

SPECIFICATION

Patent Pending

Part No. : FXP.830.07.0100C
Product Name : FXP.830 Freedom Wi-Fi 2.4/5 GHz Dipole Antenna
Features : Very High Efficiency
Ground-plane Independent
IPEX MHF1 Connector (U.FL compatible)
RoHS Compliant



Version	Date	Revision Description	Prepared	Approved
A	Jan 20 rd 2011	New Product	TW Product Centre	Zita Lin



I. Introduction

The FXP.830 has a peak gain of 1.8dBi at 2.4GHz and efficiencies of 50%, and 3-4dBi and 80-90% along bands 4.9GHz to 6GHz.

The FXP830 is a high efficiency, small, dual-band, dipole antenna for 2.4/4.9-6GHz band including Bluetooth and Wi-Fi. This Taoglas patent pending antenna is unique in the market because it is made from poly-flexible material, has a tiny form factor (42*7*.01mm) and has double-sided 3M tape for easy “peel and stick” mounting.

The FXP.830 is the ideal all-round antenna solution for squeezing into narrow spaces and still maintaining high performance, for example at the top of LCD devices.



Specification

II. Specification

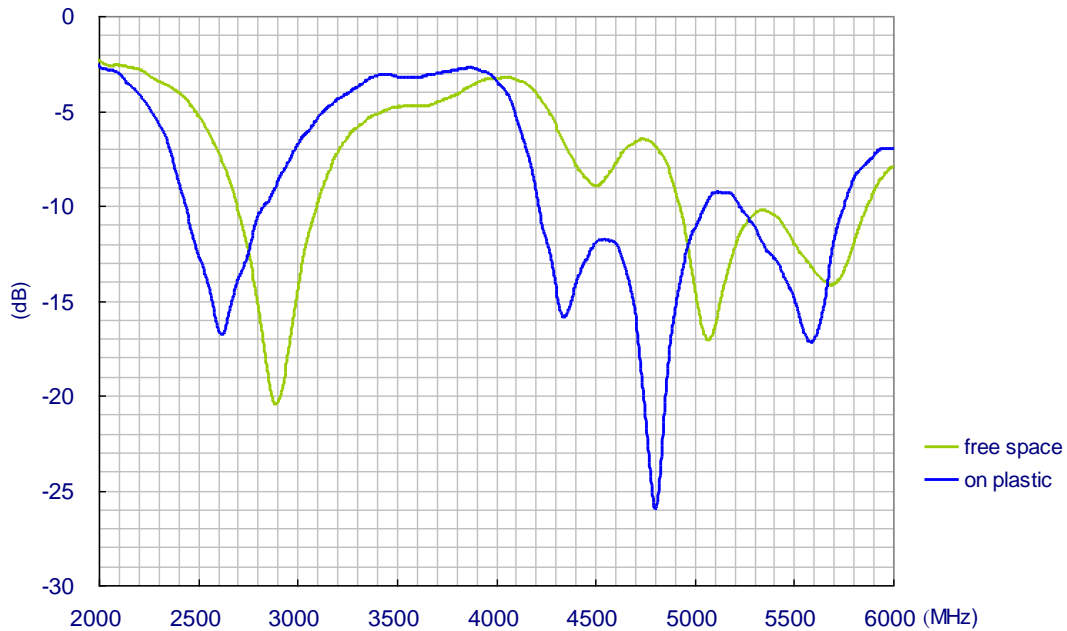
ELECTRICAL		
Frequency	2.4 ~ 2.5GHz,	4.9 ~ 5.8GHz
Peak Gain (free space)	1.8dBi	3.6dBi
Peak Gain (on plastic*)	2.6dBi	5.0dBi
Average Gain (free space)	-3.0dBi	-0.6dBi
Average Gain (on plastic)	-3.0dBi	-0.7dBi
Efficiency (free space)	50%	86%
Efficiency (on plastic)	50%	84%
Polarization	Linear	
Impedance	50 Ohms	
Radiation Pattern	Omni	
Input Power	2W max.	
MECHANICAL		
Dimensions	42mm x 7mm	
Antenna Body Material	Polymer	
Cable	Gray 100mm 1.37 co-axial	
Connector	IpeX MHF	
ENVIRONMENTAL		
Temperature Range	-40°C to 85°C	
Humidity	Non-condensing 65°C 95% RH	

* FXP.830 is likely to be mounted on plastic in many applications so we provide the antenna measurement in both free space and mounted on a 1mm thick plastic.

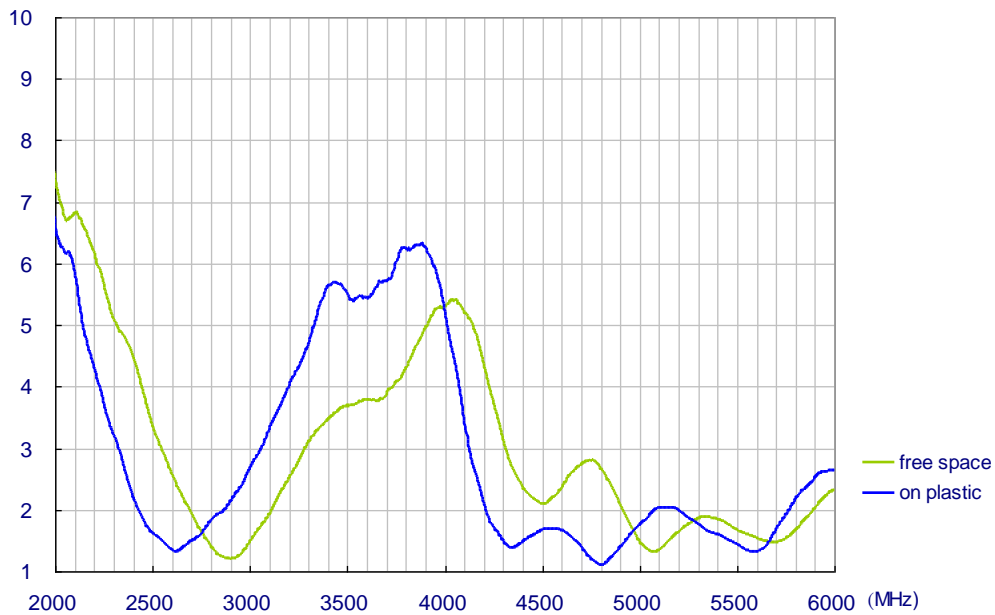


III. Antenna Characteristics

III.1. Return Loss



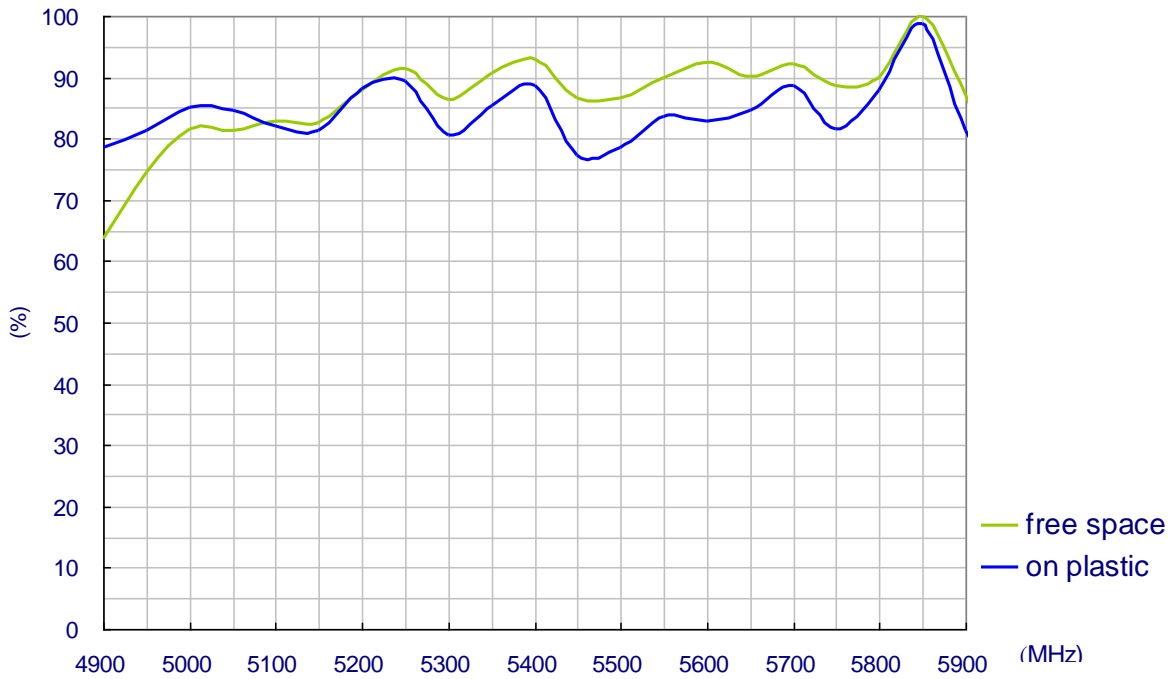
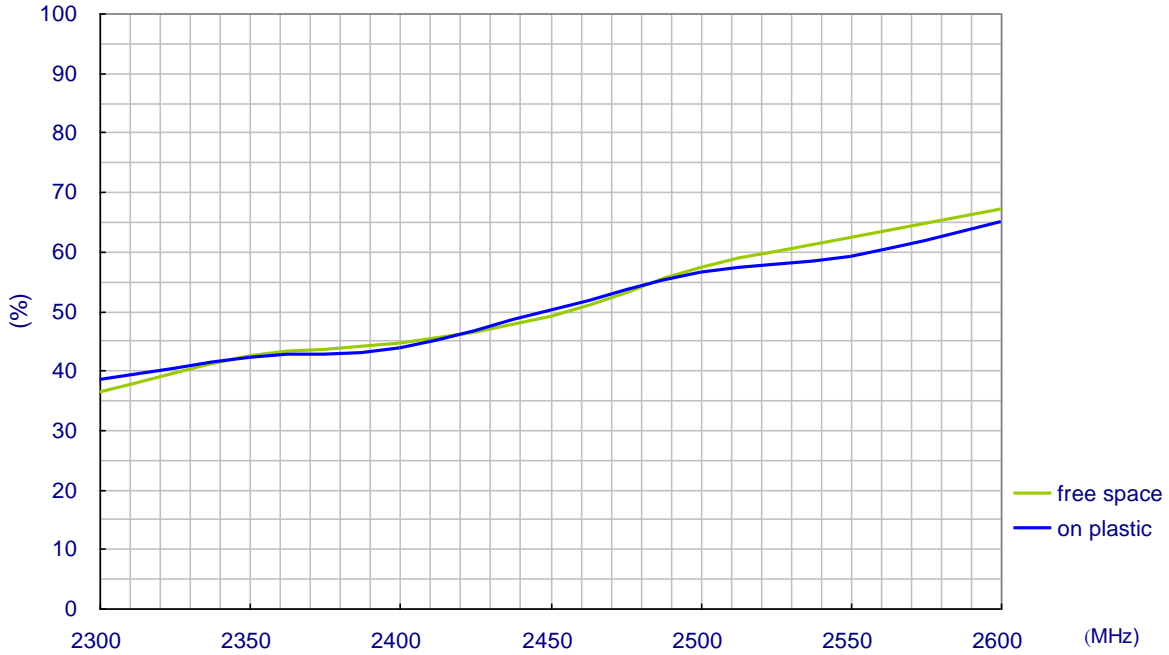
III.2. VSWR





Specification

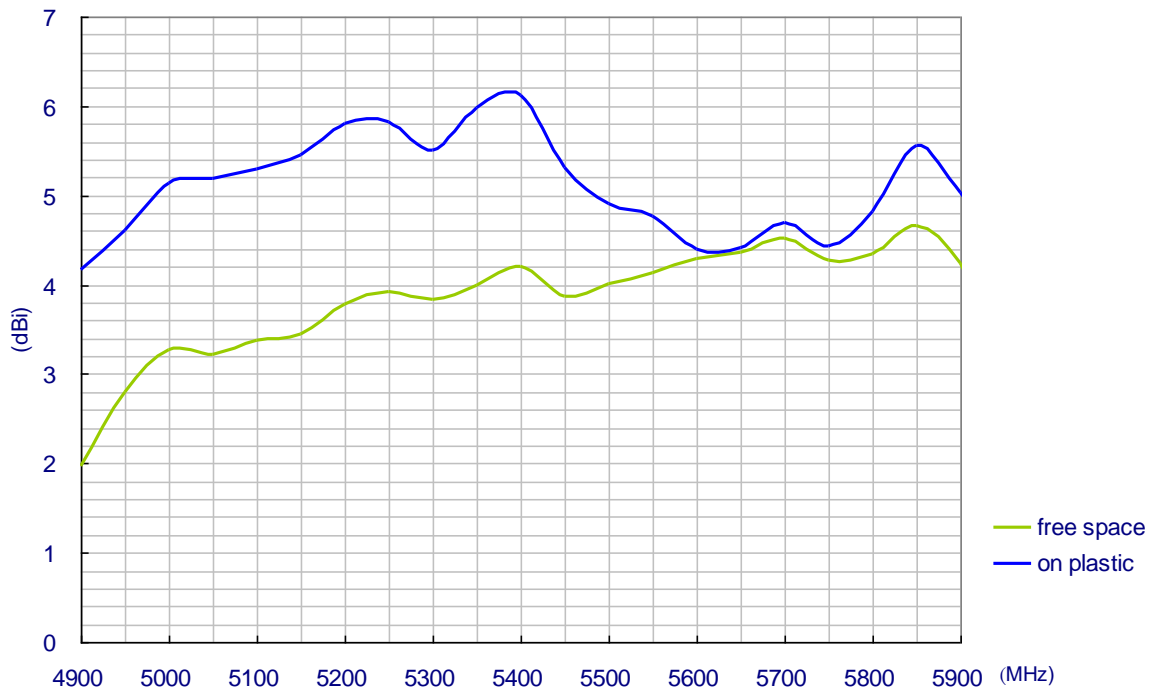
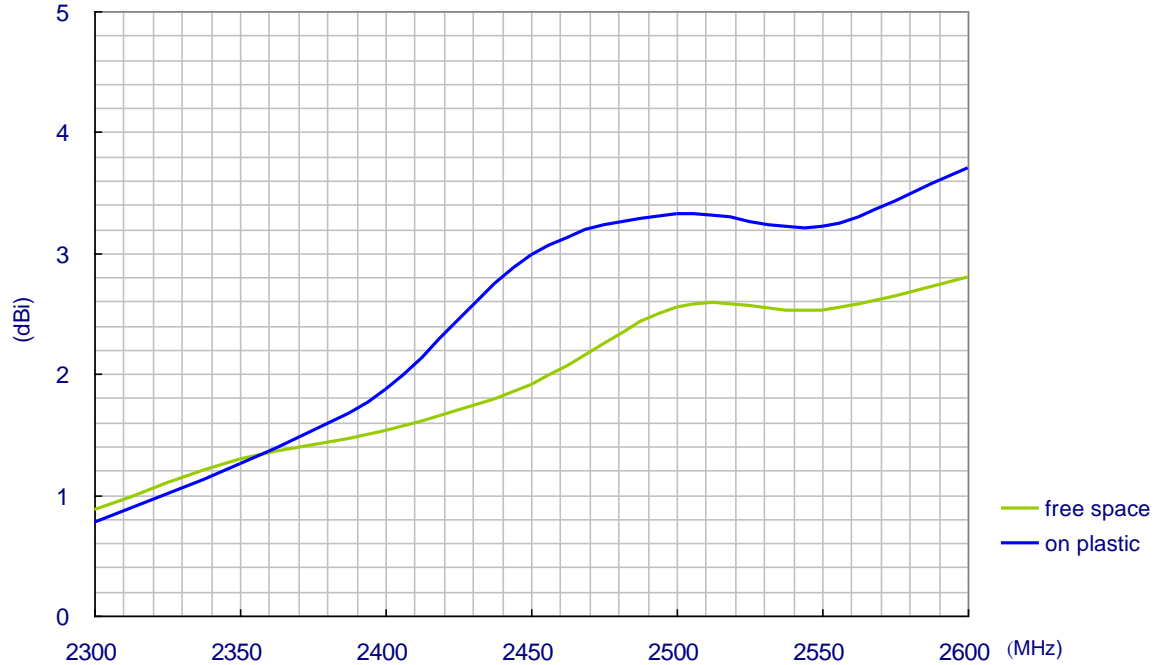
III.3. Antenna Efficiency





Specification

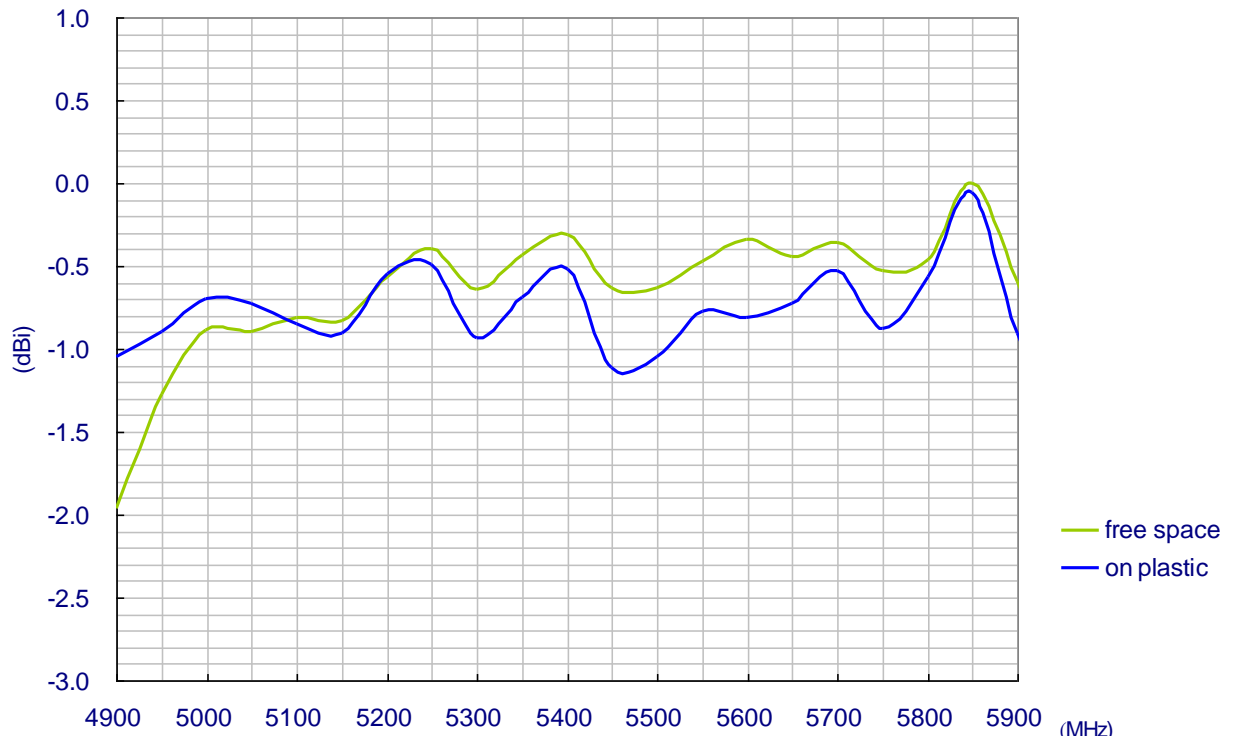
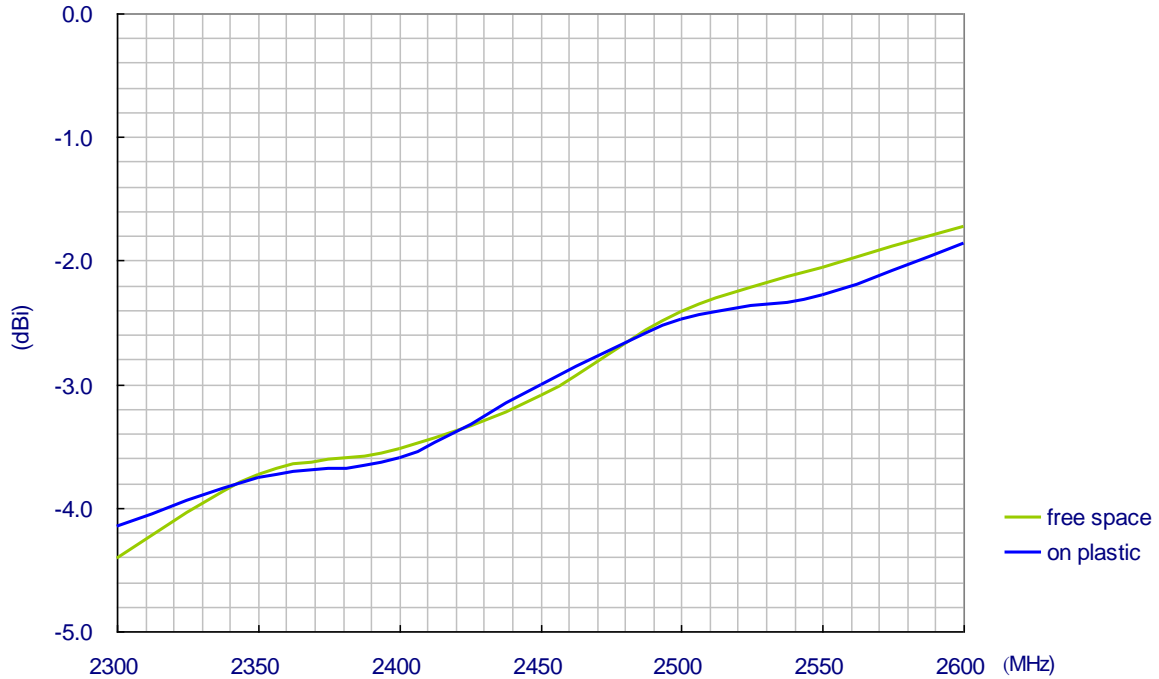
III.4. Antenna Peak Gain





Specification

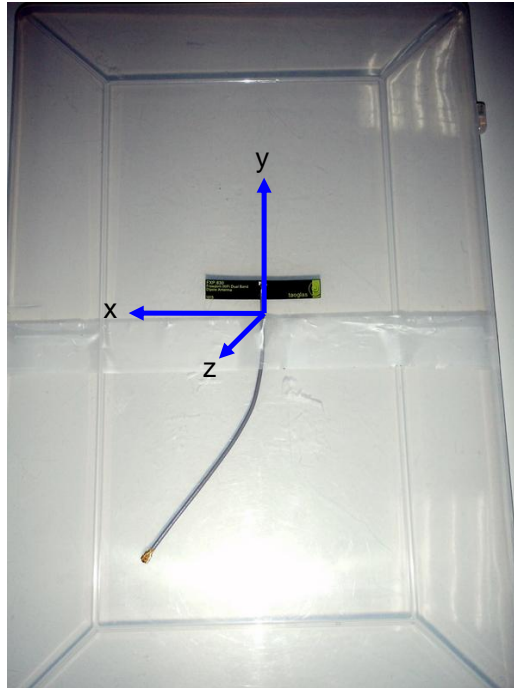
III.5. Antenna 3D Average Gain



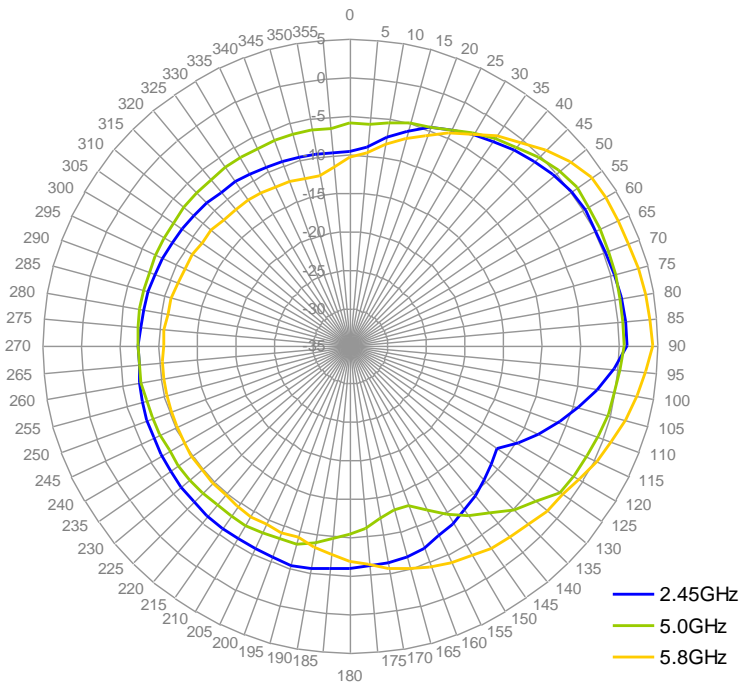


Specification

III.6. Radiation Pattern for FXP.830 on plastic



XY-plane

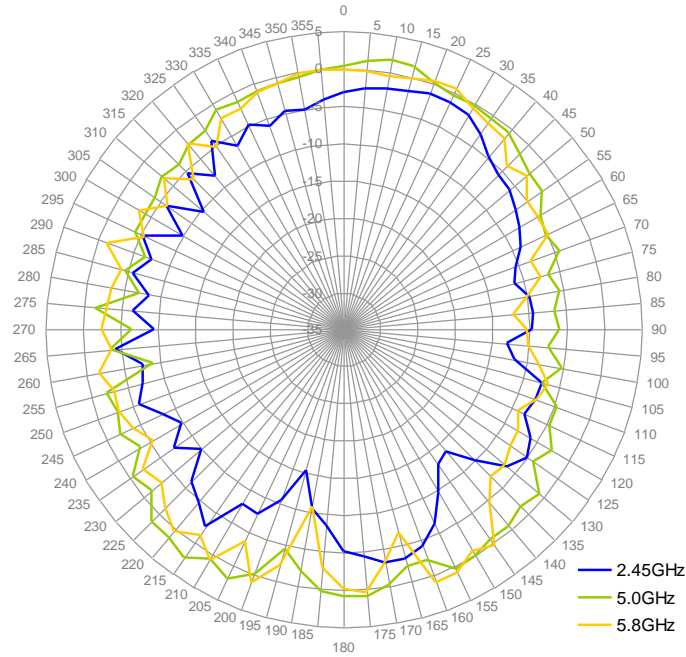


© All Rights Reserved
Taoglas Limited, Unit 7 Peare Campus, Moyne Business Park, Old Dublin Road,
Enniscorthy, Co. Wexford, Ireland www.taoglas.com



Specification

XZ-plane



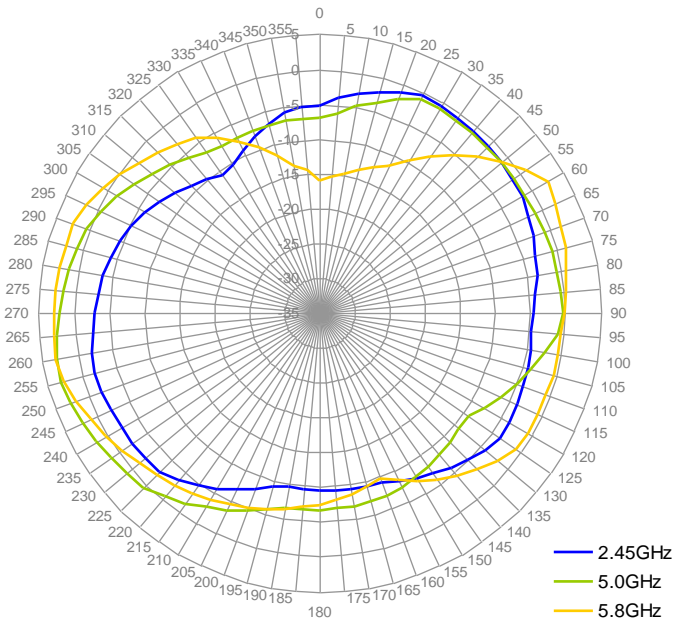
© All Rights Reserved

Taoglas Limited, Unit 7 Peare Campus, Moyne Business Park, Old Dublin Road,
Enniscorthy, Co. Wexford, Ireland www.taoglas.com

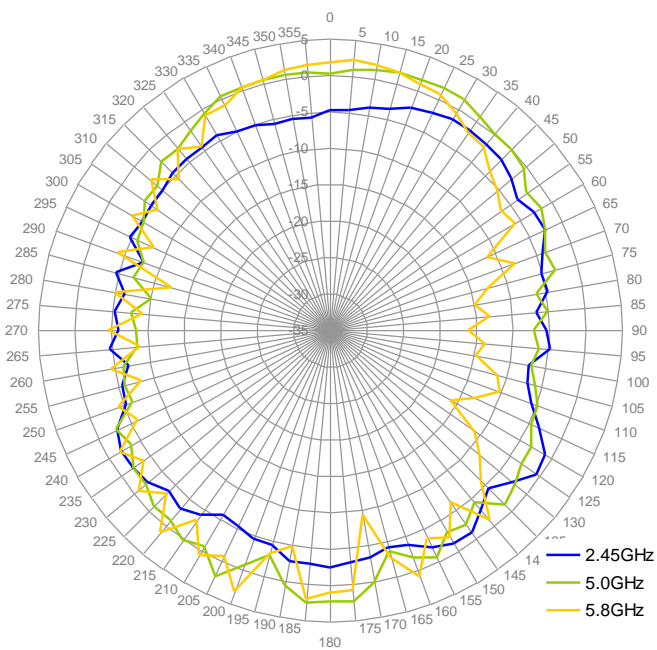


III.7. Free Space Radiation

XY-plane

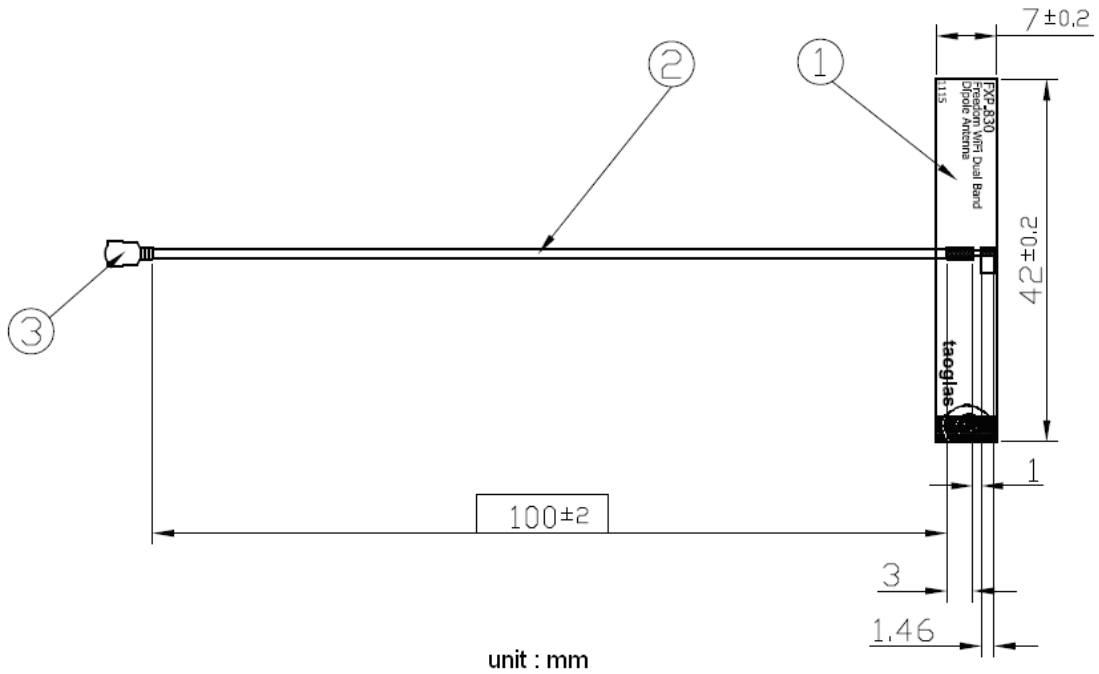


XZ-plane





IV. Antenna Drawing



	Name	Material	Finish	QTY
①	FXP.830 FPCB	FPCB 0.1t	Black	1
②	1.37 Mini-Coaxial	1.37 Cable	Black	1
③	IPEX Connector	Brass	Gold	1