



**THE DATASHEET OF  
PC30.07.0100A**



## 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)

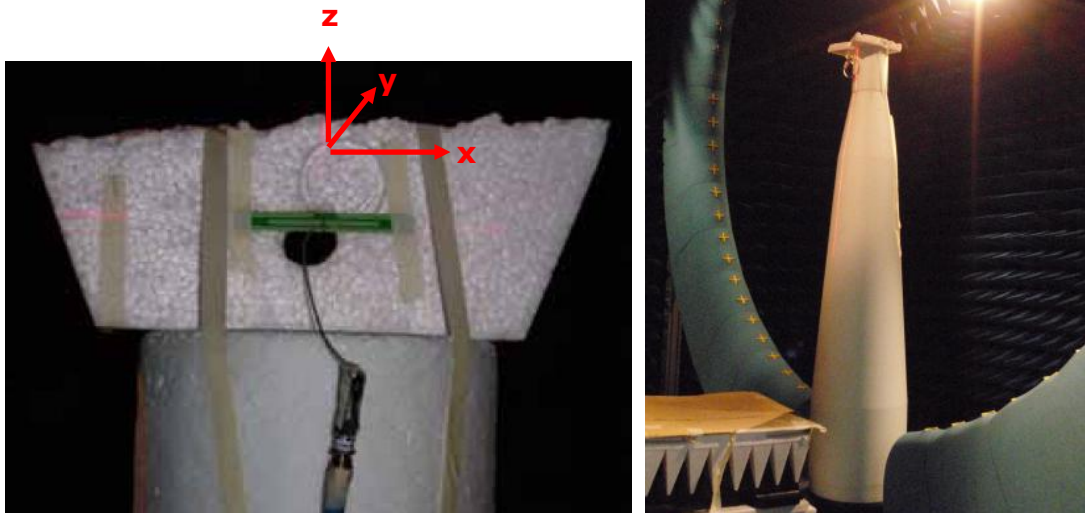
Specifications					
Communication System	Penta-band Cellular				
	AMPS	GSM	DCS	PCS	UMTS
Frequency (MHz)	824 ~ 896	880~960	1710~1880	1850~1990	1710~2170
Average Efficiency	17%	38%	60%	70%	68%
Gain	2dBi				
Impedance	50 Ohm				
Radiation Pattern	Omni-directional				
Polarization	Linear				
PCB	FR4 74.70 x 8.20 x 0.8 mm				
Connector	IPEX				
Cable	Ø1.13				
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

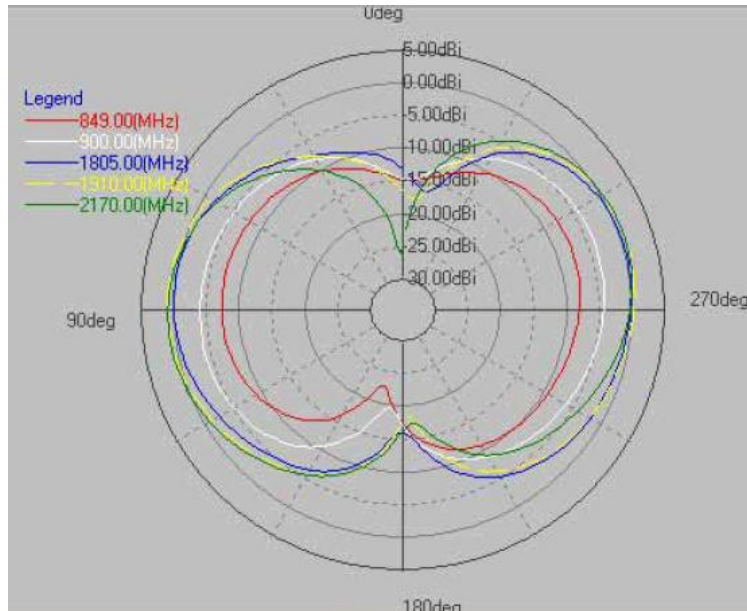
Satimo SG64 3D-chamber is used for radiation and efficiency test. For the free space test, a Styrofoam is used to fix the antenna in the testing set.



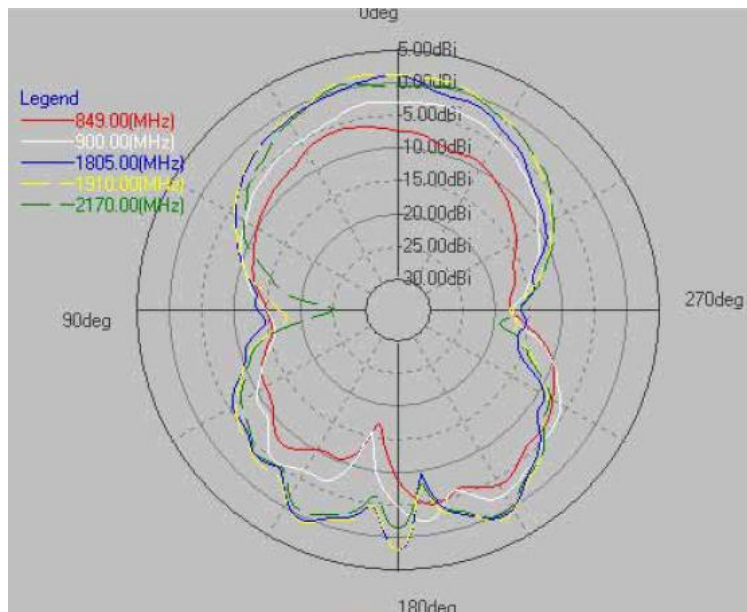
Antenna setup and Satimo SG64 3D-chamber.

### III.2 Radiation Pattern

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

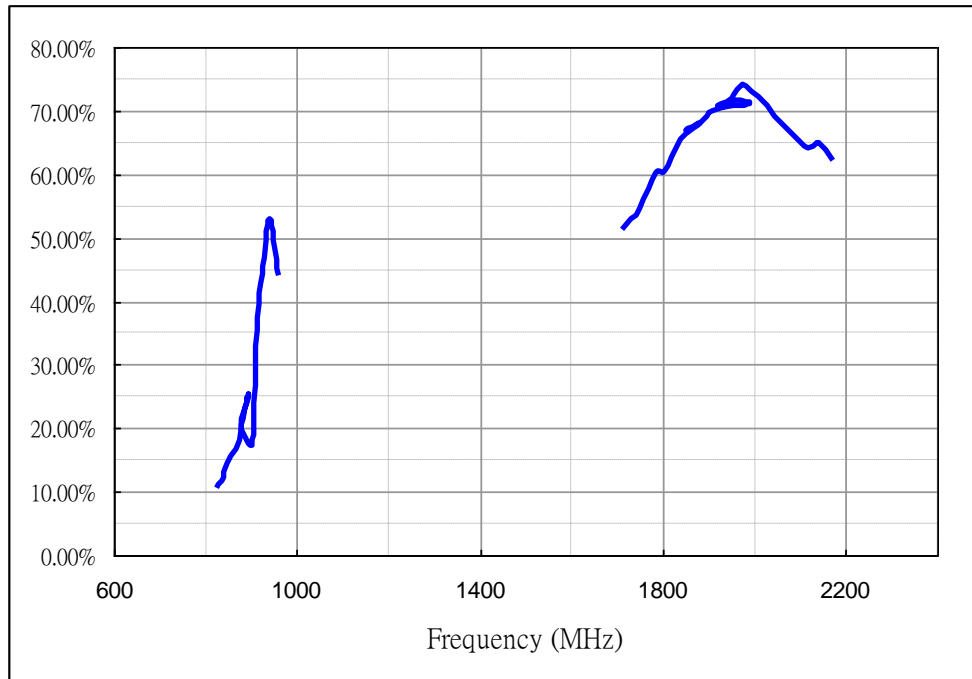


Radiation pattern of x-y plane



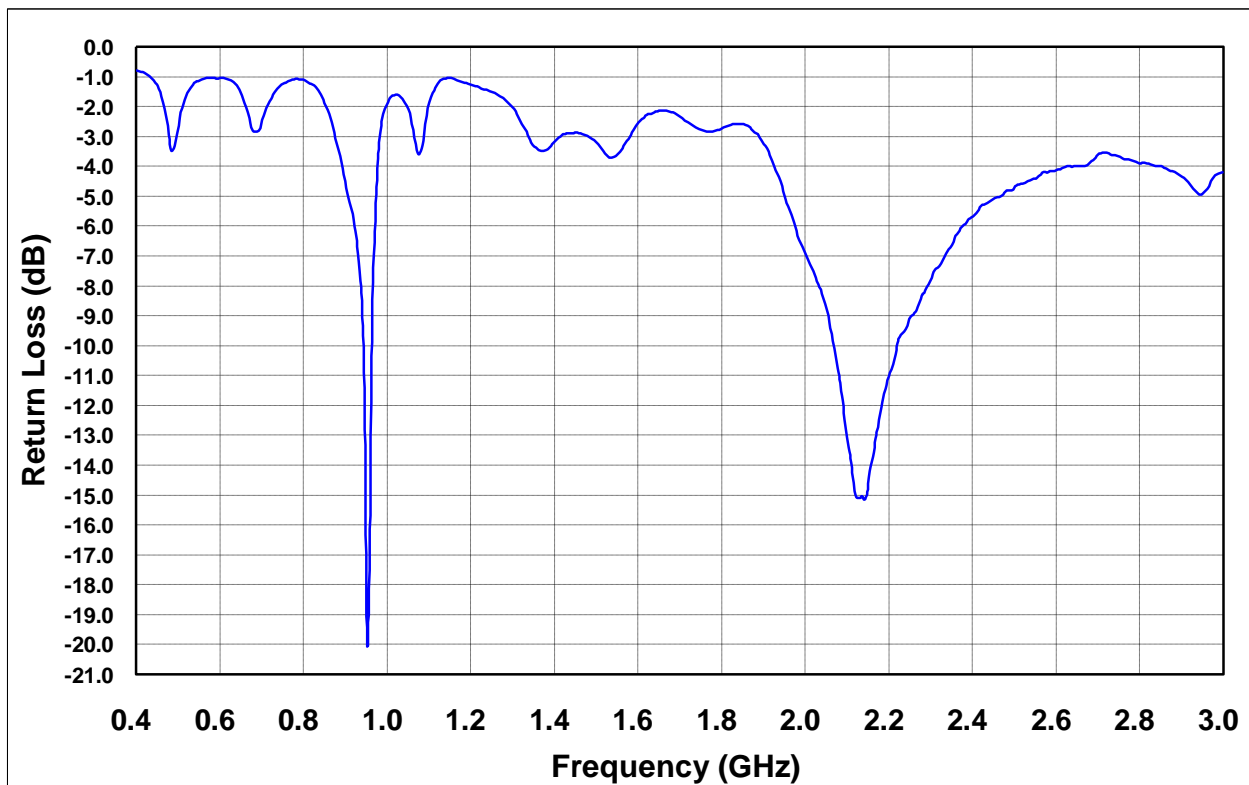
Radiation pattern of x-z plane

### III.3 Efficiency

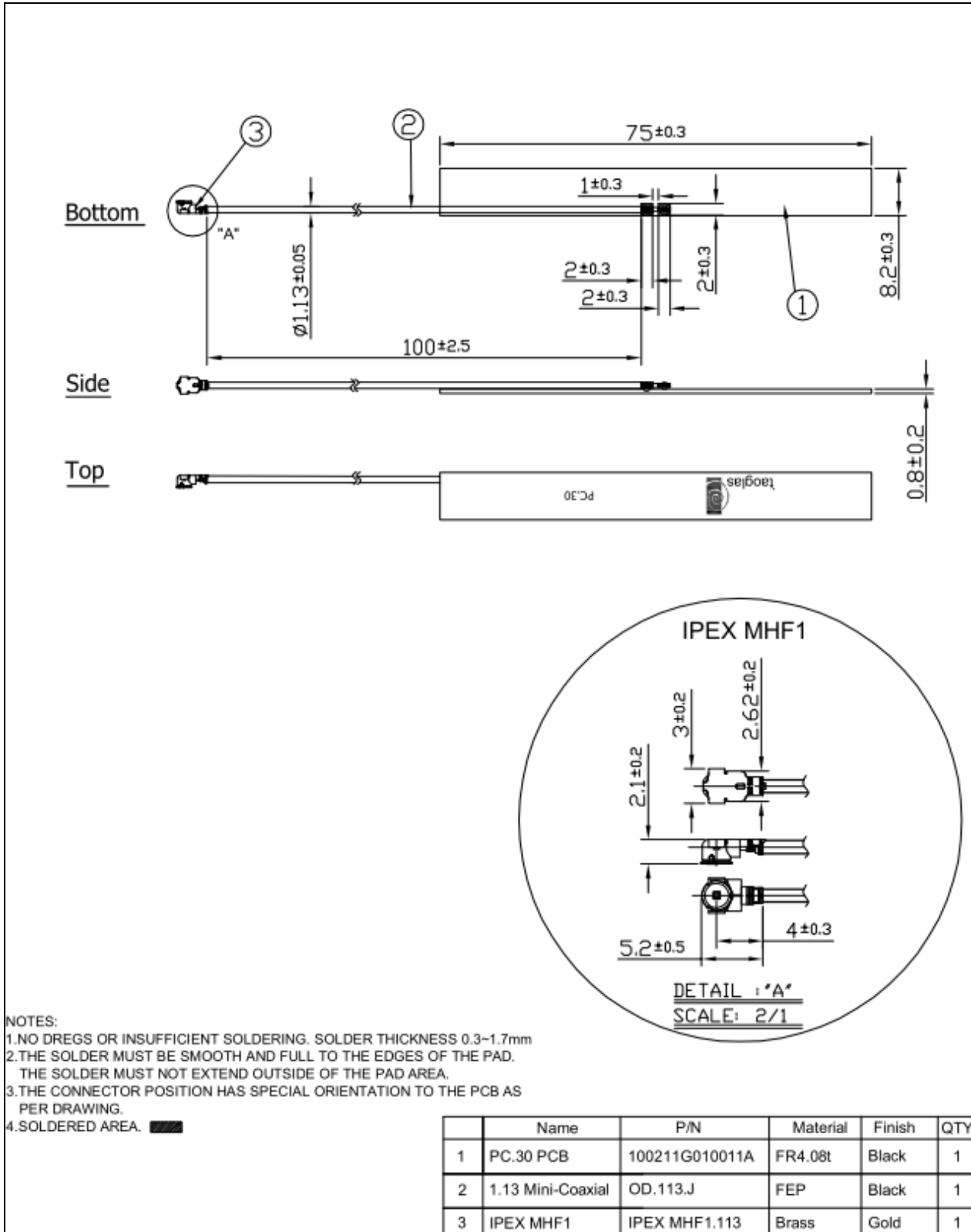


### III.4 Return Loss

A piece of Styrofoam is used 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



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