



Specification

# SPECIFICATION

Part No. : **TG.22.0112**

Product Name : Penta-Band Cellular Connector Mount Dipole  
GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA  
800MHz ~2200 MHz

Features : 0dBi Gain  
SMA(M) Fixed Right Angle plug, 50 Ohms  
ROHS Compliant

Photo :



## REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Jan 9th 2007	All	Preliminary Specification	TW Product Centre	Ronan Quinlan
02	Dec 8 <sup>th</sup> 2008	All	New Layout	TW Product Centre	Dermot O'Shea



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### 1.0 Introduction

The TG.22.0112 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 fixed right angle SMA(M) connector with a hardened waterproof PU casing, this antenna is the ideal GSM antenna for telematics devices.

### 2.0 Antenna Performance

#### 2.1 Electrical Specifications

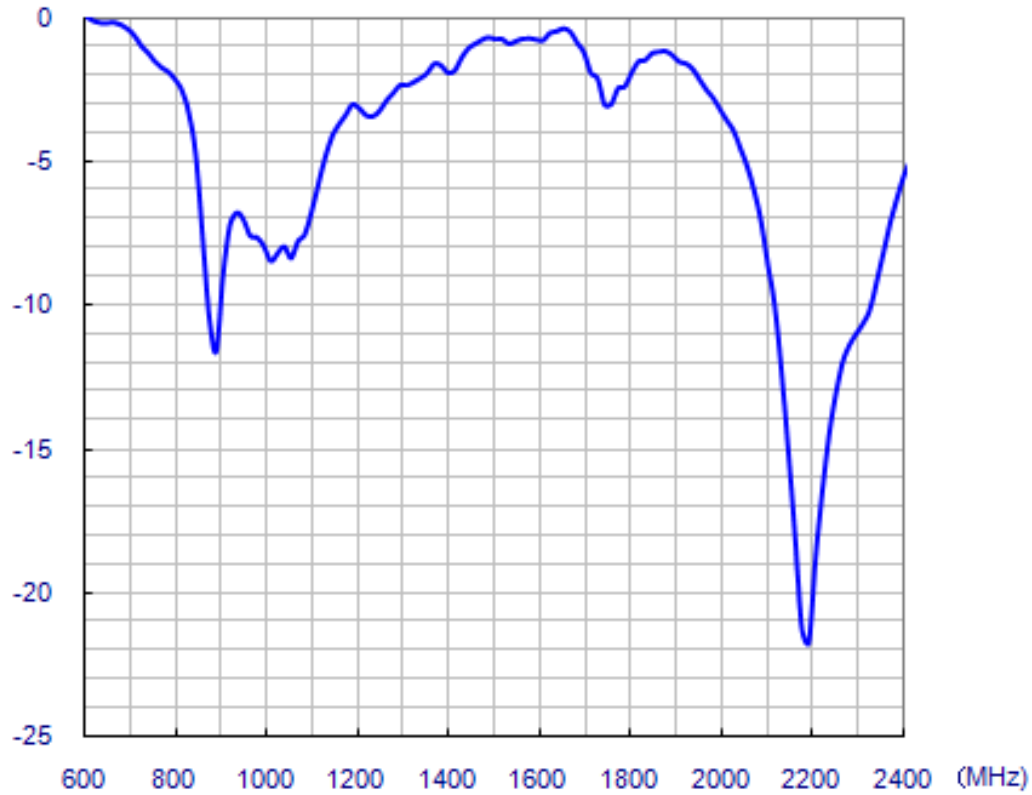
No	Parameter	Specification
1	Frequency Range	800MHz to 2200MHz
2	Bands	GSM-DCS-PCS-UMTS-CDMA-GPRS-EDGE-HSPA
3	VSWR	≤ 2.3
4	Power Handling	20W
5	Polarization	Linear
6	Impedance	50 Ohms
7	Connector	SMA(M)RA

#### 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



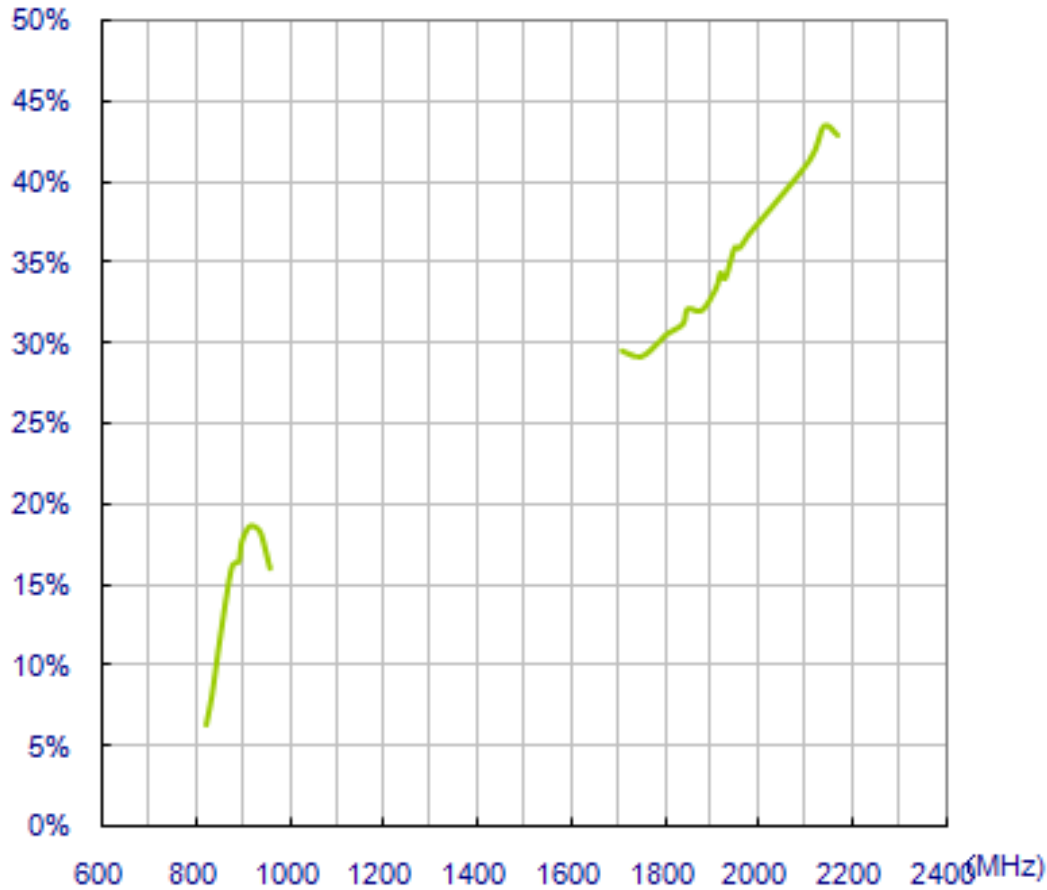
### 3.0 Return Loss





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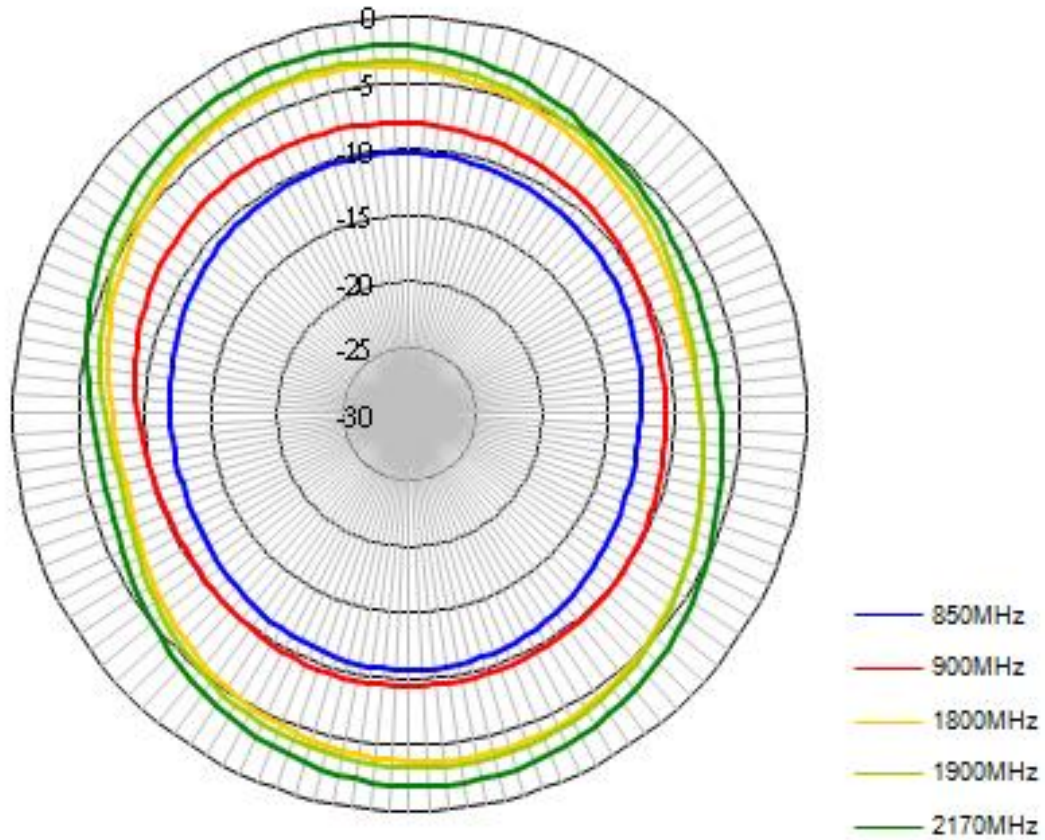
### 3.1 Efficiency (dB)



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%



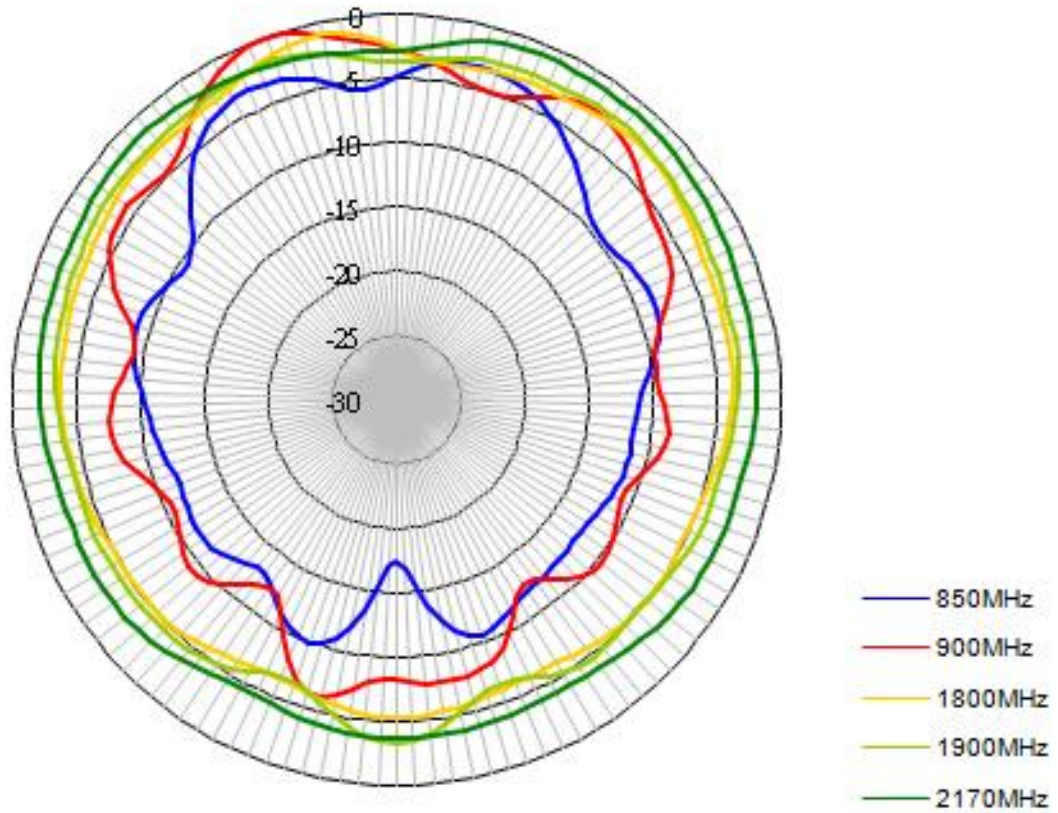
### 3.3 Radiation Pattern Data



A. Radiation Pattern, Azimuth Plane (XY)



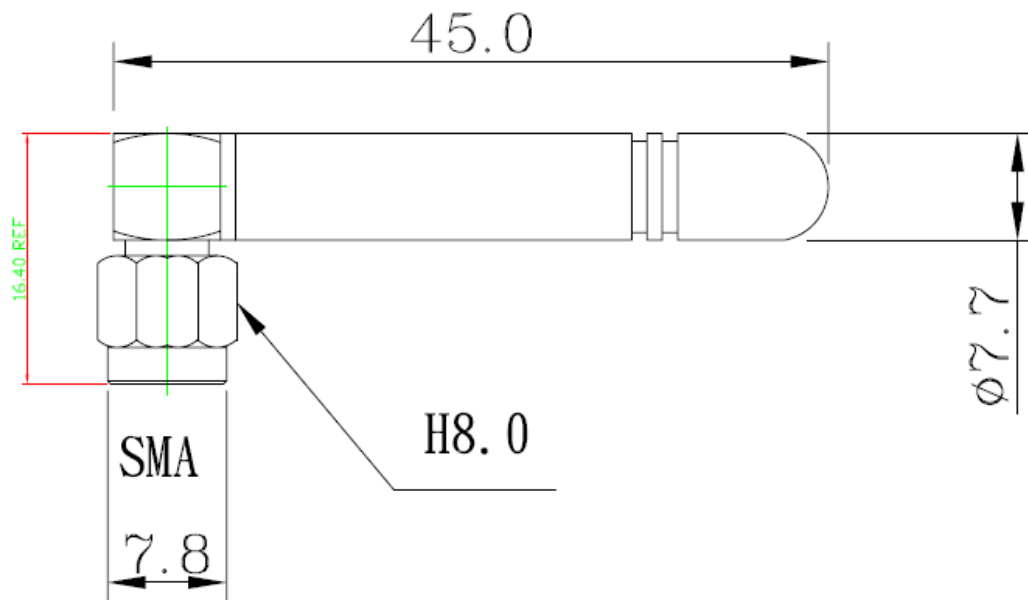
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B. Radiation Pattern, Aligned at the Connector



## 4.0 Mechanical Drawing



unit:mm