Datasheet
Sixfab Pico LTE Antenna

Designed by
Sixfab, Inc.
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1. Introduction

Proposed antenna is constructed for 4G LTE applications that operates over 7 different bands within an ergonomic blade design to blend well to the inside/outside of a device. • The antenna is designed to work with various allocations in free-space for ease of integration inside the proposed device.

The proposed antenna designed exclusively for the Sixfab Pico LTE.

Applications
• Routers
• Industrial devices
• Remote devices
2. Specifications

2.1 Absolute Maximum Ratings

- Terminal antenna for LTE applications.
- 1850-1910MHz, 1710-1725MHz, 1710-1755MHz, 880-915MHz, 699-716MHz, 777-787MHz, 832-862 MHz.
- High performance mounted antenna design.
- Dimensions (20 mm X 60 mm). • Available in two terminal options: Vertical and Horizontal allocations.

2.2 Recommended Operating Conditions

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>MIN</th>
<th>MAX</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>The ideal operating ambient temperature for the device is required for healthy functioning.</td>
<td>-10</td>
<td>55</td>
<td>°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>The amount of water vapor in the air</td>
<td>0</td>
<td>75%</td>
<td>RH</td>
</tr>
<tr>
<td>Shelf life</td>
<td>The length of time a product may be stored without becoming unsuitable for use or consumption</td>
<td>0</td>
<td>5</td>
<td>Year</td>
</tr>
</tbody>
</table>

⚠️ Storage Place: To extend the lifespan, ensure long term health and reliable operation of the device, prevent direct exposure to sunlight.
3. RF Characteristics

3.1 Return Loss

![Return Loss Graph]

<table>
<thead>
<tr>
<th>Bands</th>
<th>B2</th>
<th>B3</th>
<th>B4</th>
<th>B8</th>
<th>B12</th>
<th>B13</th>
<th>B20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return Loss (dB)</td>
<td>-11.5</td>
<td>-7.2</td>
<td>-7.6</td>
<td>-12.1</td>
<td>-10.2</td>
<td>-13.1</td>
<td>-13.4</td>
</tr>
</tbody>
</table>

3.2 Voltage Standing Wave Ratio

![VSWR Graph]
3.3 Antenna Gain Over Frequency

![Graph showing antenna gain over frequency.](image)

3.4 Antenna Efficiency Over Frequency

![Graph showing antenna efficiency over frequency.](image)
3.5 Radiation Patterns

699-716 MHz

832-862 MHz

1710-1755 MHz
4. Hazardous Material Regulation Conformance

The antenna has been tested to conform to RoHS requirements.