



Specification

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Part No. : **PC31.07.0050A**

Specification No : PC.3101.09

Product Name : 1 dBi ISM 868/915MHz FR4 antenna with 50mm Ø1.13 IPEX MHF (U.FL comp)

Features : High Efficiency FR4 Antenna
90mm*55mm*0.8mm
RoHS Compliant

Picture:



REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Feb 14 th 2007	All	New Product	TW Product Centre	Ronan Quinlan
02	Jan 28 th 2009	All	Added Radiation pattern and reformatted	TW Product Centre	Ronan Quinlan



1.0 Introduction

This high gain, low profile, PCB antenna and mini coaxial cable is an 868MHz ~ 928MHz ISM dual-band Omni-directional antenna intended for use in 868MHz and 915MHz applications. It is optimized for free space to be tested as a performance benchmark. The high efficiency dual-band characteristics allow the client device to be used in countries with different regulatory bands. Cable and optional double-sided adhesive foam mounting allows flexible placement. Further performance enhancement can be done through tuning upon receipt of client’s housing and board.

2.0 Typical Antenna Performance in free space

Parameter	Specification	
Communication System	ISM Bands	
	ISM 868	ISM 915
Frequency (MHz)	868 ~ 870	902 ~ 928
Average efficiency	0.87	0.77
Average gain	2.3dBi	1.6dBi
Impedance	50 Ohm	
Polarization	Linear	
Antenna Length	90*55*0.8 mm	
Connector	IPEX MHF	
Operation Temperature	-40°C ~ +85°C	
Storage Temperature	-40°C ~ +85°C	



Specification

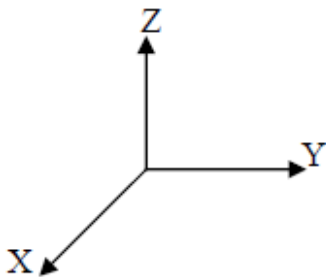
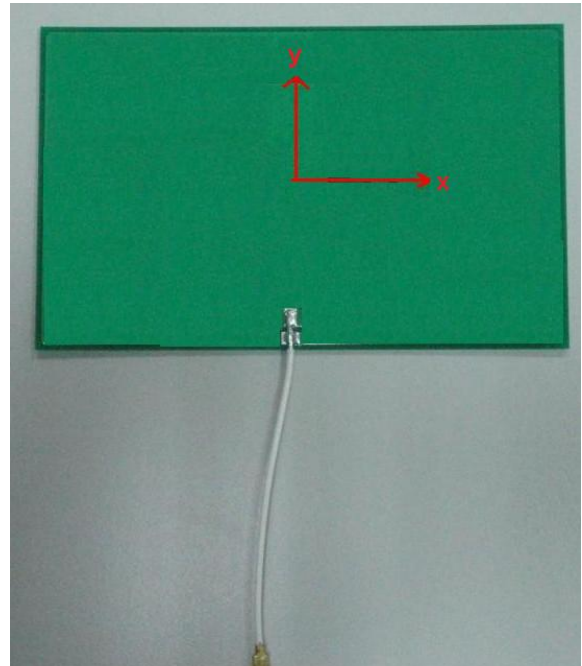
3.0 Mechanical Dimensions

3.1 Dimensions and Drawing

Length : 90mm

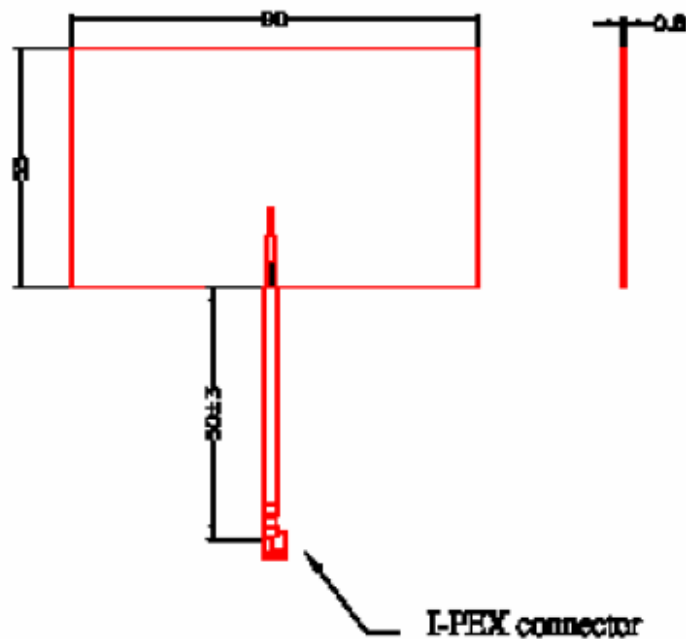
Width : 55mm

Depth : 0.8mm



Note : 1. The upper face of the PCB is in the X direction.
2. Connector is towards the Z direction.

1. Unit : mm
2. PCB Material : FR4





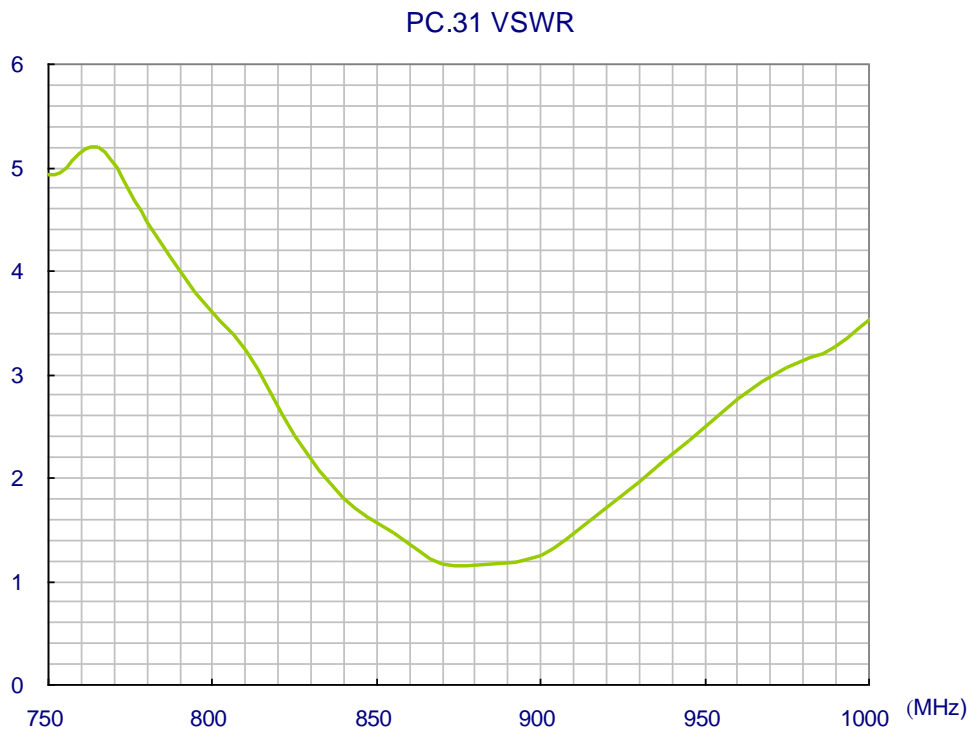
Specification

3.2 Cable & Connector

3.2.1	RF Cable	RF Coaxial Cable 1.13mm Diameter L = 50 +/- 3 mm
3.2.2	RF Connector	IPEX MHF II (Hirose U.FL compatible)
3.2.3	Mounting	Pre-applied double-sided adhesive optional

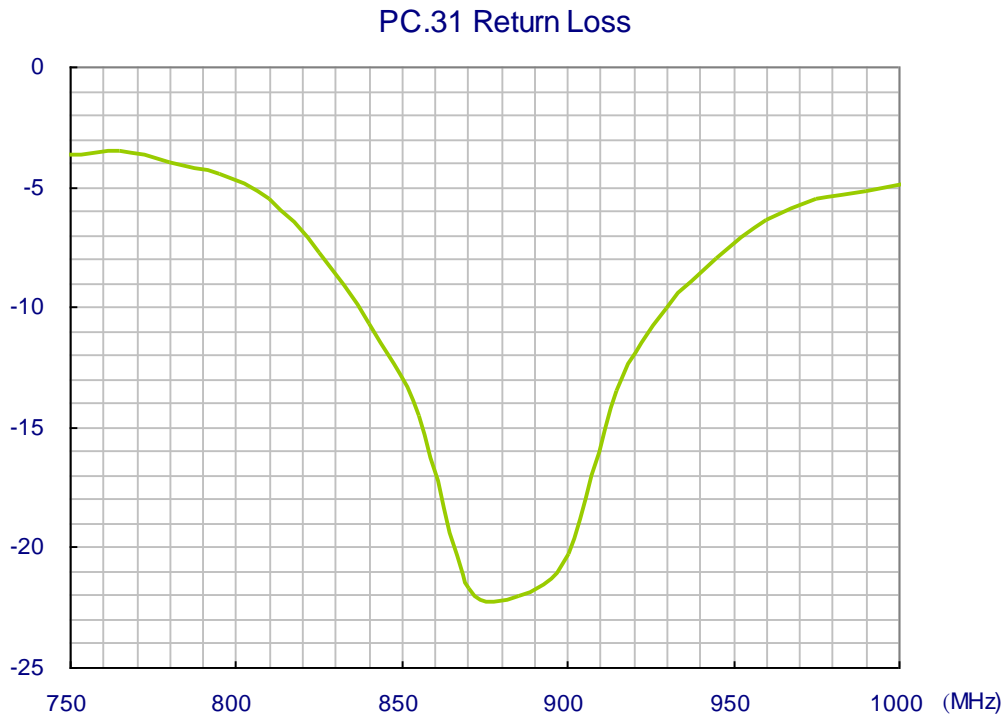
4.0 Antenna Electrical Characteristics

4.1 VSWR





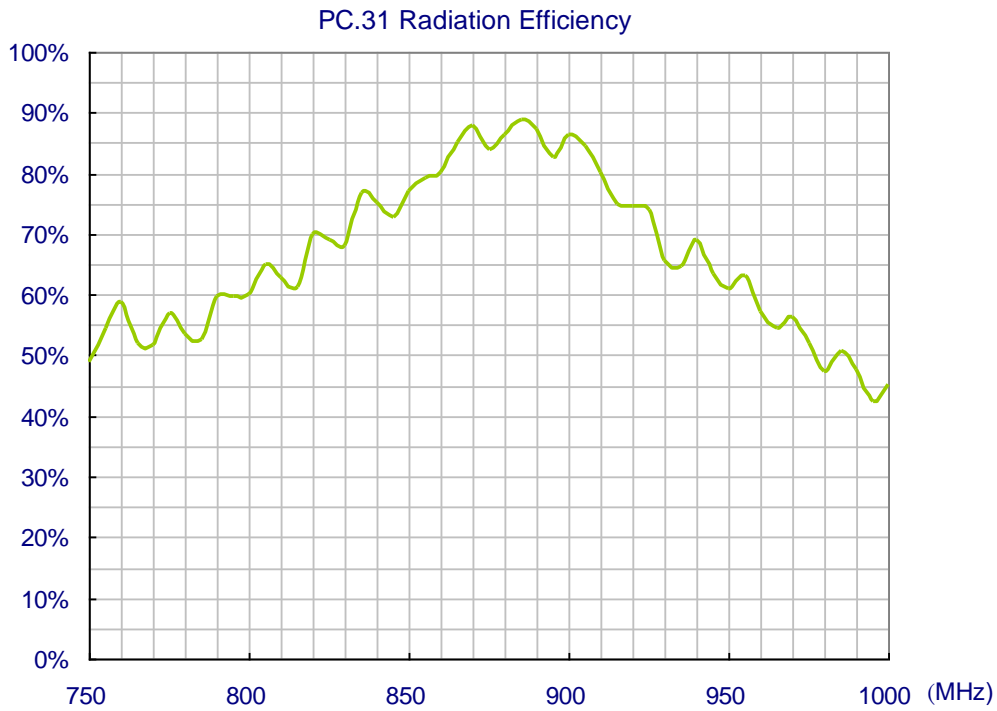
4.2 Return Loss



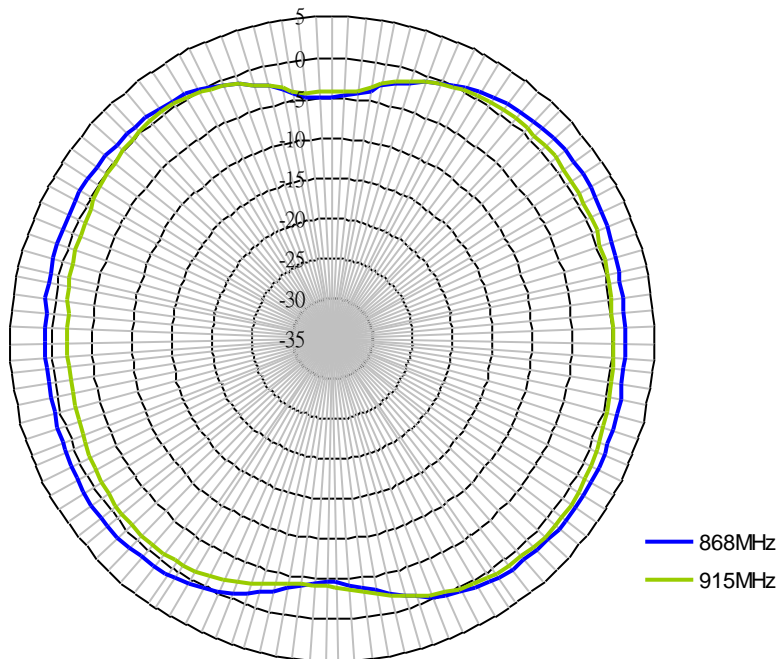
4.3 Efficiency



Specification



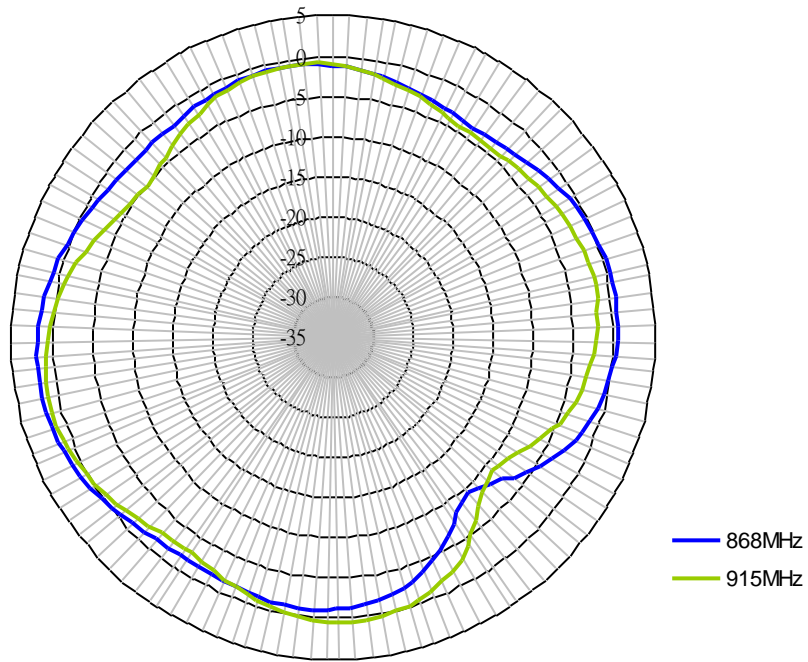
4.4 Radiation Patterns



Radiation pattern of x-z plane
(find the attached file for xy, z is coming out of the page)



Specification



Radiation pattern of x-y plane