



TG.22.0112.HT

Specification

| | |
|---------------------|---|
| Part No. | TG.22.0112.HT |
| Product Name | Penta-Band Cellular Connector Mount Monopole Helical GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA 800MHz ~2200 MHz |
| Feature | 0dBi Gain SMA(M) Fixed Right Angle plug, 50 Ohms Dupont® Hytrel® High Temperature Resistant TPEE Housing (up to 150°C) ROHS Compliant |

1. Introduction

The TG.22.0112.HT Penta-band GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA 800MHz to 2,170 MHz monopole helical antenna is a quality robust antenna with high gain in small form factor. Antenna housing applies highly resistant Dupont® Hytrel®

TPEE material which is durable in high temperature application environments up to 150°C. This material is often applied in automotive or industrial applications, where the antenna is placed near the engine or heat generating components.

Connection is made via fixed right angle SMA(M) connector with a hardened TPEE casing, this antenna is the ideal GSM antenna for telematics devices.

2. Antenna Performance

2.1 Electrical Specifications

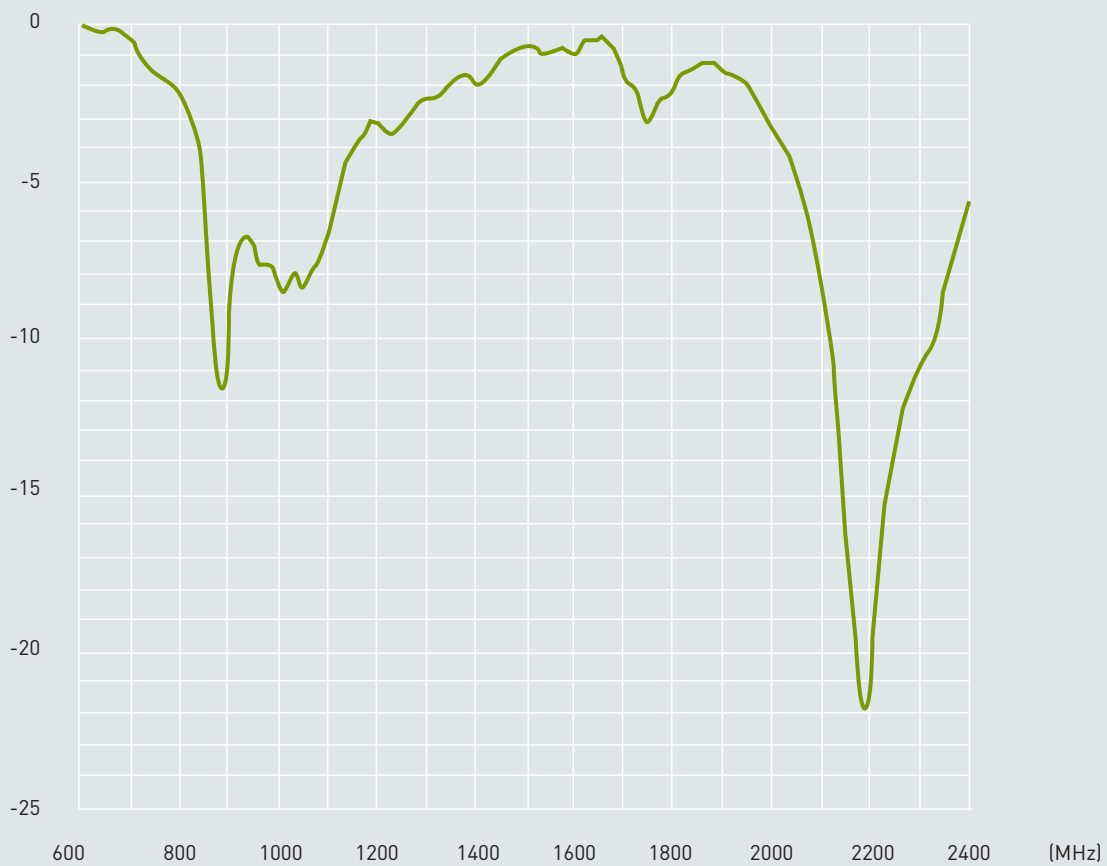
| Parameter | Specification |
|-----------------|--------------------------------------|
| Frequency Range | 800MHz to 2200MHz |
| Bands | GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA |
| VSWR | ≤ 2.3 |
| Power Handling | 20W |
| Polarization | Linear |
| Impedance | 50 Ohms |
| Connector | SMA(M) RA |

2.2 Environmental & Mechanical Characteristics

| Parameter | Specification |
|-----------------|----------------------|
| Temperature | -40°C to +150°C |
| Radome Color | Black |
| Radome Material | Dupont® Hytrel® TPEE |
| Weight | 6g |

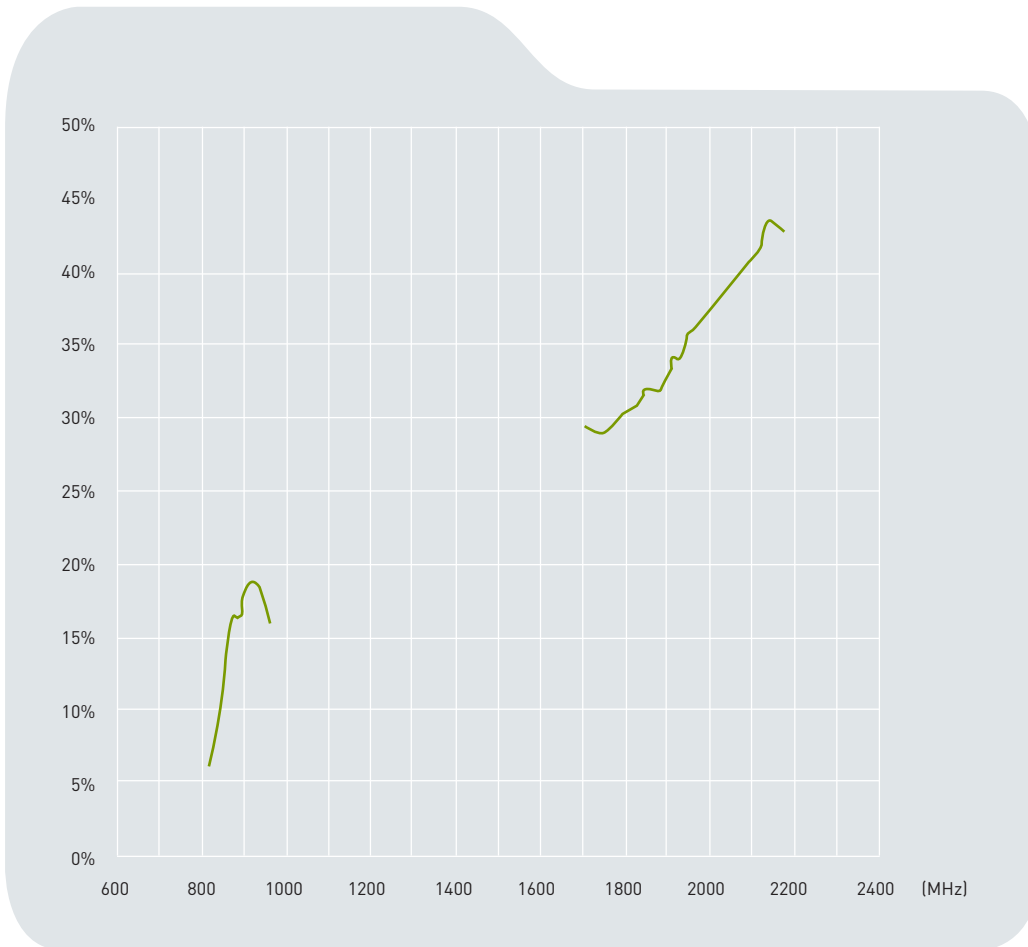
3. Performance Measurements

3.1 Return Loss (dB)



3. Antenna Characteristics

3.2 Efficiency (dB)



| | | | | | | | | | | | |
|-------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency | 824 | 836 | 849 | 869 | 880 | 894 | 900 | 915 | 925 | 940 | 960 |
| Efficiency | 6.27% | 8.09% | 10.76% | 14.60% | 16.19% | 16.45% | 17.70% | 18.58% | 18.62% | 18.21% | 16.00% |

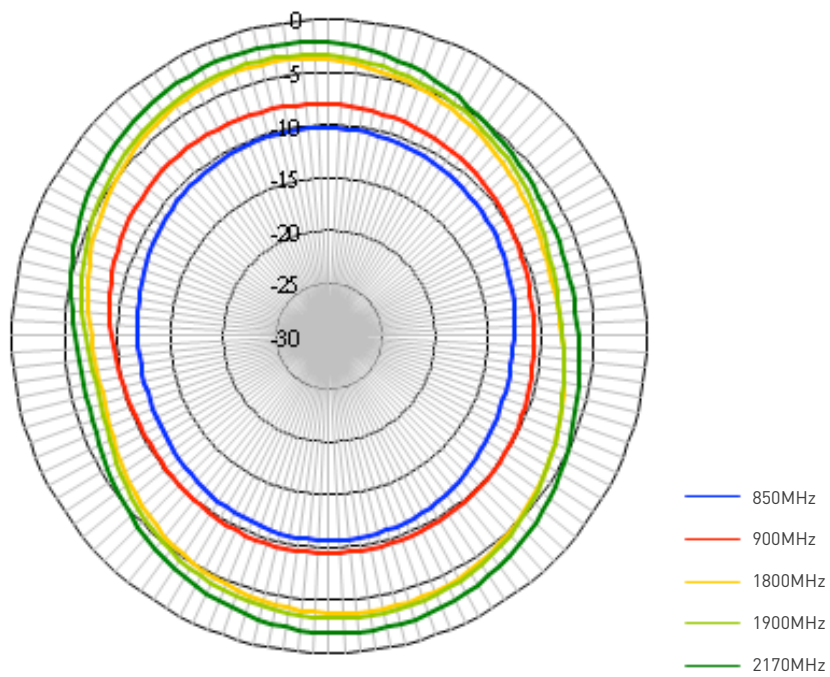
| | |
|-------------------|--------|
| Frequency | 1575 |
| Efficiency | 21.75% |

| | | | | | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency | 1710 | 1750 | 1785 | 1805 | 1840 | 1850 | 1880 | 1910 | 1920 | 1930 | 1950 |
| Efficiency | 29.50% | 29.13% | 29.94% | 30.52% | 31.18% | 32.10% | 32.01% | 33.35% | 34.33% | 34.01% | 35.90% |

| | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|
| Frequency | 1960 | 1980 | 1990 | 2110 | 2140 | 2170 |
| Efficiency | 35.87% | 36.71% | 37.07% | 41.34% | 43.44% | 42.88% |

3. Antenna Characteristics

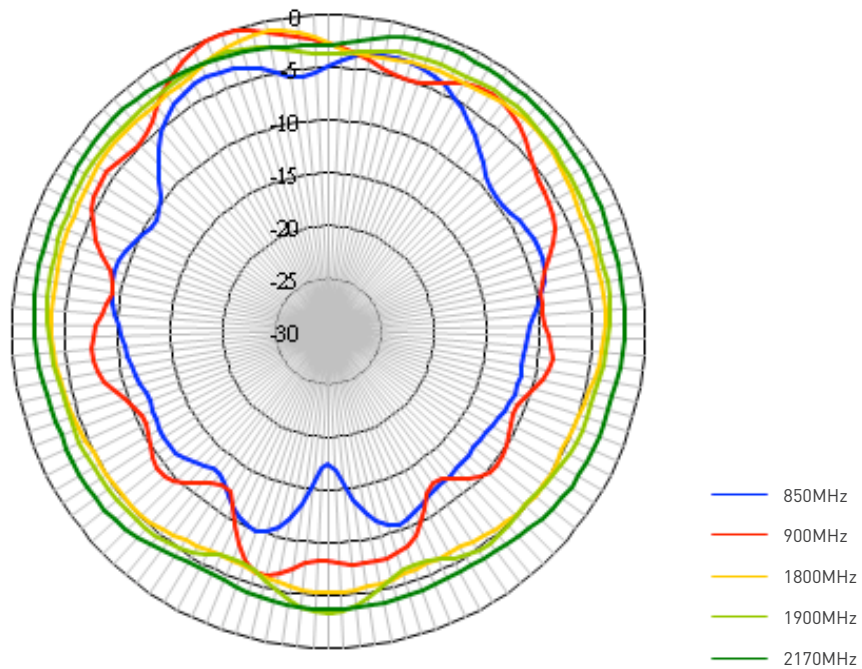
3.3 Radiation Pattern Data



A. Radiation Pattern, Azimuth Plane (XY)

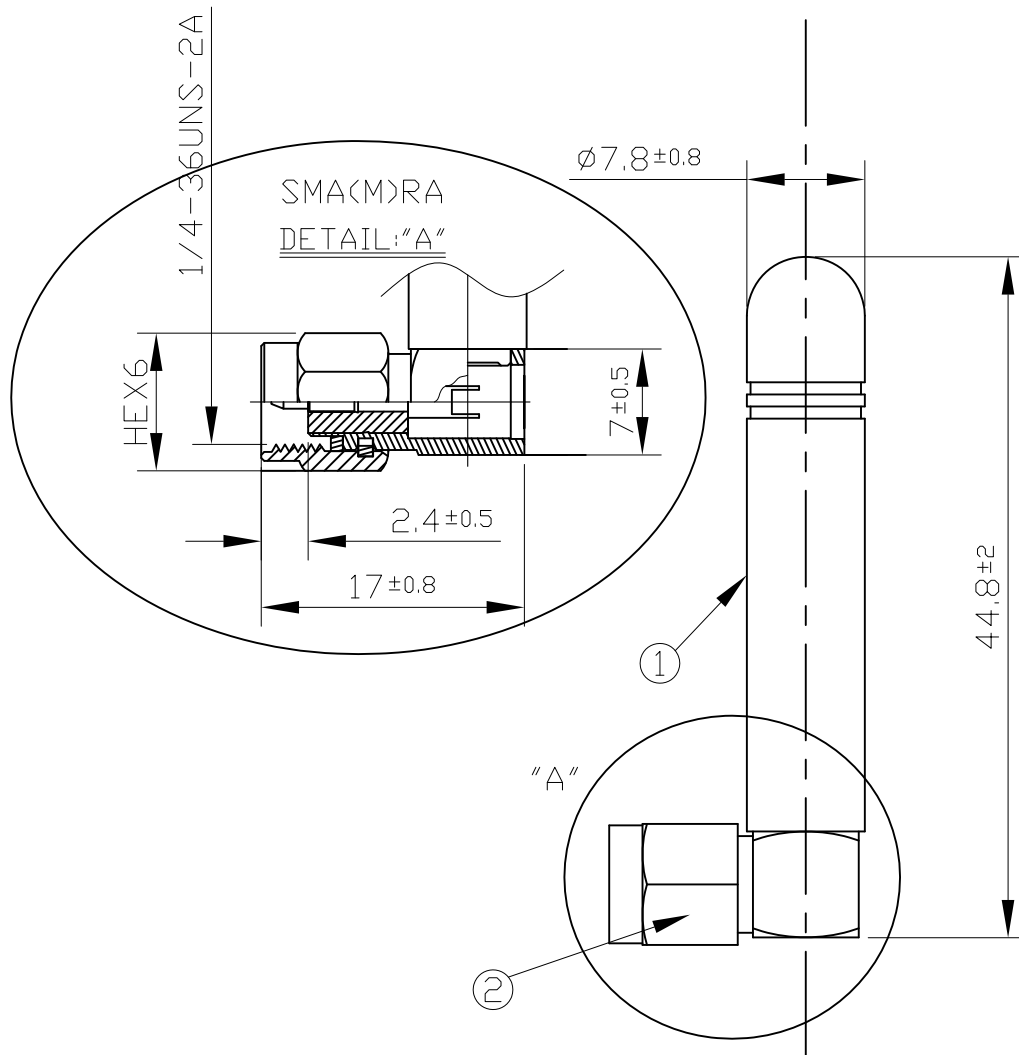
3. Antenna Characteristics

3.3 Radiation Pattern Data



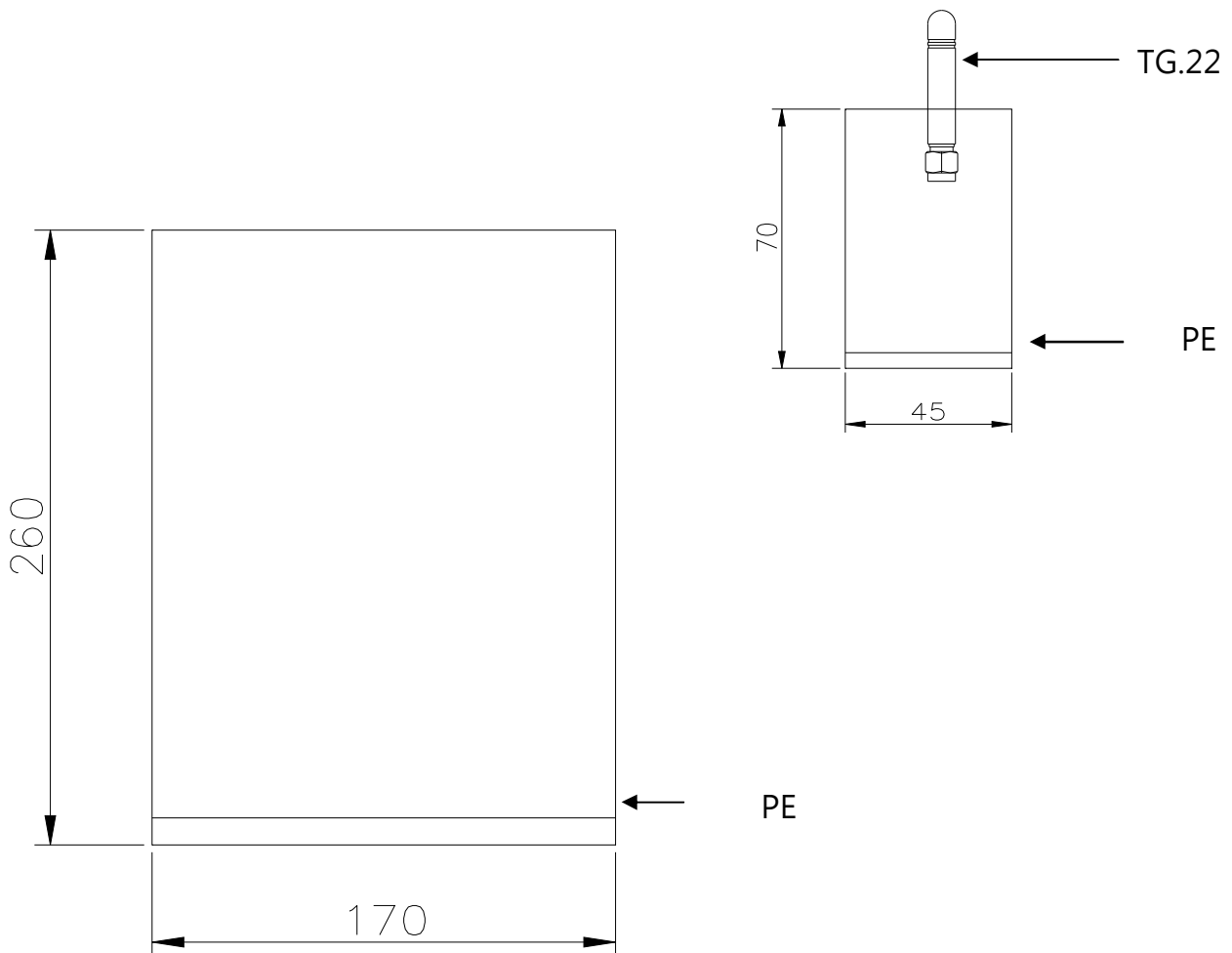
B. Radiation Pattern, Aligned at the Connector

4. Mechanical Drawing



| | Name | Material | Finish | QTY |
|---|------------------------------------|----------|--------|-----|
| 1 | High Temperature Resistant Housing | TPEE | Black | 1 |
| 2 | SMA(M) RA | Brass | Gold | 1 |

5. Packaging



- 1pcs antennas per small PE bag.
- 100 small PE bags per big PE bag.
- 100pcs antennas per big sealed PE bag.