

## SPECIFICATION

|              |   |                                                                                                                  |
|--------------|---|------------------------------------------------------------------------------------------------------------------|
| Part No.     | : | <b>TG.22.0152</b>                                                                                                |
| Product Name | : | Penta-Band Cellular Connector Mount Monopole Helical<br>GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA<br>800MHz ~2200 MHz |
| Features     | : | 0dBi Gain<br>RP-SMA(M) Fixed Right Angle plug, 50 Ohms<br>ROHS Compliant                                         |
| Photo        | : |                                                                                                                  |



## 1. Introduction

The TG.22.0152 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 RP-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

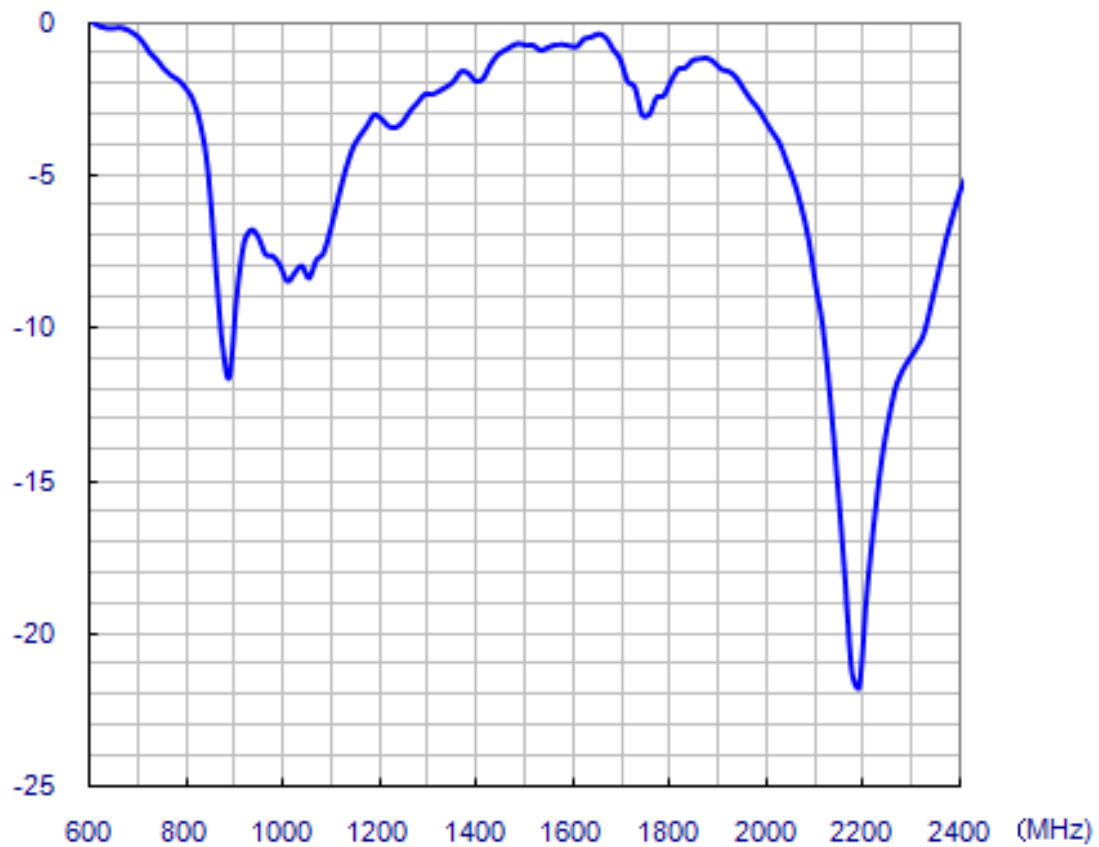
| No | Parameter       | Specification                        |
|----|-----------------|--------------------------------------|
| 1  | Frequency Range | 800MHz to 2200MHz                    |
| 2  | Bands           | GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA |
| 3  | VSWR            | $\leq 2.3$                           |
| 4  | Power Handling  | 20W                                  |
| 5  | Polarization    | Linear                               |
| 6  | Impedance       | 50 Ohms                              |
| 7  | Connector       | RP-SMA(M)RA                          |

### 2.2 Environmental & Mechanical Characteristics

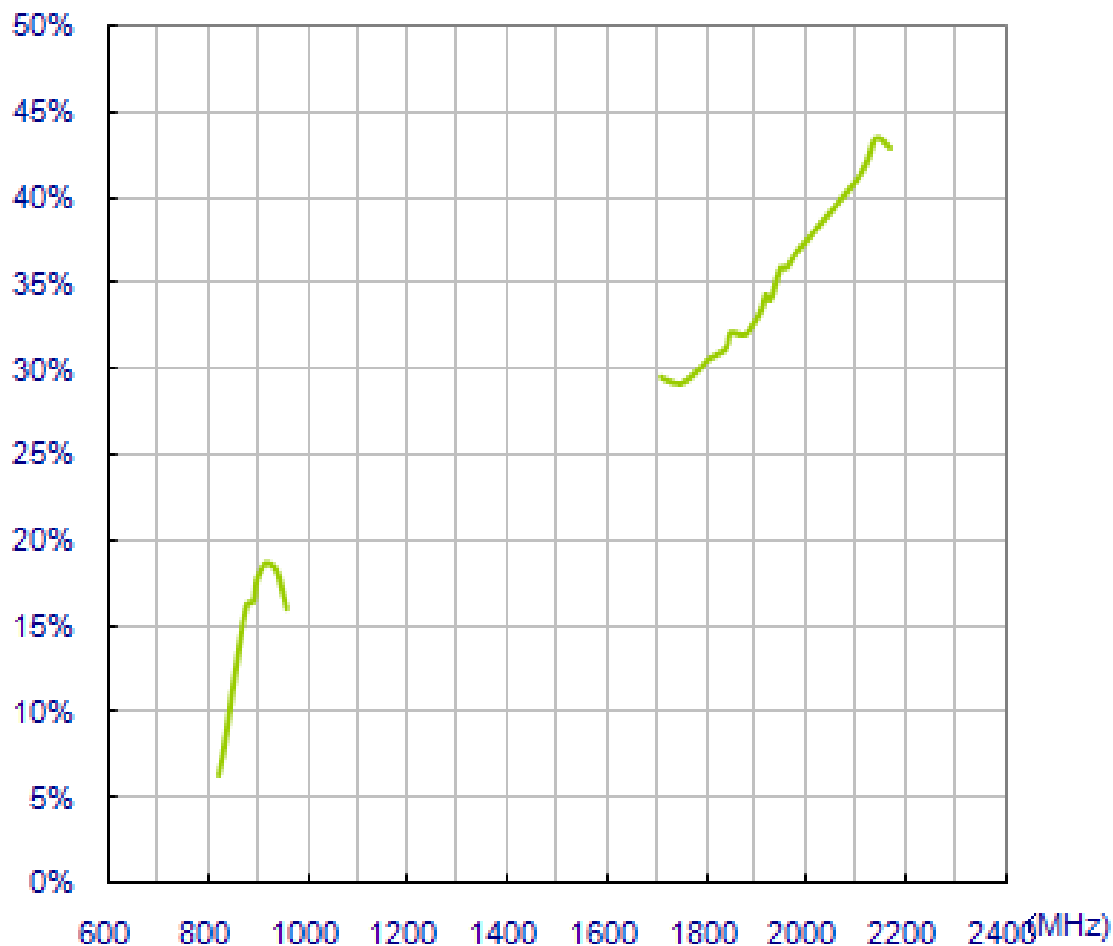
| No | Parameter       | Specification  |
|----|-----------------|----------------|
| 1  | Temperature     | -40°C to +85°C |
| 2  | Radome Colour   | Black          |
| 3  | Radome Material | Pu             |
| 4  | Weight          | 6g             |

## 3. Performance Measurements

### 3.1 Return Loss (dB)

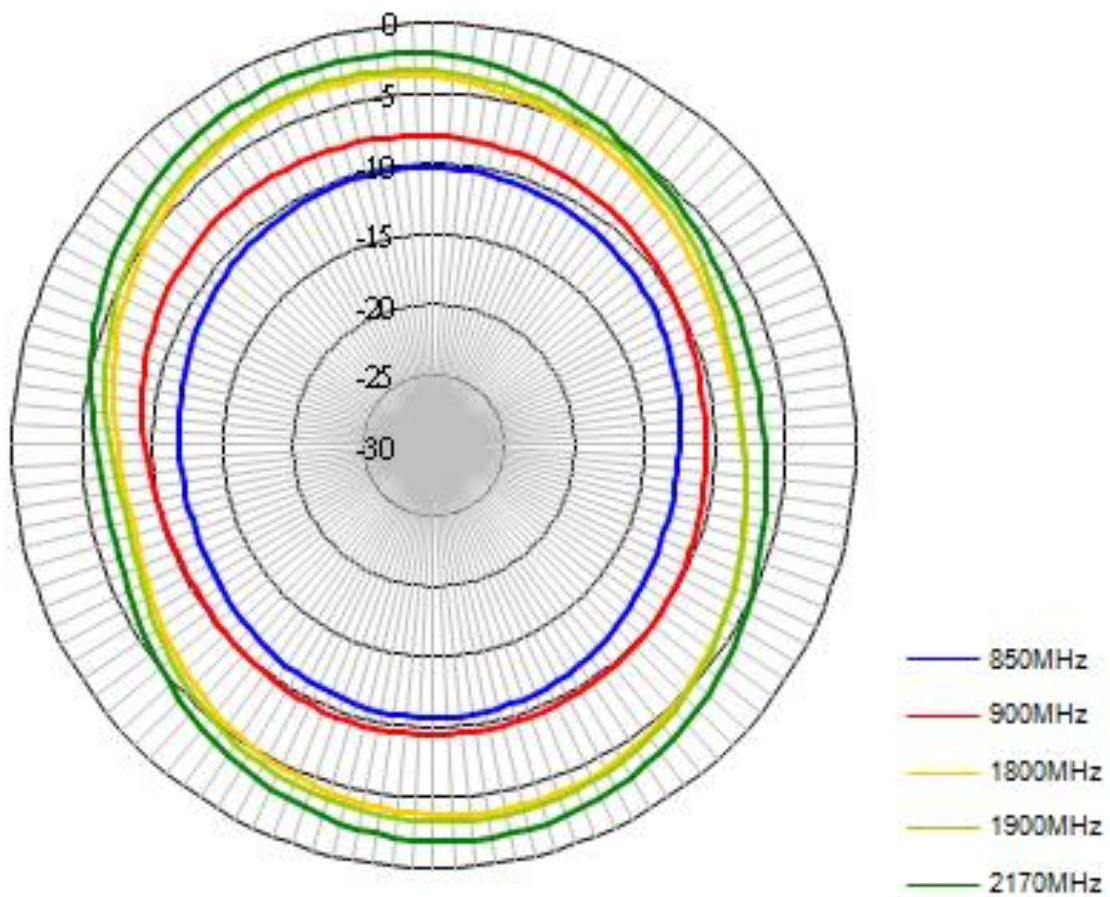


### 3.2 Efficiency (dB)

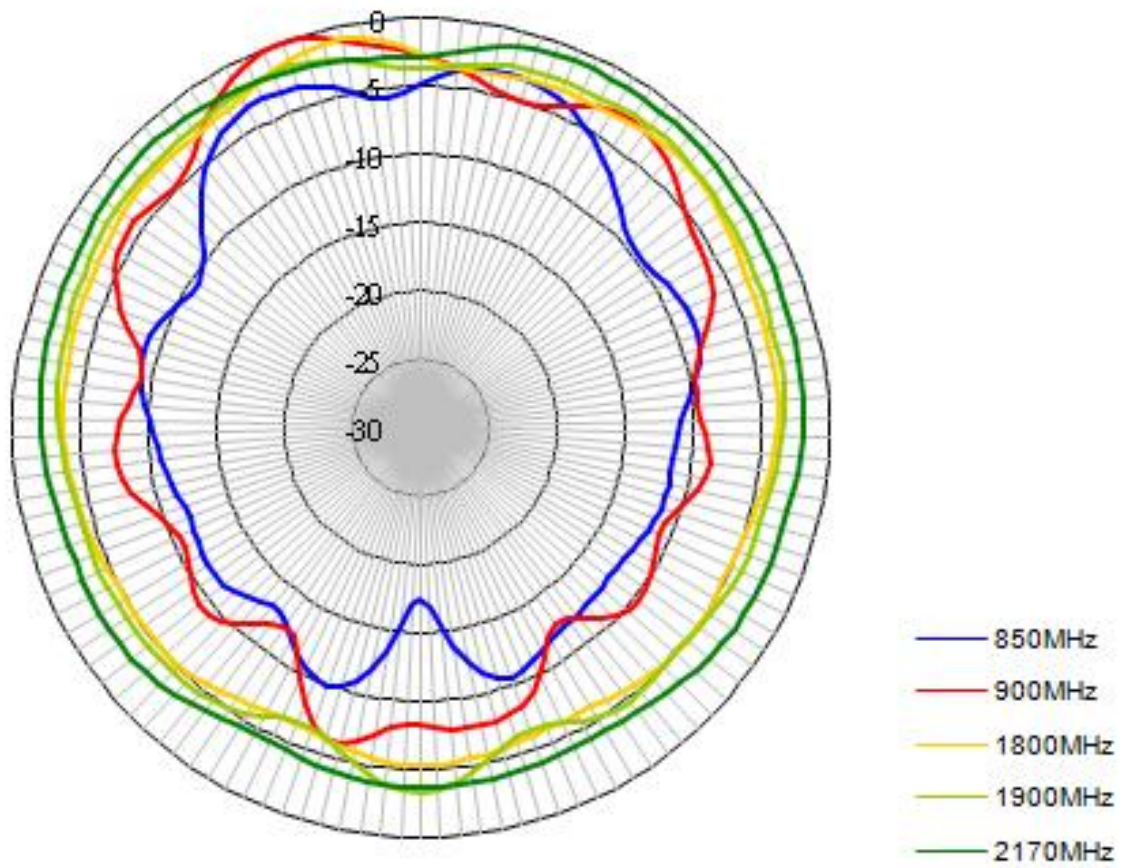


| TG.22.0112 |            |
|------------|------------|
| Frequency  | Efficiency |
| 824        | 6.27%      |
| 836        | 8.09%      |
| 849        | 10.76%     |
| 869        | 14.60%     |
| 880        | 16.19%     |
| 894        | 16.45%     |
| 900        | 17.70%     |
| 915        | 18.58%     |
| 925        | 18.62%     |
| 940        | 18.21%     |
| 960        | 16.00%     |
|            |            |
| 1575       | 21.75%     |
|            |            |
| 1710       | 29.50%     |
| 1750       | 29.13%     |
| 1785       | 29.94%     |
| 1805       | 30.52%     |
| 1840       | 31.18%     |
| 1850       | 32.10%     |
| 1880       | 32.01%     |
| 1910       | 33.35%     |
| 1920       | 34.33%     |
| 1930       | 34.01%     |
| 1950       | 35.90%     |
| 1960       | 35.87%     |
| 1980       | 36.71%     |
| 1990       | 37.07%     |
| 2110       | 41.34%     |
| 2140       | 43.44%     |
| 2170       | 42.88%     |

### 3.3 Radiation Pattern Data

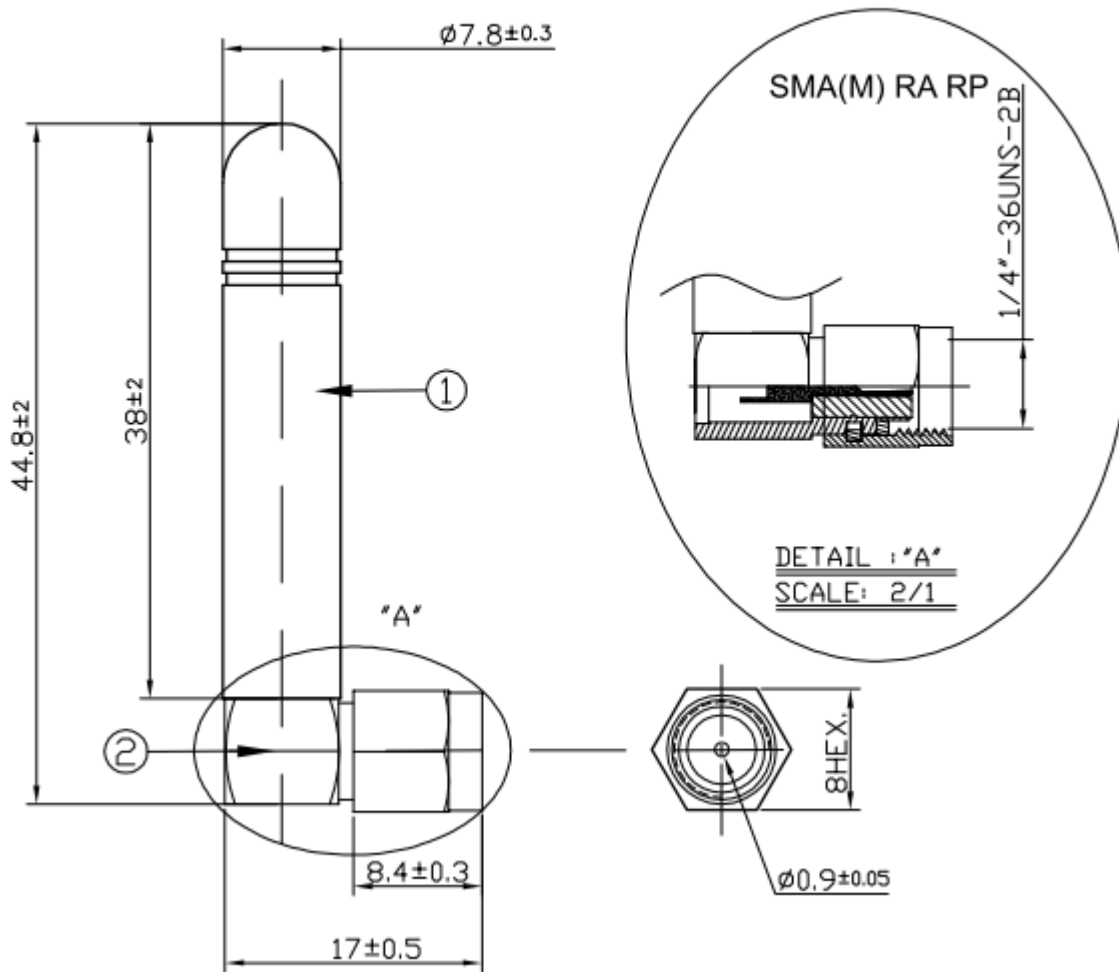


A. Radiation Pattern, Azimuth Plane (XY)



B. Radiation Pattern, Aligned at the Connector

## 4. Mechanical Drawing



|   | Name            | P/N            | Material | Finish | QTY |
|---|-----------------|----------------|----------|--------|-----|
| ① | Antenna Housing | 000111F0300XXA | TPEE     | Black  | 1   |
| ② | SMA(M) RP RA    | 200211J020002A | Brass    | Gold   | 1   |

unit:mm

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