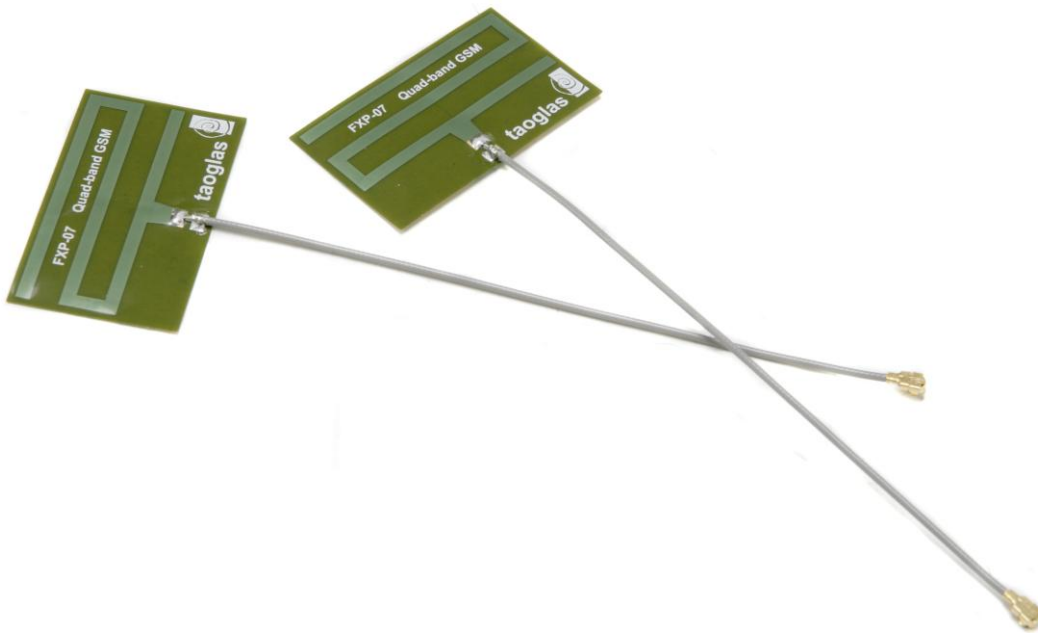




SPECIFICATION

- Part No. : FXP07.07.100A
- Product Name : Flexible PCB Penta Band GSM Antenna,
100mm 1.13cable, IPEX connector
- Feature : Very low profile penta band GSM
Adhesive tape for easy mounting
RoHS compliant



Version	Date	Page	Revision Description	Prepared	Approved
A	May 14 th 2008	All	New Product	TW Product Centre	Zita Lin



Specification

I. Introduction

FXP07.07.100A is a general version of stick-on flexible PCB. It is designed with 100mm 1.13mm coaxial cable and the IPEX connector for easy installation. FXP07.07.0100A is ideal for initial test of FPCB type antenna.

II. Specification

Communication System	Penta-band Cellular				
	AMPS	GSM	DCS	PCS	UMTS
Frequency (MHz)	824 ~ 896	880~960	1710~1880	1850~1990	1710~2170
Efficiency (ground plane)	82%	82%	29%	60%	49%
Efficiency (free space)	11%	12%	41%	32%	33%
Impedance	50 Ohm				
Radiation Pattern	Omni-directional				
Polarization	Linear				
FPCB	41.0 x 24.0 mm				
Connector	IPEX				
Cable	ϕ 1.13				
Cable Length	100 mm				
Adhesive Tape	3M 467				
Operation Temperature	-40°C ~ +85°C				
Storage Temperature	-40°C ~ +85°C				



III. Electrical Property

Test Setup

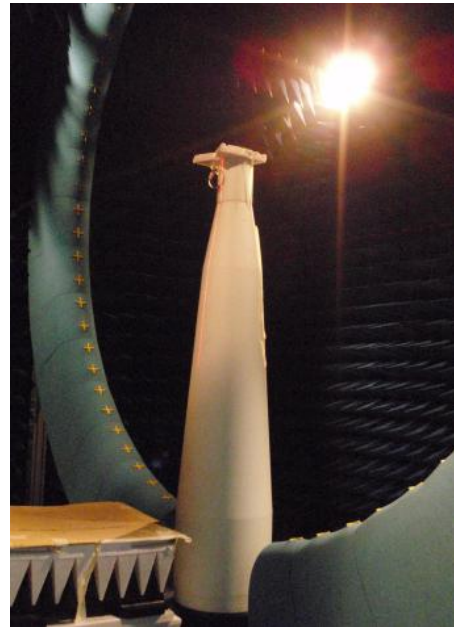
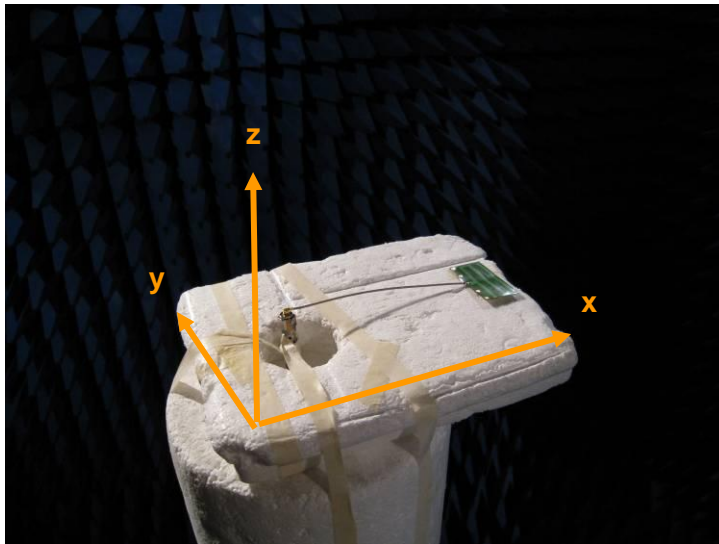
FXP-07 was design with a cell phone size ground plane (110 x 45 mm) so works the best with this ground plane. Tests were setup to demonstrate its RF properties with this ground plane, in free space and adhere to a plastic. Satimo SG64 3D-chamber is used for radiation and efficiency test with 5% tolerance.



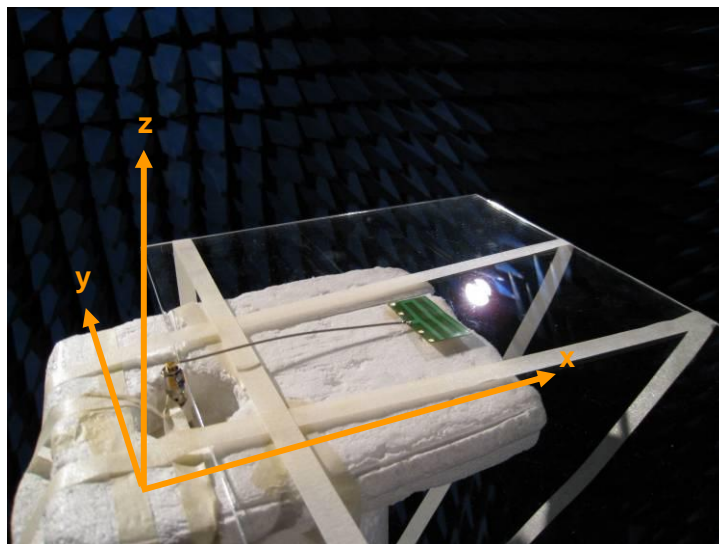
FXP-07 with original ground plane



Specification



Free space antenna setup and Satimo SG64 3D-chamber.

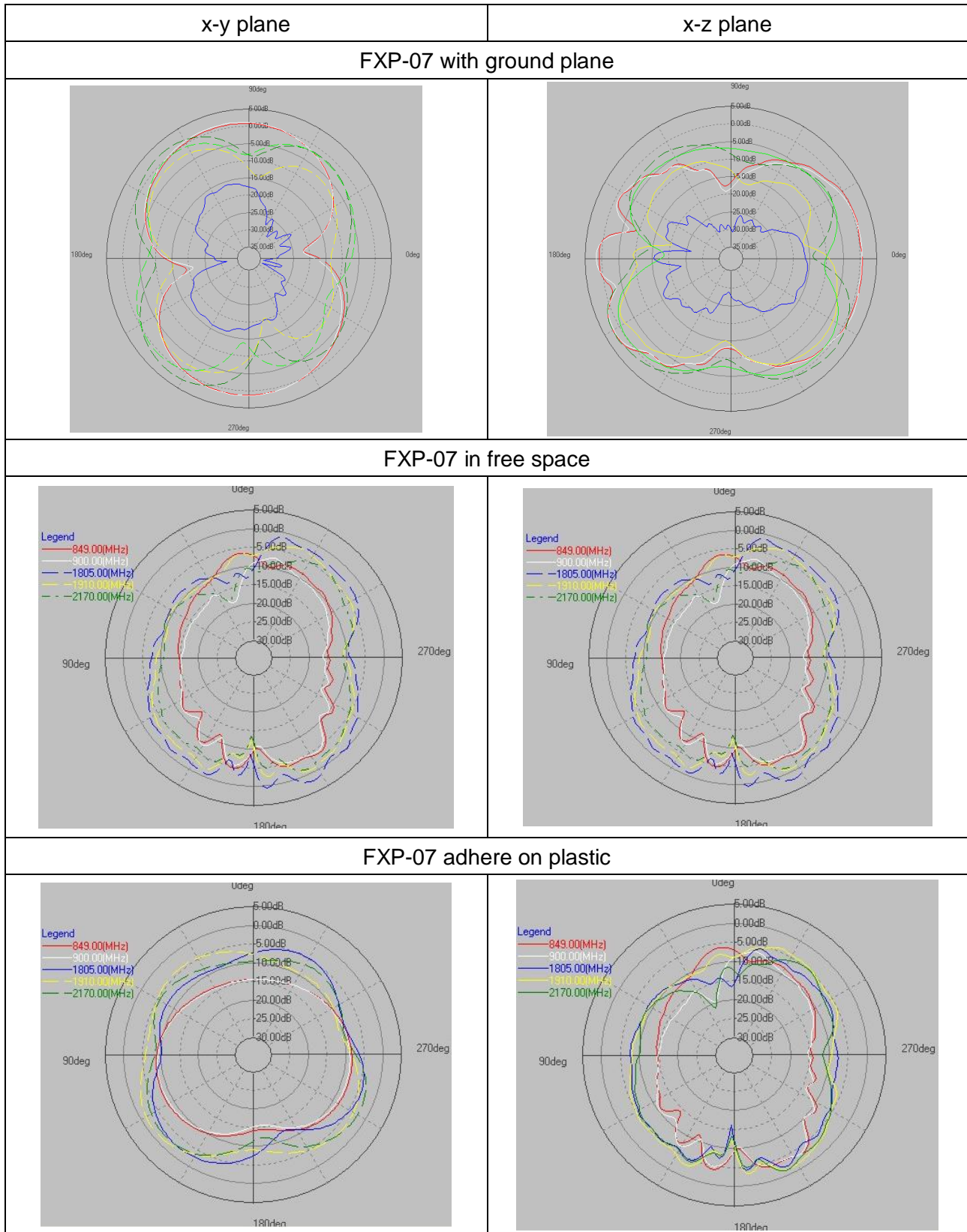


FXP-07 places on a plastic in the chamber.



Specification

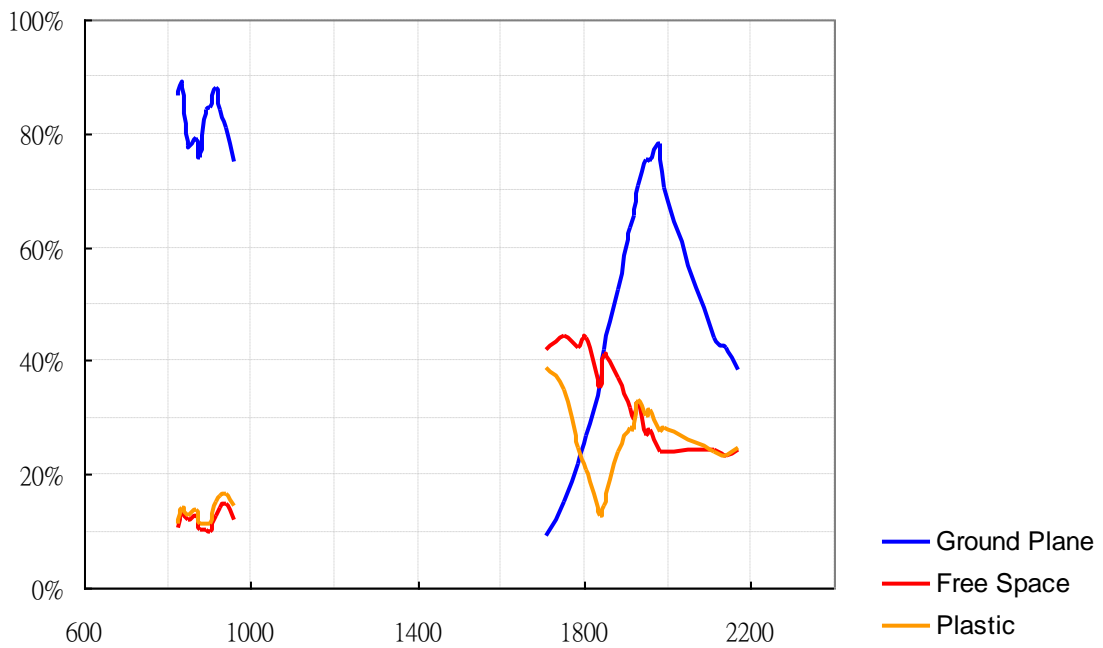
Radiation Pattern





Specification

Efficiency

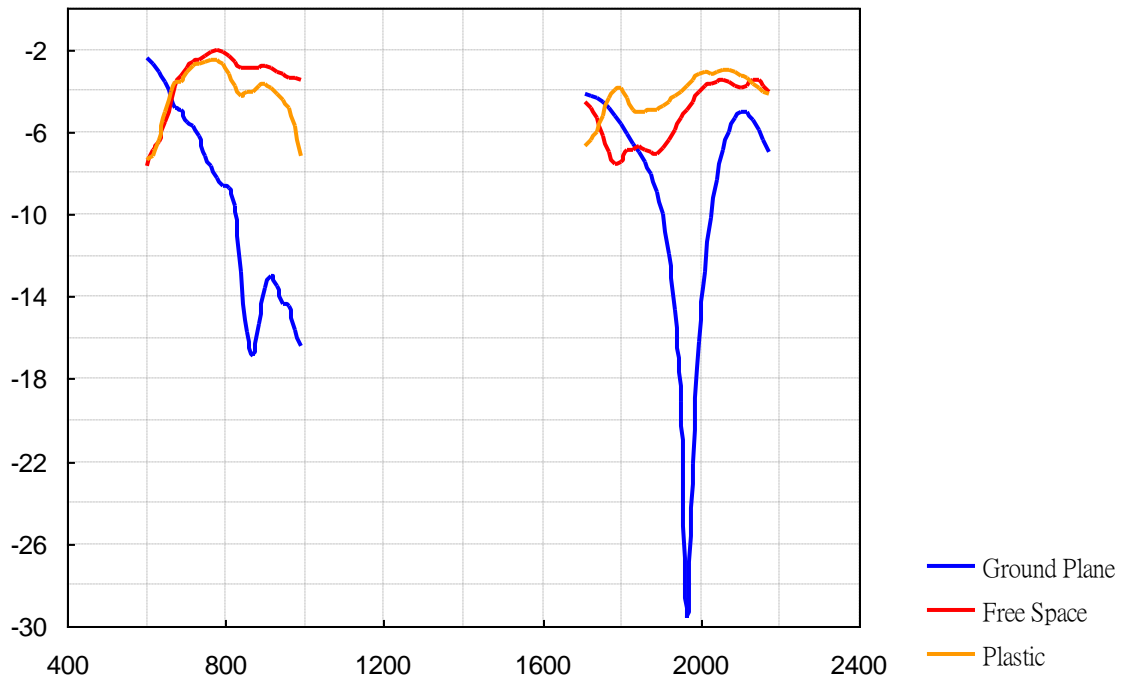


Miniature antennas couple to the ground plane for radiation so the efficiency of the antenna without a ground plane is largely degraded. These tests demonstrate the best performance (with the designed ground) and the worst performance (with no ground) possible of FXP-07. Adhere the antenna to a plastic changes the result, particularly in higher frequency bands.



Specification

Return Loss



Return loss result also indicates that FXP-07 needs to connect to a ground plane for proper operation.