



Specification

SPECIFICATION

Part No. : PC30.09.0100A

Product Name : FR4 Penta-band GSM Antenna
100mm 1.13 coax MMCX(M)RA

Feature : High antenna RF efficiency
RoHS compliant



Version	Date	Page	Revision Description	Prepared	Approved
A	June 11 th 2008	All	New Product	TW Product Centre	Zita Lin



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I. Introduction

PC30 is a custom-designed FR4 quad-band GSM antenna for a tracking device. This RoHS compliant antenna has high RF efficiency with the tracking device to meet PTCRB requirement.

II. Specification (Free Space)

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	≤2 dBi				
Impedance	50 Ohm				
Radiation Pattern	Omni-directional				
Polarization	Linear				
PCB	FR4 74.70 x 8.20 x 0.8 mm				
Connector	MMCX(M)RA				
Cable	ϕ 1.13				
Cable Length	125 mm				
Operation Temperature	-40°C ~ +85°C				
Storage Temperature	-40°C ~ +105°C				

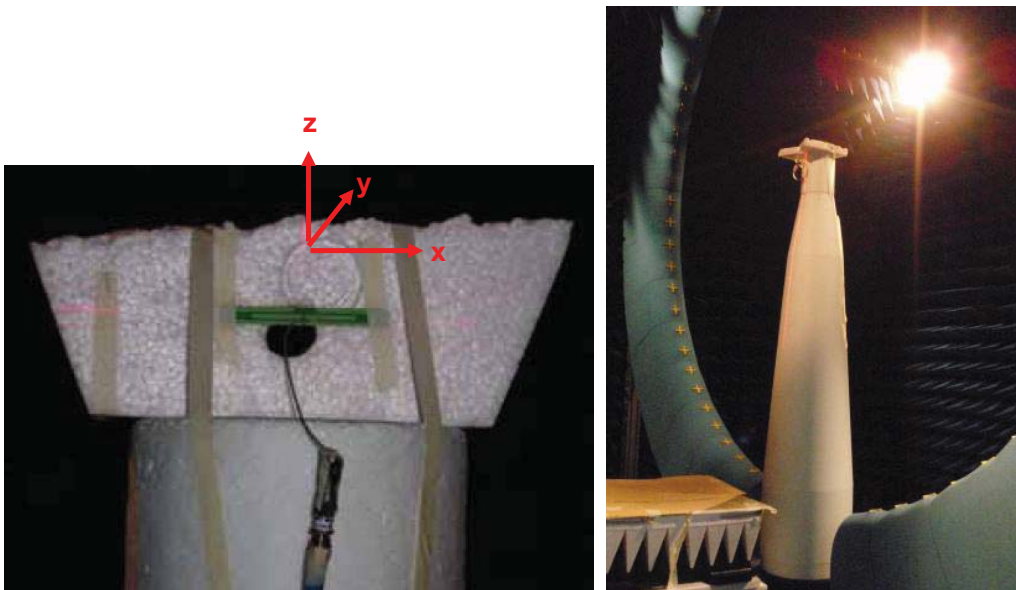
Please note that Cables and Connectors are Customizable



III. Electrical Property

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.



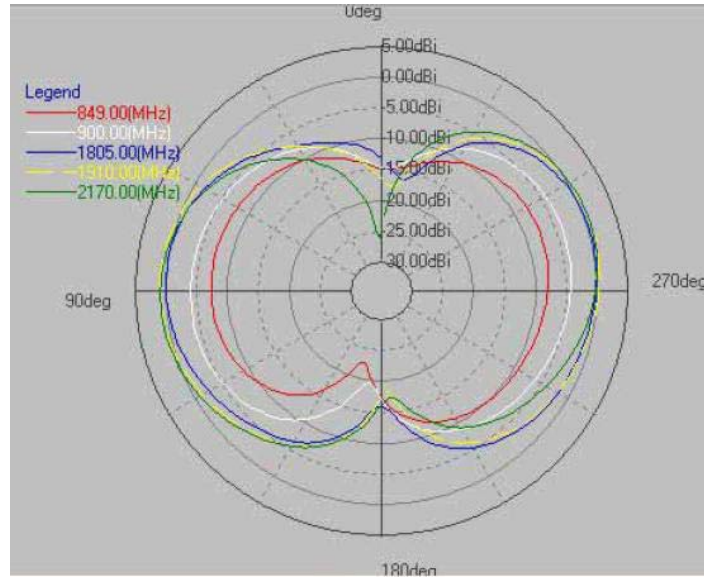
Antenna setup and Satimo SG64 3D-chamber.



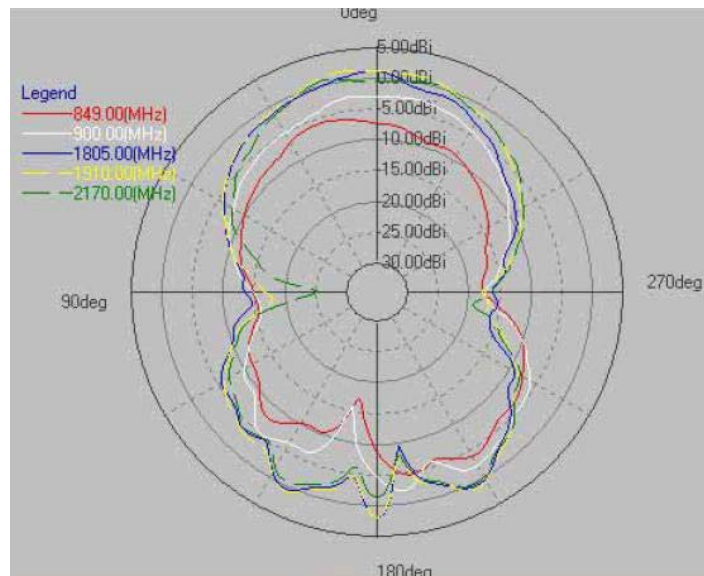
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Radiation Pattern

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



Radiation pattern of x-y plane

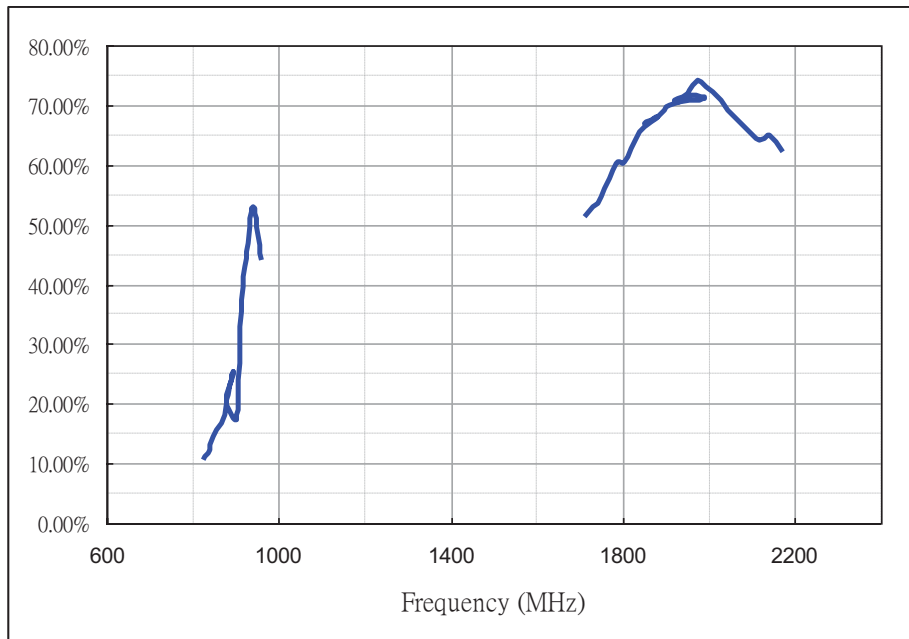


Radiation pattern of x-z plane



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Efficiency



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.





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