**SPECIFICATION**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>GSA.8822</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name</td>
<td>T-Bar Penta-band GSM Antenna</td>
</tr>
<tr>
<td></td>
<td>Works with GSM / CDMA / PCS / DCS /UMTS/ WCDMA</td>
</tr>
<tr>
<td>Features</td>
<td>Low profile for easy installation</td>
</tr>
<tr>
<td></td>
<td>Fully customized cable and connector</td>
</tr>
<tr>
<td></td>
<td><strong>RoHS Compliant</strong></td>
</tr>
</tbody>
</table>

*Photo:*

- **Top View**
- **Side**
1.0 Introduction
The GSA.8822 T-Bar is flexible and robust for fast installation. It is designed for covert and convenient use in the Telematics industry. It is ideal for tracking systems and cellular car kits.

The antenna has been subject to rigorous IP67 waterproof testing and can handle full immersion in water for extended periods of time.

2.0 Antenna Specifications

<table>
<thead>
<tr>
<th>ELECTRICAL</th>
<th>AMPS</th>
<th>GSM</th>
<th>DCS</th>
<th>PCS</th>
<th>UMTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band</td>
<td>824-896</td>
<td>880-960</td>
<td>1710-1880</td>
<td>1850-1990</td>
<td>1710-2170</td>
</tr>
<tr>
<td>Average Gain</td>
<td></td>
<td></td>
<td>3dBi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polarization</td>
<td></td>
<td></td>
<td>Linear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impedance</td>
<td></td>
<td></td>
<td>50 ohms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Power</td>
<td></td>
<td></td>
<td>10 watts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Connection</td>
<td></td>
<td></td>
<td>Coaxial Cable - RG174 Standard, Fully customizable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VSWR (Min performance)</td>
<td></td>
<td></td>
<td>&lt;2.0:1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| MECHANICAL       |        |        |        |        |         |
| Dimensions (L x W x H) |        | Length 105.7mm x Width 14mm x Height 6.5mm| | | |
| Weight           |        | 40g    |        |        |         |
| Casing           |        |        | UV Resistant TPE | | |
| Waterproofing    |        |        | Sealing Film | | |

| ENVIRONMENTAL    |        |        |        |        |         |
| Waterproof       |        | IP-67 - No internal water entry | after 30mins immersion in 1M water | | |
| Temperature Range|        | -40°C to +85°C | | | |
| Thermal Shock    |        | 100 cycles -40°C to +80°C | | | |
| Humidity         |        | Non-condensing 65°C 95% RH | | | |
| Shock (Drop Test)|        | 1m drop on concrete 6 axes | | | |
| Cable Pull       |        | 8 KGf  | | | |
3.0 Outline Drawing
4.0 Return Loss
4.1 Smith Chart
4.2 VSWR