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[TG.22.0112](#)

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TG.22.0112

Specification

Part No.	TG.22.0112
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 ROHS Compliant



1. Introduction

The TG.22.0112 Penta-band GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA 800MHz to 2200MHz monopole helical

antenna is a quality robust antenna with high gain in small form factor. Connection is made via fixed right angle

SMA(M) connector with a hardened waterproof PU 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

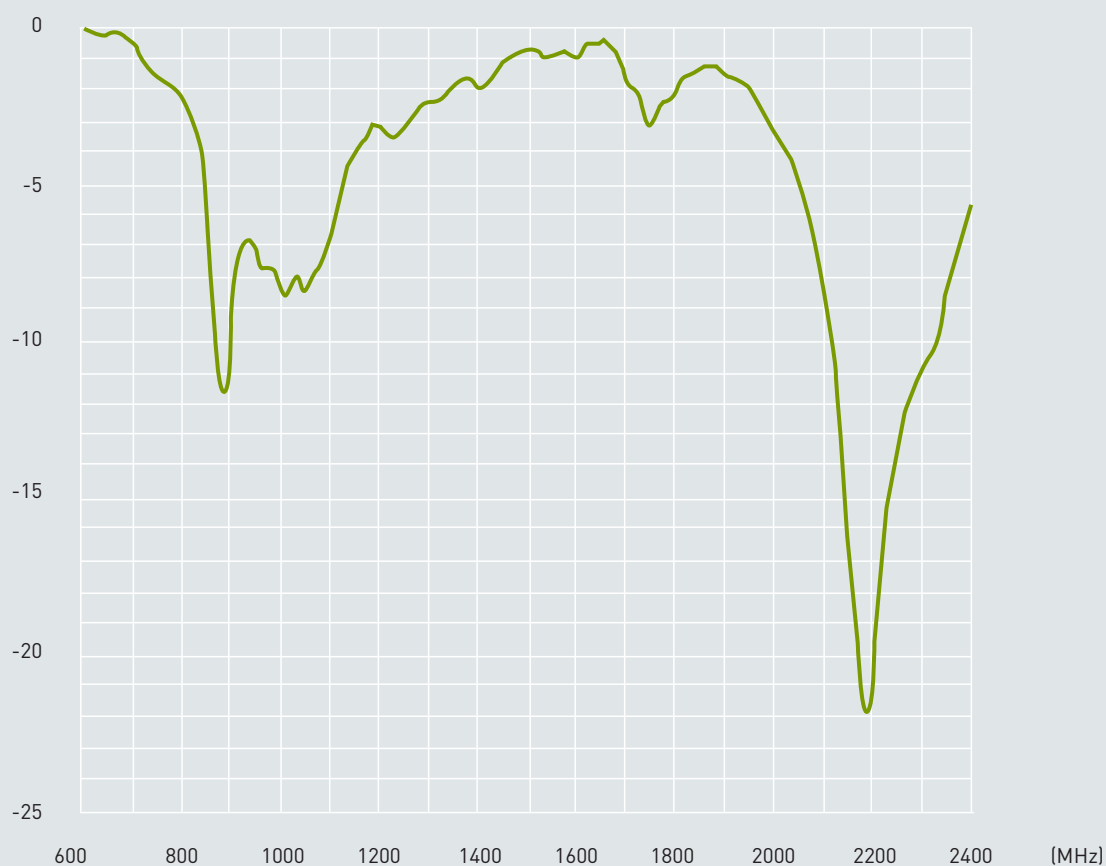
2.2 Environmental & Mechanical Characteristics

Parameter	Specification
Temperature	-40°C to +85°C
Radome Color	Black
Radome Material	Pu
Weight	6g



3. Performance Measurements

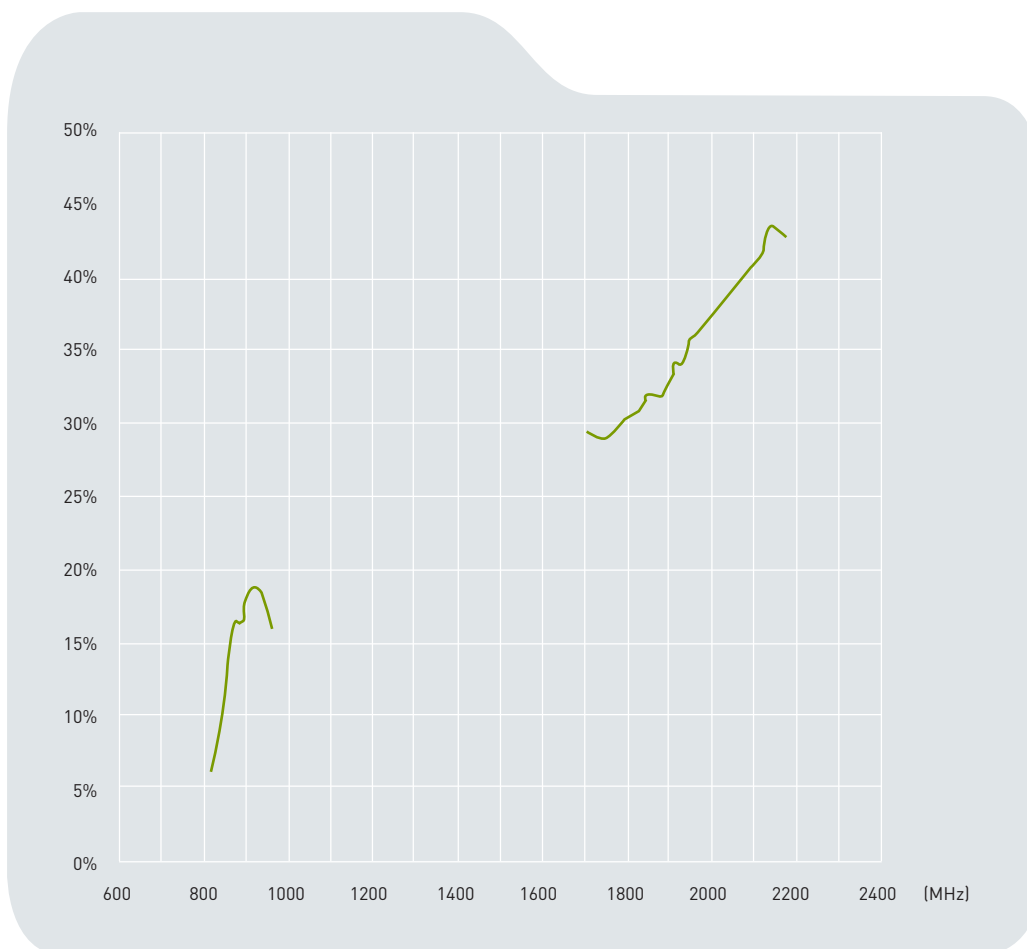
3.1 Return Loss (dB)





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%

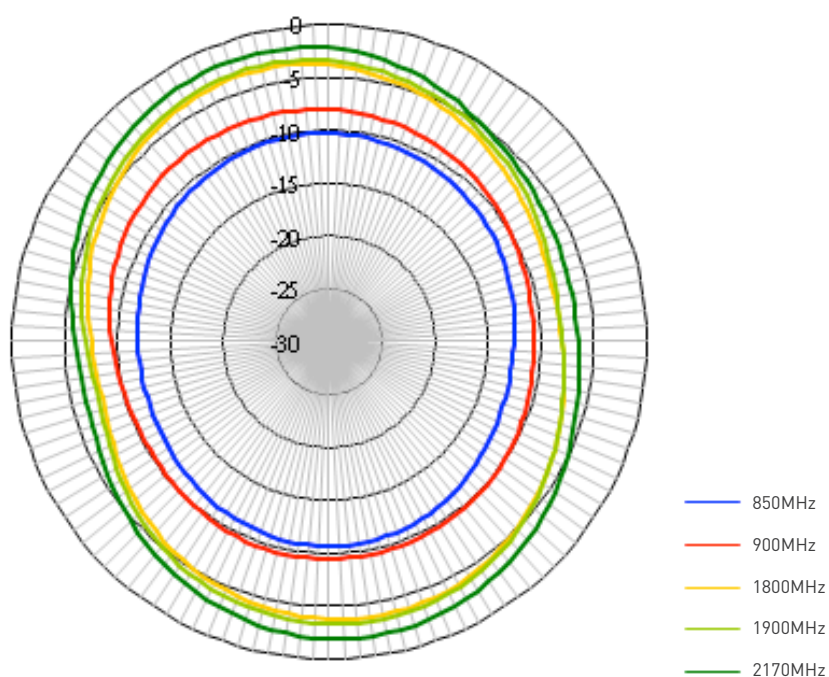
Frequency	1710	1750	1785	1805	1840	1850	1880	1910	1920	1930	1950
Efficiency	29.50%	29.13%	29.94%	30.52%	31.18%	32.10%	32.01%	33.35%	34.33%	34.01%	35.90%

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

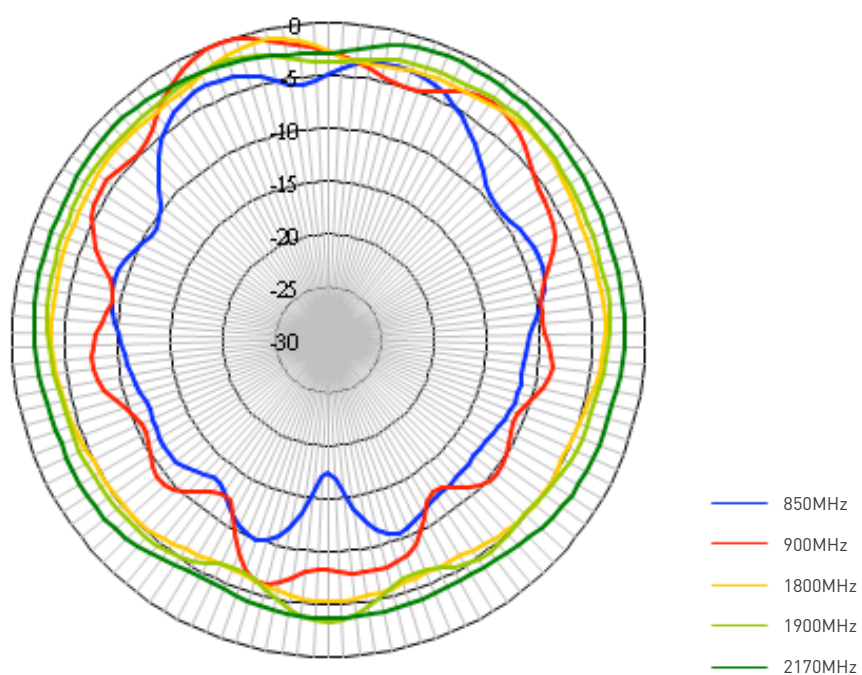


A. Radiation Pattern, Azimuth Plane (XY)



3. Antenna Characteristics

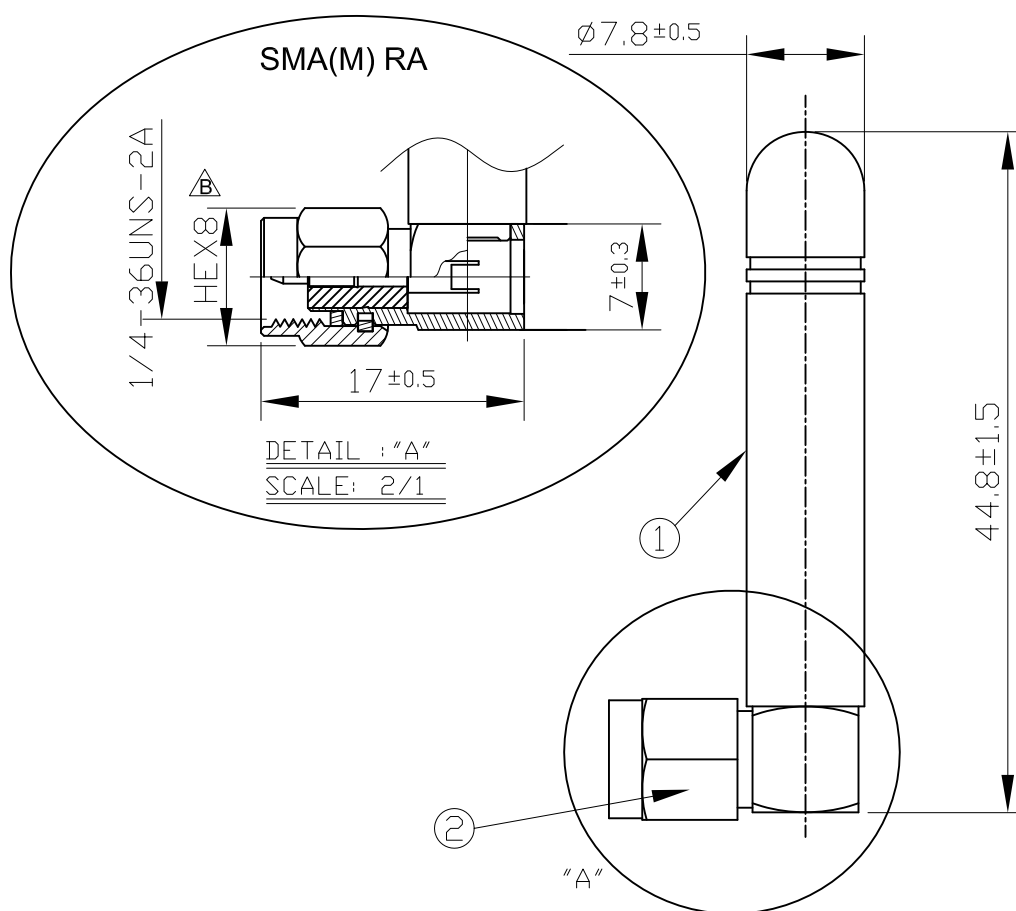
3.3 Radiation Pattern Data



B. Radiation Pattern, Aligned at the Connector



4. Mechanical Drawing

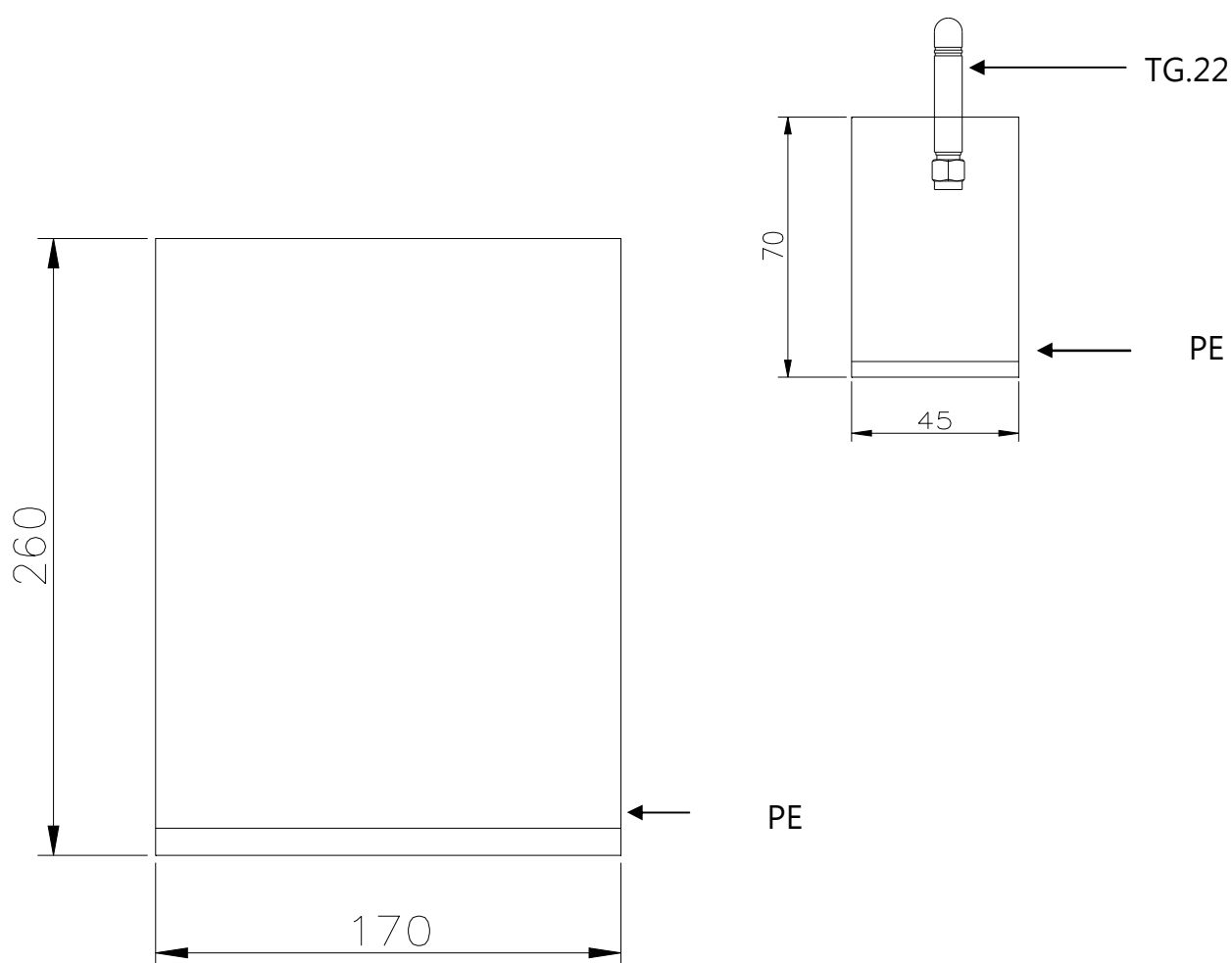


Unit: mm

	Name	Material	Finish	QTY
1	Antenna 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.



6. Installation

- 1) Use hand to screw the SMA connector.
Tighten it until it feels a little tight.



- 2) Use torque wrench which has 0.9 Nm torque limit to tighten it.



- 3) Do not use normal wrench.

