Internal 2G / 3G / 4G PCB Antenna

(100 x 20 x 0.4mm, 2G / 3G antenna) Pulse Part Number: TWA0831

**Features:**

- Peak gain 2.4 ~ 7.2 dBi
- VSWR 2:1
- Mounting with adhesive tape
- Ultra small PCB 100 x 20 x 0.4mm
- Coaxial feed cable with I-Pex 1 compatible connector
- 824-960/1710-2170/2690 MHz
- Size 100 x 20 x 0.4mm
- Adhesive mount on plastic

**Applications:**

- Frequency range:
  - 824-960MHz/1710-2170/2300~2690MHz
# Electrical Specifications

<table>
<thead>
<tr>
<th>Frequency Range (Mhz)</th>
<th>Max Gain (dBi)</th>
<th>Efficiency [%] / [dB]</th>
<th>Return loss min. [dB]</th>
<th>Impedance [Ω]</th>
<th>Operating Temperature[°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>824-960</td>
<td>3.6 (peak)</td>
<td>72 / -3.0 (peak)</td>
<td>-10</td>
<td>50</td>
<td>- 40 to +85</td>
</tr>
<tr>
<td></td>
<td>2.4 (min)</td>
<td>58 / -5.2 (min)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1710-1990</td>
<td>7.2 (peak)</td>
<td>80 / -1.0 (peak)</td>
<td>-10</td>
<td>50</td>
<td>- 40 to +85</td>
</tr>
<tr>
<td></td>
<td>4.7 (min)</td>
<td>65 / -2.2 (min)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1920-2170</td>
<td>6.8 (peak)</td>
<td>80 / -1.0 (peak)</td>
<td>-10</td>
<td>50</td>
<td>- 40 to +85</td>
</tr>
<tr>
<td></td>
<td>2.8 (min)</td>
<td>60 / -3.0 (min)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2300-2690</td>
<td>4.8 (peak)</td>
<td>57 / -5.1 (peak)</td>
<td>-10</td>
<td>50</td>
<td>- 40 to +85</td>
</tr>
<tr>
<td></td>
<td>3.2 (min)</td>
<td>48 / -3.0 (min)</td>
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<td></td>
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</tr>
</tbody>
</table>

### Mechanical Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCB Size</td>
<td>100 x 20 x 0.4mm with adhesive</td>
</tr>
<tr>
<td>Connector type</td>
<td>I-Pex 1 compatible connector</td>
</tr>
<tr>
<td>Cable type</td>
<td>1.13mm</td>
</tr>
<tr>
<td>Cable length</td>
<td>200mm</td>
</tr>
</tbody>
</table>

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No.99 HuoJu Road, SuZhou New District 215009, JiangSu Province,P.R.China  
Tel: +86-512-69206076
MECHANICAL DRAWING

Note:
1. Surface finish quality to PULS PD-050/00 class D.
2. No dust requirements, only functional.
3. Part surface must be clean and free from release agent, grease, fingerprint oil and dust or any other contaminants.
4. Unless specified otherwise, parts must be in the position shown.
5. For complete documentation this drawing must be accompanied by a 10 cm file with part number, as stated in the title block.

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Antenna Radiation pattern (Phi 0)
Antenna Radiation pattern (Phi 90)

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Antenna Radiation pattern (Theta 90)
Antenna Radiation 3D pattern (824MHz)
Antenna Radiation 3D pattern (896MHz)
Antenna Radiation 3D pattern (960MHz)
Antenna Radiation 3D pattern (1710MHz)
Antenna Radiation 3D pattern (1850MHz)
Antenna Radiation 3D pattern (1990MHz)
Antenna Radiation 3D pattern (2080MHz)
Antenna Radiation 3D pattern (2170MHz)