



Specification

# SPECIFICATION

- Part No. : **TG.22.0111**
- Spec No. : **TG.22.03**
- Product Name : Penta-Band Cellular Connector Mount Dipole  
GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA  
800MHz ~2200 MHz
- Features : 0dBi Gain  
Straight SMA Male, 50 Ohms  
ROHS Compliant



## REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	April 06 2009	All	New product	TW Product Centre	Ronan Quinlan



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## 1.0 Introduction

The TG.22.0111, Penta-band GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA 800MHz to 2200MHz dipole antenna is a quality robust antenna with high gain in small form factor. Connection is made via straight SMA(M) connector. With a hardened waterproof PU casing, this antenna is the ideal GSM antenna for telematics devices.

## 2.0 Key Antenna Performance Indicators

### Electrical Specifications

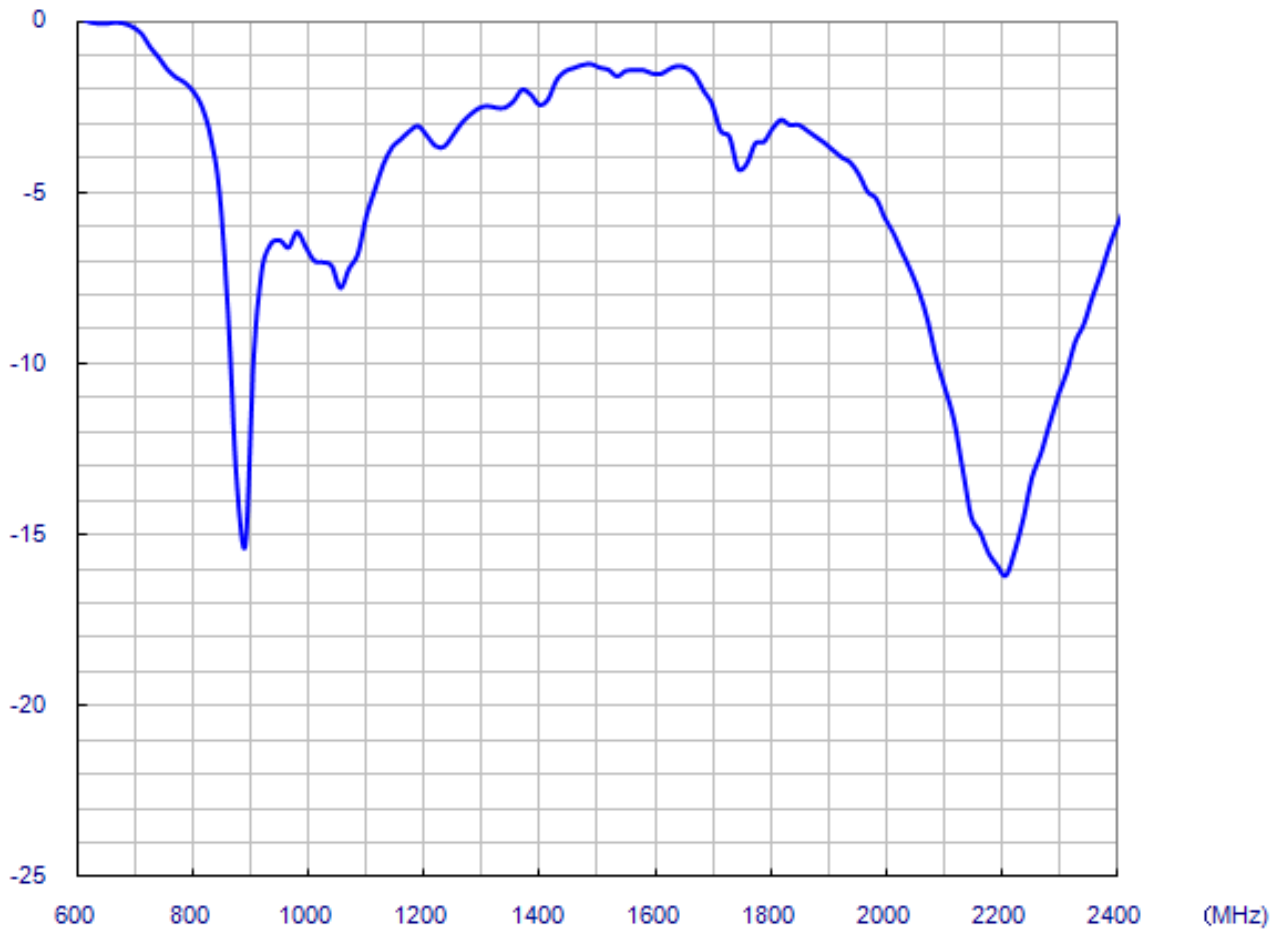
Parameter	Specification
Frequency range	800MHz to 2200MHz
Bands	GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA
VSWR	≤2.3
Polarization	Linear
Power handling	20 W
Impedance	50 Ohms
Connector	Straight SMA(M)

### Environmental & Mechanical Characteristics

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



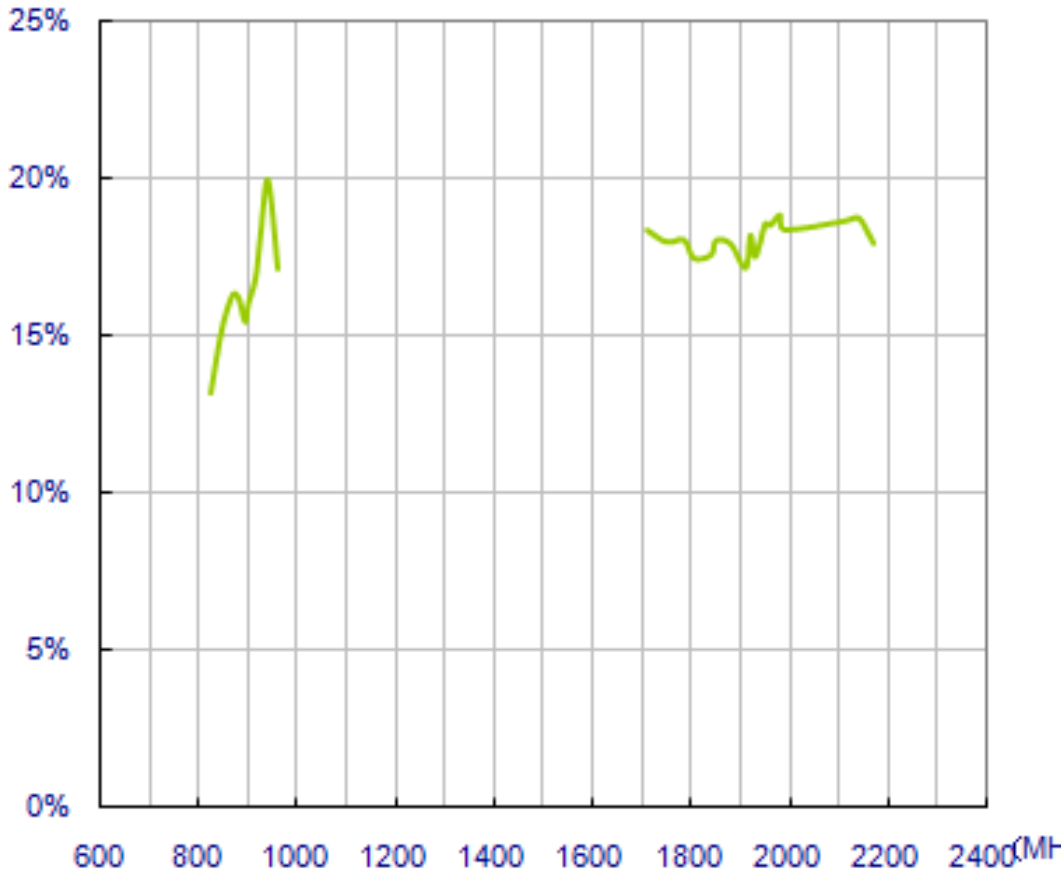
### 3.0 Return Loss (dB)





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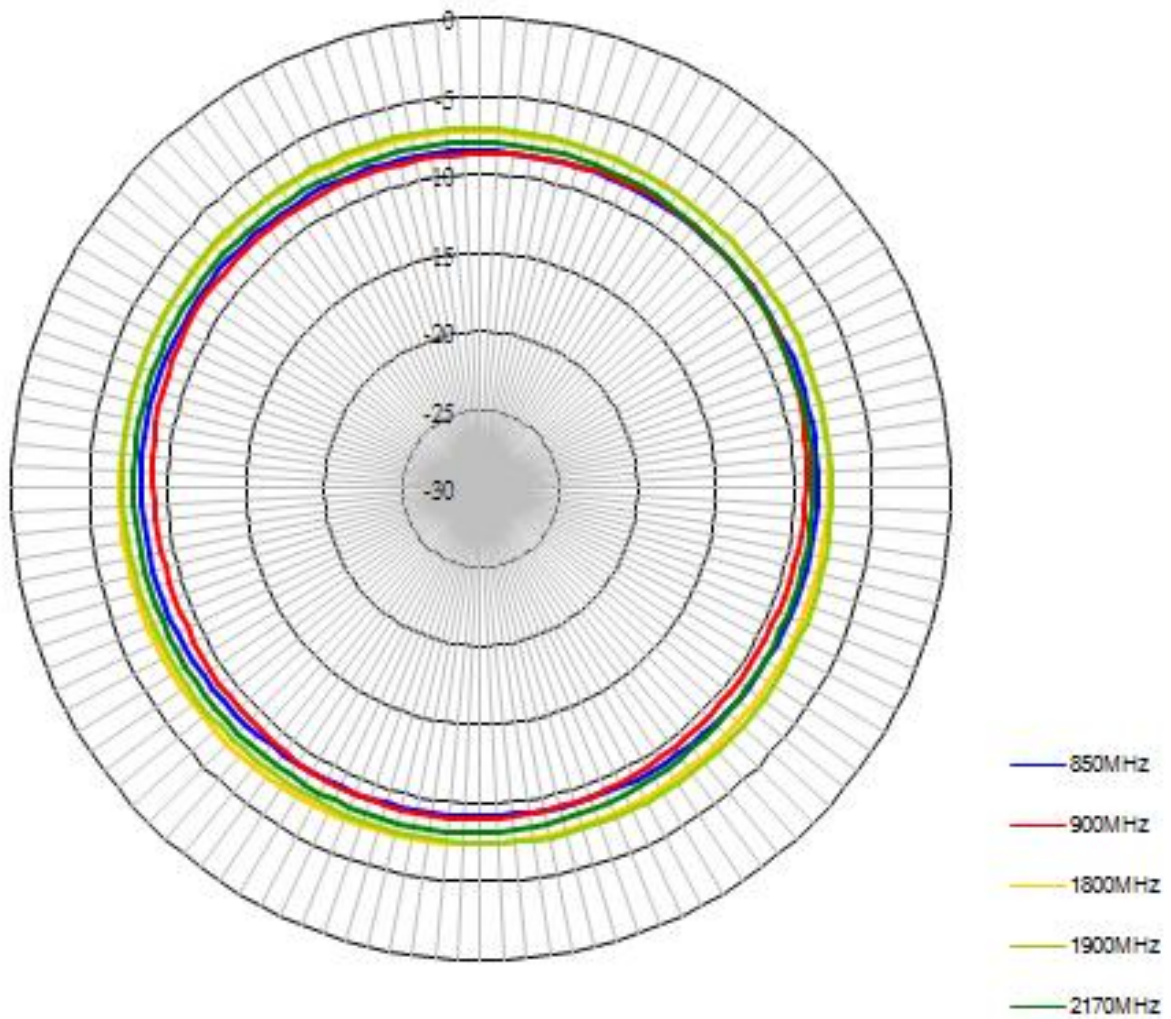
### 3.1 Efficiency (dB)



TG-22-0111	
Frequency	Efficiency
824	13.18%
836	14.31%
849	15.37%
869	16.30%
880	16.21%
894	15.43%
900	16.01%
915	16.83%
925	18.20%
940	19.92%
960	17.11%
1575	14.98%
1710	18.33%
1750	17.96%
1785	18.03%
1805	17.45%
1840	17.55%
1850	18.01%
1880	17.90%
1910	17.13%
1920	18.18%
1930	17.50%
1950	18.53%
1960	18.48%
1980	18.81%
1990	18.35%
2110	18.62%
2140	18.72%
2170	17.92%



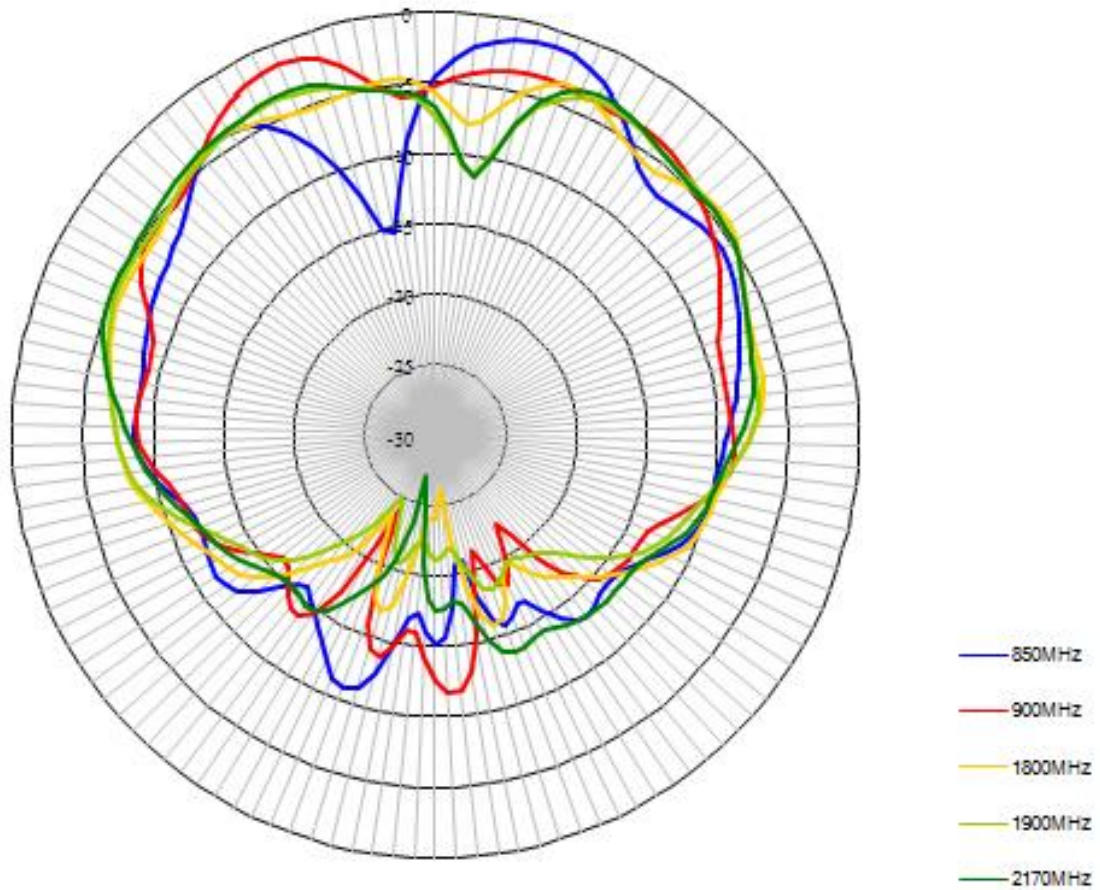
### 3.3 Radiation Pattern Data



A. Radiation Pattern, Azimuth Plane (XY)



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B. Radiation Pattern, Aligned at the Connector



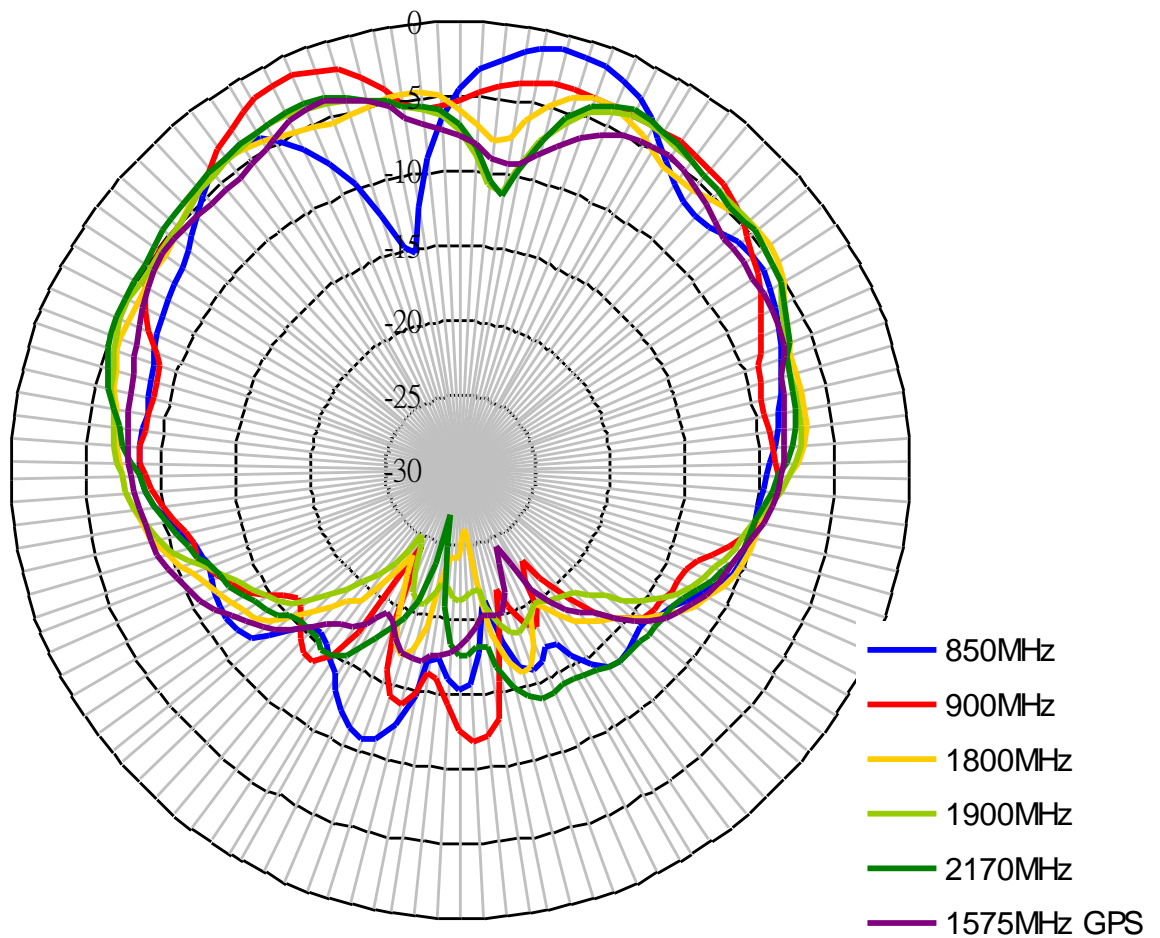
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GPS

-3.05gain

15% radiation efficienc

Radiation Pattern, Aligned at the Connector

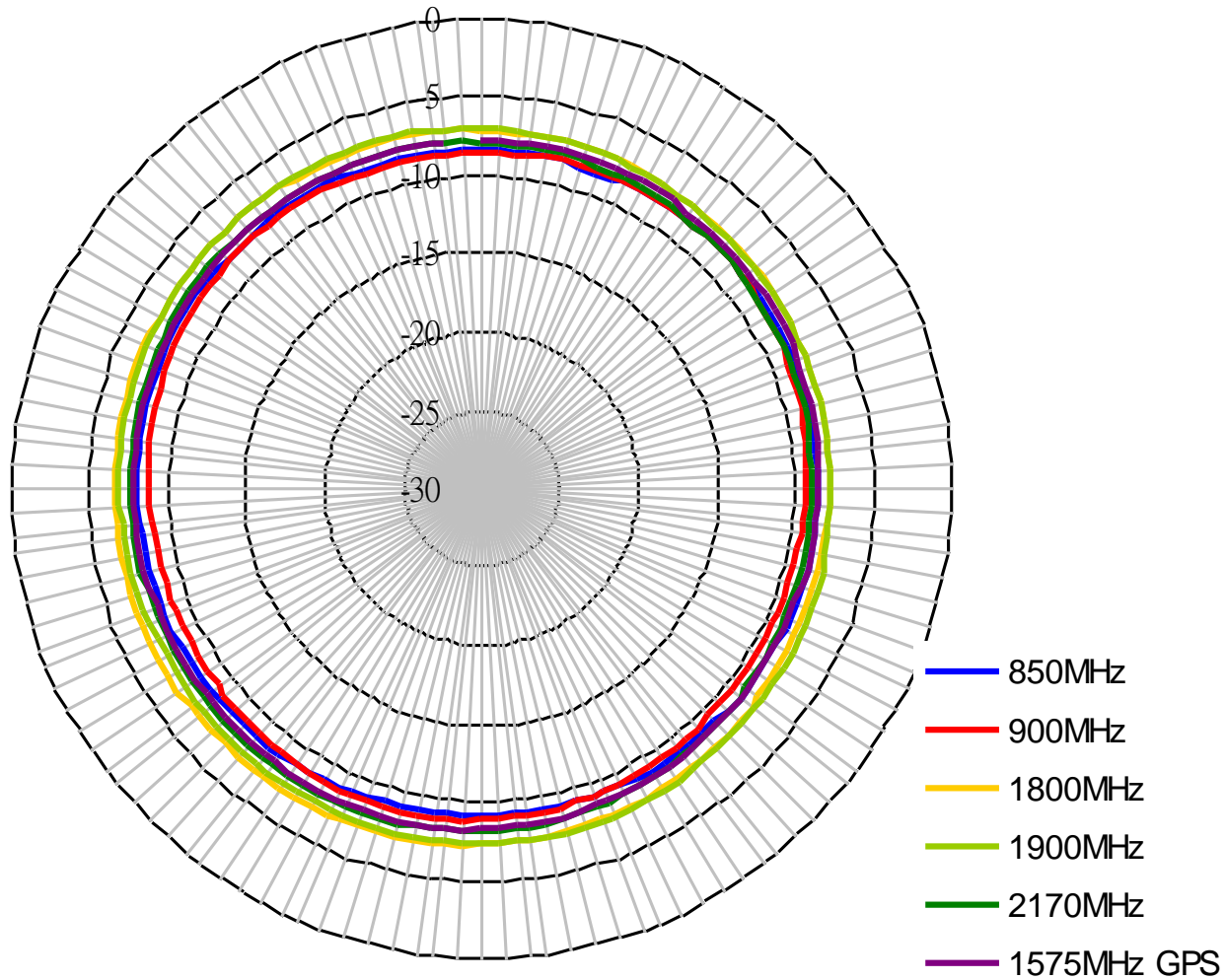






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Radiation Pattern, Azimuth Plane (XY)

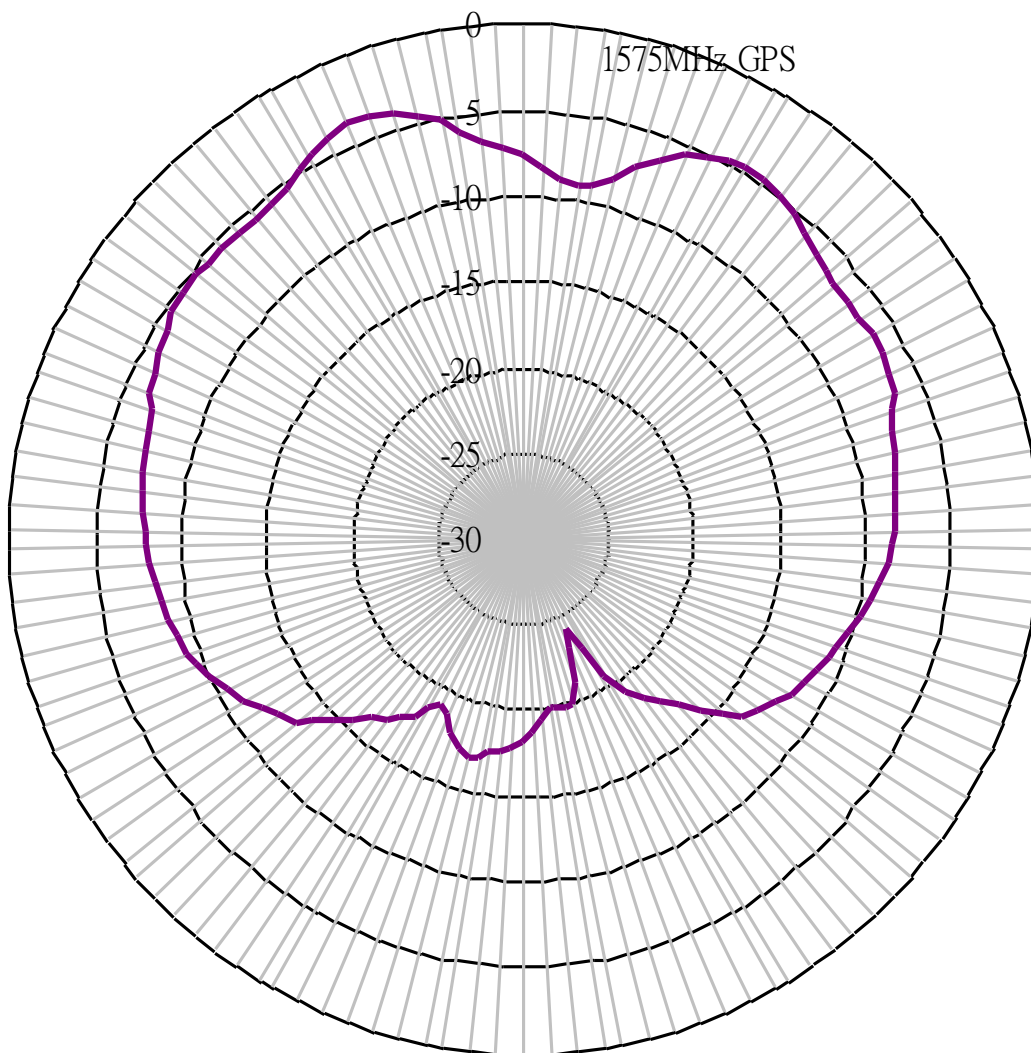






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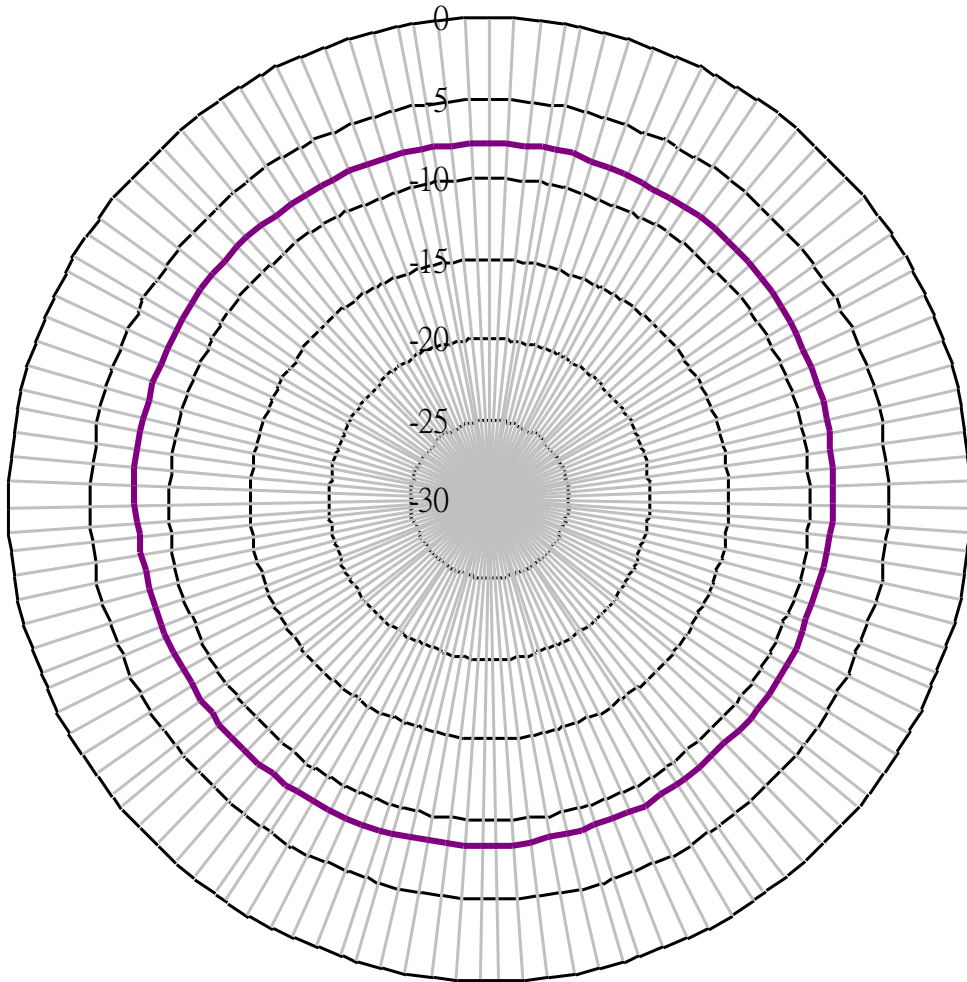
Radiation pattern – 1575MHz only





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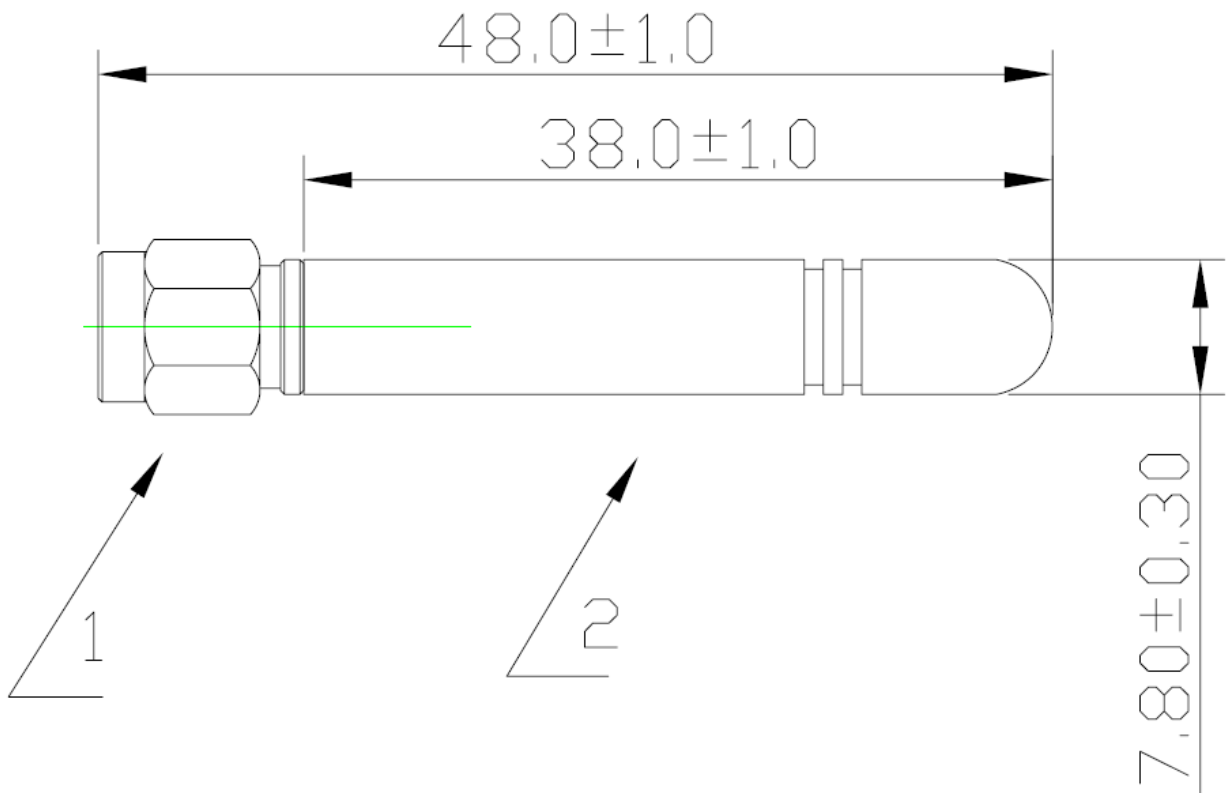
Radiation Pattern, Azimuth Plane (XY) – 1575MHz only





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### 4.0 Drawing and Dimensions



Note:  
Unit:mm  
SMA(M) Connector