SPECIFICATION

Part No. : PC30.07.0100A

Product Name : FR4 Penta-band GSM Antenna

Feature : High antenna RF efficiency (Avg 50% across all bands)

RoHS compliant



I. Introduction

This dipole antenna delivers high efficiency, averaging 50% across all bands, in a small form factor to tracking devices, metering devices and other M2M applications. Further tuning can be done for optimized embedded solutions at specific cellular bands

II. Specification (Free Space)

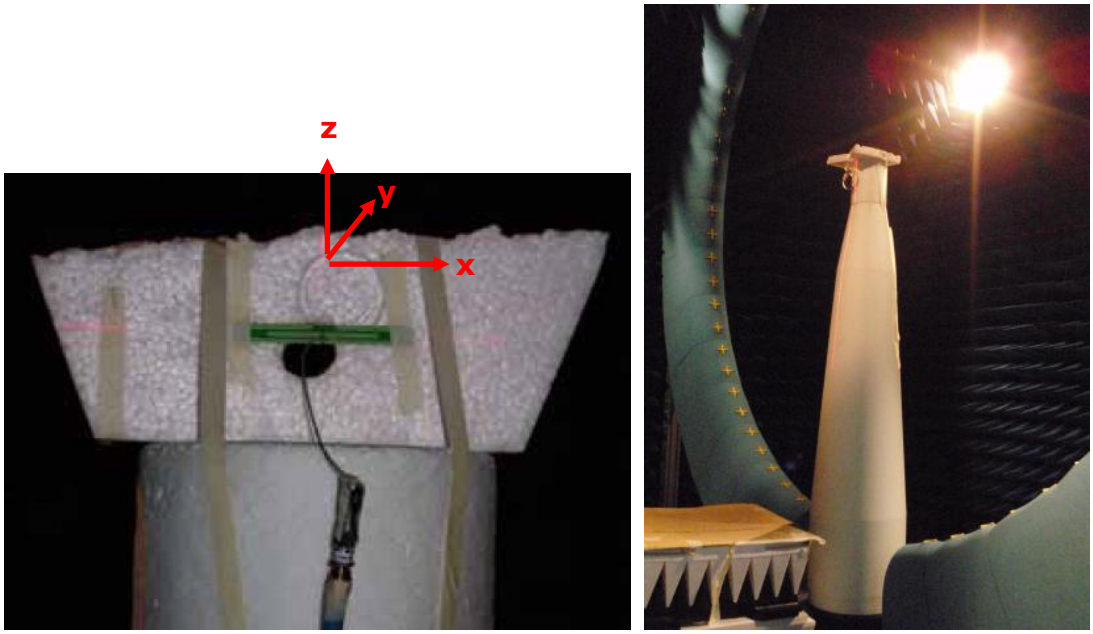
Specifications					
Communication System	**Penta-band Cellular**				
	AMPS	**GSM**	**DCS**	**PCS**	**UMTS**
Frequency (MHz)	824 ~ 896	880~960	1710~1880	1850~1990	1710~2170
Average Efficiency	17%	38%	60%	70%	68%
Gain	2dBi				
Impedance	50 Ohm				
Radiation Pattern	Omni-directional				
Polarization	Linear				
PCB	FR4 74.70 x 8.20 x 0.8 mm				
Connector	IPEX				
Cable	∅1.13				
Cable Length	100 mm				
Operation Temperature	-40°C ~ +85°C				
Storage Temperature	-40°C ~ +85°C				

Please note that Cables and Connectors are Customizable, customized solution will have an MOQ

III. Electrical Property

III.1 Test Setup

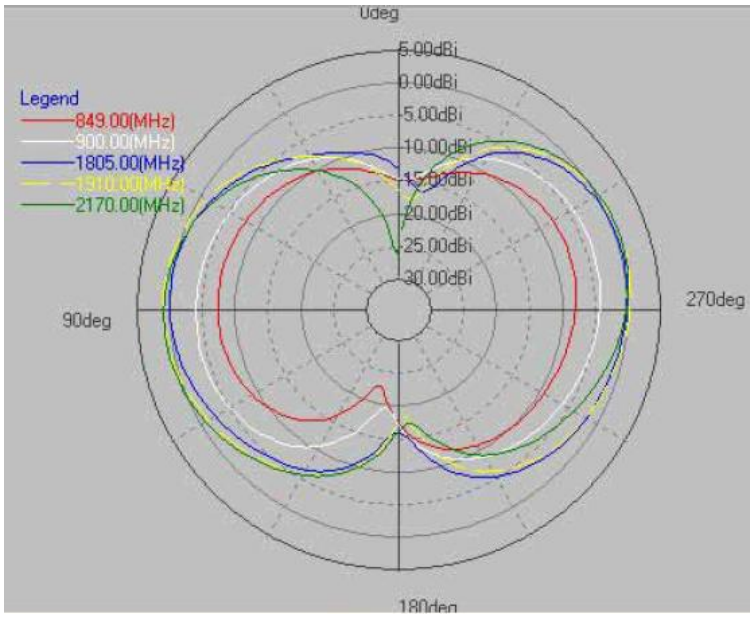
Satimo SG64 3D-chamber is used for radiation and efficiency test. For the free space test, a Styrofoam is used to fix the antenna in the testing set.



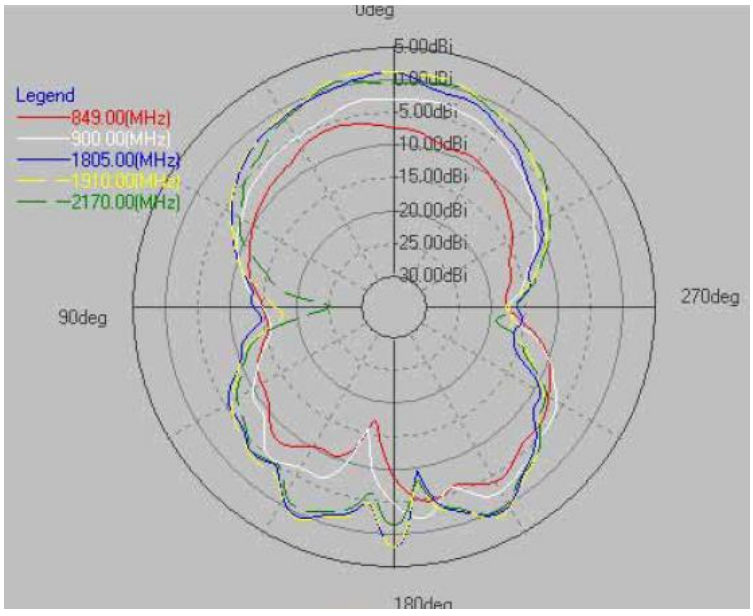
Antenna setup and Satimo SG64 3D-chamber.

III.2 Radiation Pattern

The radiation pattern of PC.30 in free space as the above test setup is --

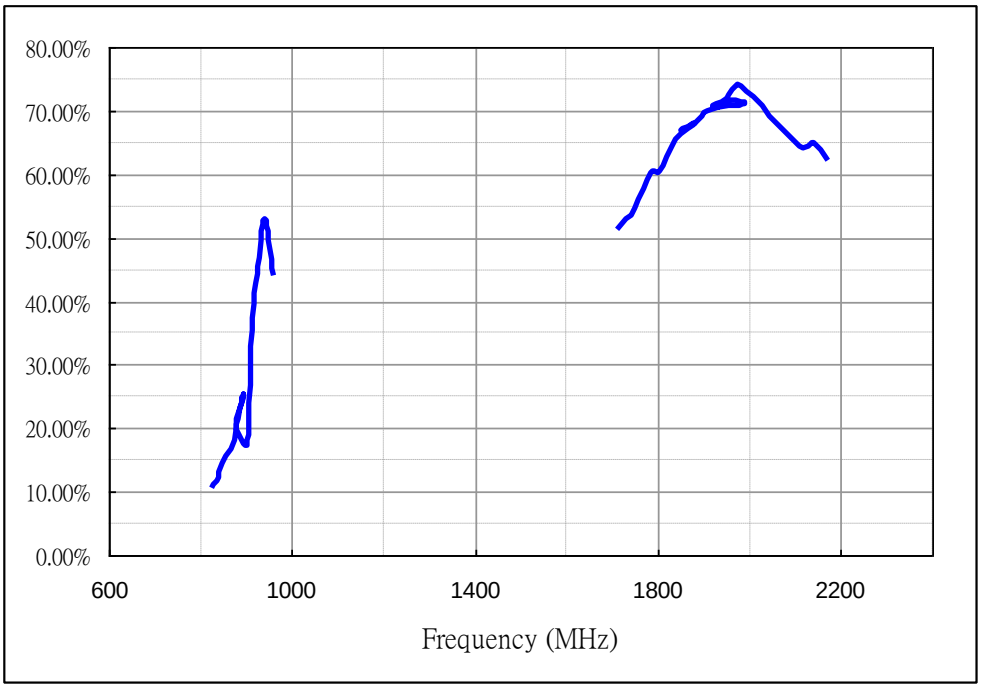


Radiation pattern of x-y plane



Radiation pattern of x-z plane

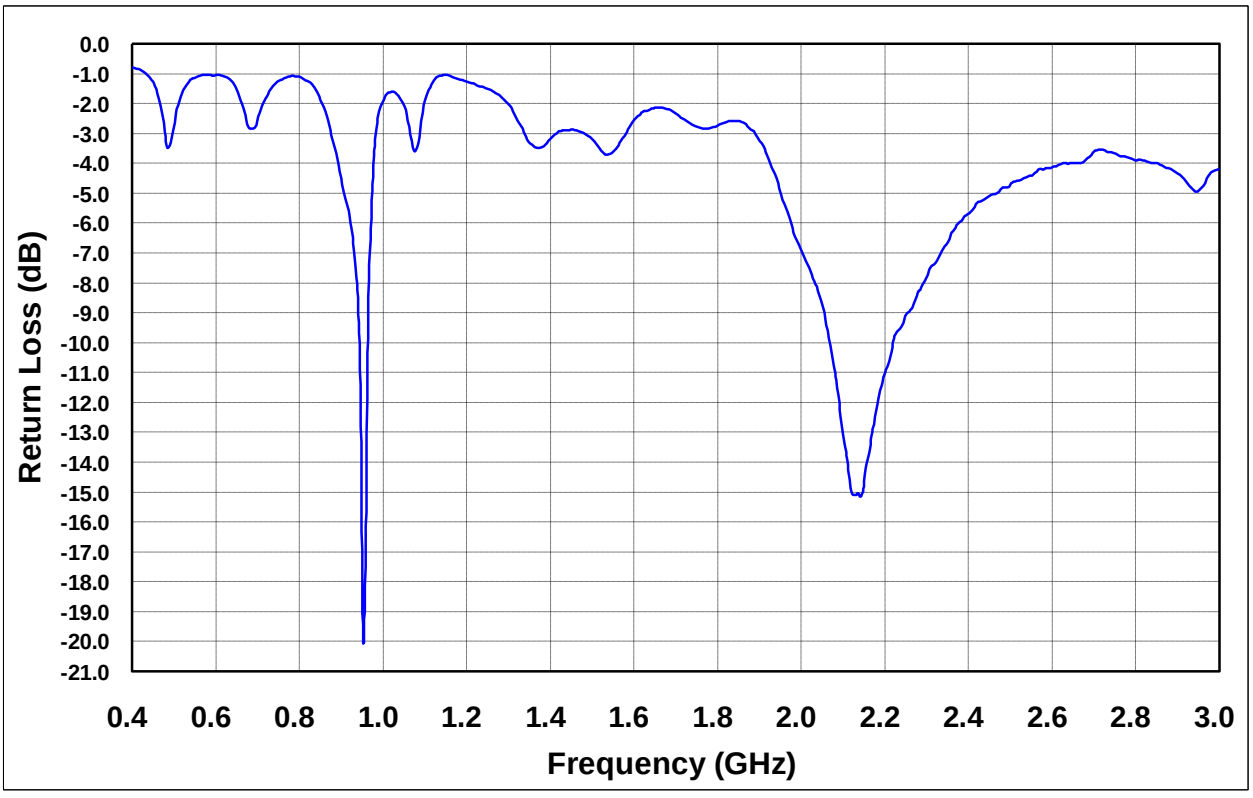
III.3 Efficiency



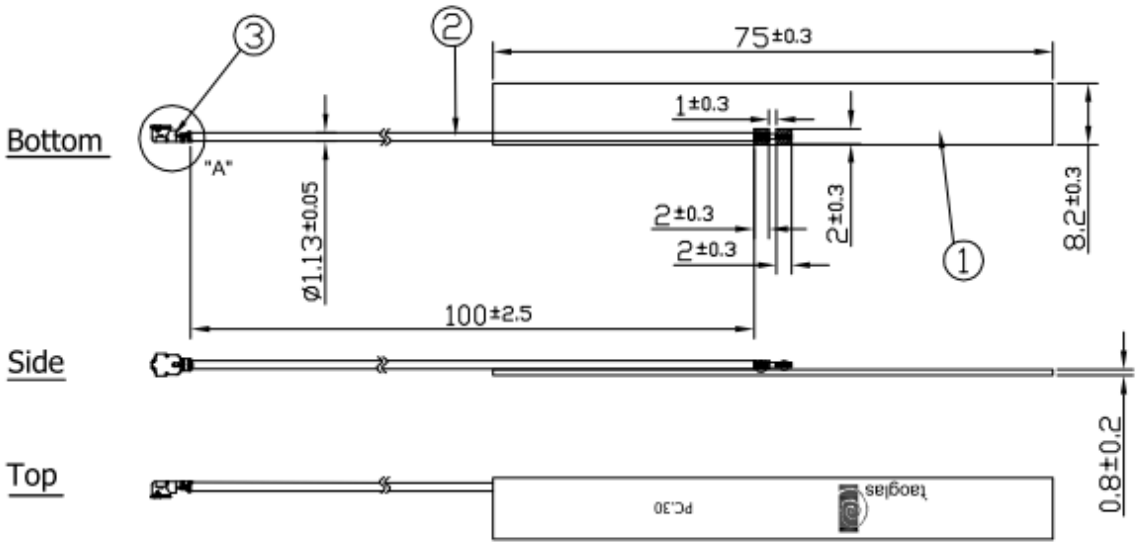
III.4 Return Loss

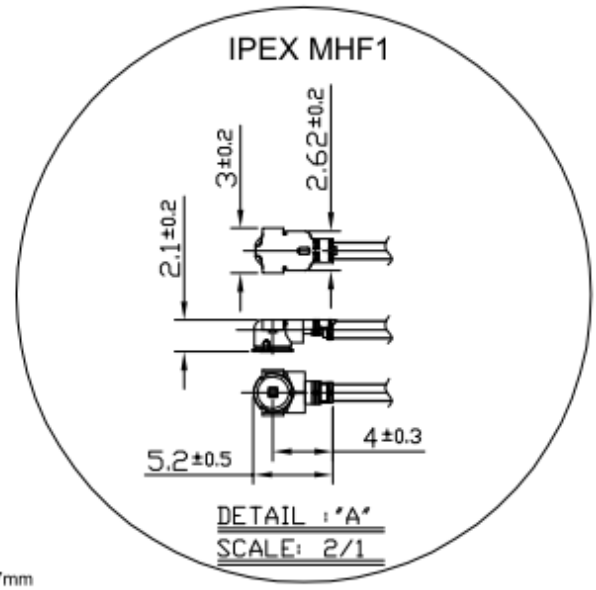
A piece of Styrofoam is use to hold PC.30 at least 30cm away from any metal surrounding objects. Agilent E5071B Network Analyzer is used for the return loss measurement.





IV. Drawing





NOTES:
1.NO DREGS OR INSUFFICIENT SOLDERING. SOLDER THICKNESS 0.3~1.7mm
2.THE SOLDER MUST BE SMOOTH AND FULL TO THE EDGES OF THE PAD.
THE SOLDER MUST NOT EXTEND OUTSIDE OF THE PAD AREA.
3.THE CONNECTOR POSITION HAS SPECIAL ORIENTATION TO THE PCB AS PER DRAWING.
4.SOLDERED AREA.

	Name	P/N	Material	Finish	QTY
1	PC.30 PCB	100211G010011A	FR4.08t	Black	1
2	1.13 Mini-Coaxial	OD.113.J	FEP	Black	1
3	IPEX MHF1	IPEX MHF1.113	Brass	Gold	1