>
<th>Test</th>
<th>Procedure</th>
<th>Requirements permissible change (ΔR max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solderability</td>
<td>IEC60115-1 (4.17)/ IEC 60068-2-20 (method S8 (Td)) (235±5 °C; 2 s; solder bath method; SnPb40)</td>
<td>Good tinning (&gt;95 % covered, no visible damage)</td>
</tr>
<tr>
<td>Resistance to soldering heat</td>
<td>IEC60115-1 (4.18.2)/ IEC 60068-2-20 (method S8 (Td)) (260±5 °C; (15±1) s)</td>
<td>± 2 %; no visible damage</td>
</tr>
<tr>
<td>Cold</td>
<td>IEC60115-1 (4.23.4)/ IEC 60068-2-1(method 1 (Aa)) -60 °C; (60±15) min</td>
<td>± 2 %</td>
</tr>
<tr>
<td>Rapid change of temperature</td>
<td>IEC60115-1 (4.19)/ IEC 60068-2-14(method 14 (Na)) 30 min at -60 °C; 30 min at 155°C; 5 cycles</td>
<td>± 2 %</td>
</tr>
<tr>
<td>Low air pressure</td>
<td>IEC60115-1 (4.23.5)/ IEC 60068-2-13(method 13 (M)) 0,67kPa;30 min;15 °C to 35 °C</td>
<td>No visible damage</td>
</tr>
<tr>
<td>Damp heat, steady state</td>
<td>IEC60115-1 (4.24)/ IEC 60068-2-78 (40±2 °C; 21 days; (93±3) % RH</td>
<td>± 2 %</td>
</tr>
</tbody>
</table>

All tests are carried out in accordance with the following specifications:
- IEC 60115-1 (clause),
- IEC 60068-2-xx (test method).
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