

SPECIFICATION

Part No.	:	FXP832.03.0458D
Product Name	:	FXP832 Freedom Wi-Fi 2.4/5 GHz Dipole Antenna
Features	:	Flexible Very High Efficiency 42mm*7mm*0.1mm Ground-plane Independent 458mm (18 inches) RG174 Cable RP-SMA(M) Straight Connector RoHS Compliant



1. Introduction

FXP832 is a breakthrough, very high efficiency, small, dual-band dipole omni-directional antenna for 2.4/5 GHz bands. It works on 802.11a/b/g/n/ac Wi-Fi, ZigBee, and Bluetooth. It is designed in such a narrow rectangular form factor to cover most of the current applications on the market. Taoglas FXP series are conformal flexible antennas and can fit irregular housings.

With dimensions of 42*7*.01mm it comes with double-sided 3M tape for easy "peel and stick" mounting. This longer cable length version of the FXP832 is ideal for applications in embedded industrial and automotive environments.

Like all embedded omni-directional antennas, care should be taken to keep the antenna away from metal as much as possible, a minimum of 5 to 10mm is recommended.

Many module manufacturers specify peak gain requirements for any antennas that is to be connected to that module. Upon testing of any of our antenna with your device and a selection of appropriate layout, integration technique, or cable, Taoglas can make sure any of our antennas peak gain will be below the peak gain requirements. Taoglas can then issue a specification and/or report for this selected WiFi antennas in your device that will clearly show it complying with the peak gain requirements, so you can be assured you are meeting regulatory requirements for that module.

It is better not to select an embedded antenna with very low free-space peak gain (<2dBi) directly, as this antenna would have worse performance in your device, and lead to compromised performance compared to using a Taoglas antenna.

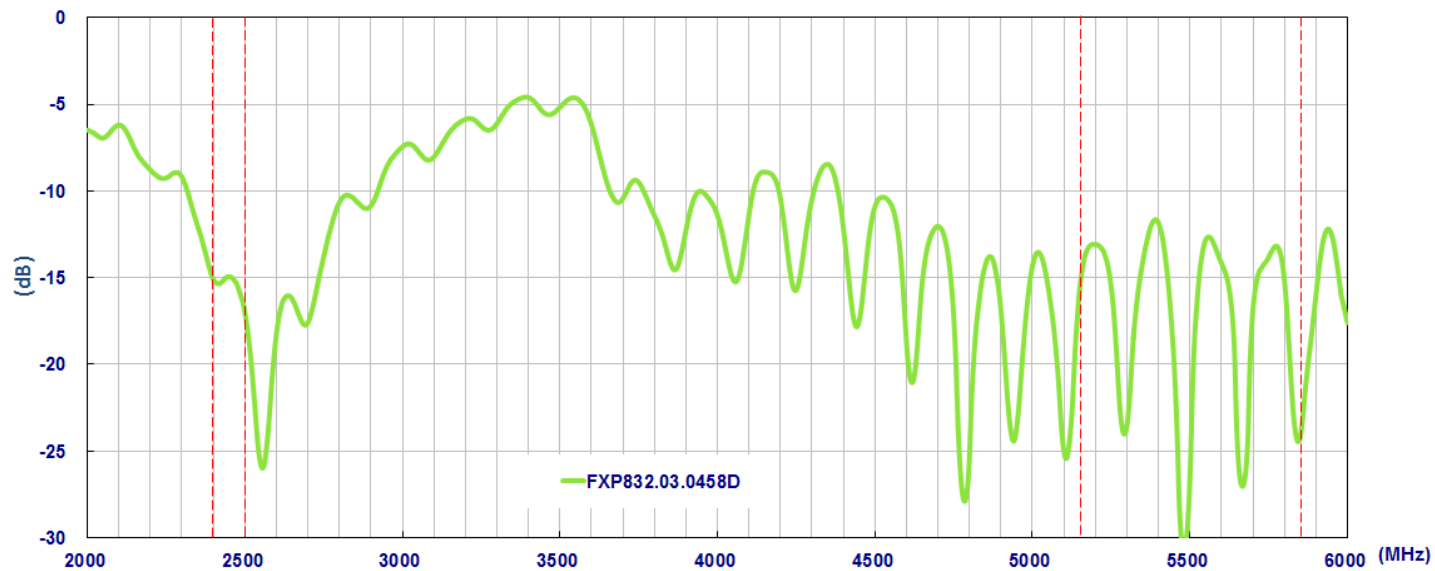
2. Specification

ELECTRICAL		
Frequency	2.4 ~ 2.5GHz	4.9 ~ 5.8GHz
Return Loss (dB)	<-10	<-10
Peak Gain (on plastic*)	3.66dBi	5.33dBi
Average Gain (on plastic)	-1.25dBi	-1.89dBi
Efficiency (on plastic)	74.9%	64.7%
Polarization	Linear	
Impedance	50 Ohms	
Radiation Pattern	Omni	
Input Power	2W max.	
MECHANICAL		
Dimensions	42mm x 7mm	
Antenna Body Material	Polymer	
Cable	Black 458mm (18 inches) RG174 Coaxial Cable	
Connector	RP-SMA(M) Straight	
Weight	7.5g	
ENVIRONMENTAL		
Temperature Range	-40°C to 85°C	
Humidity	Non-condensing 65°C 95% RH	

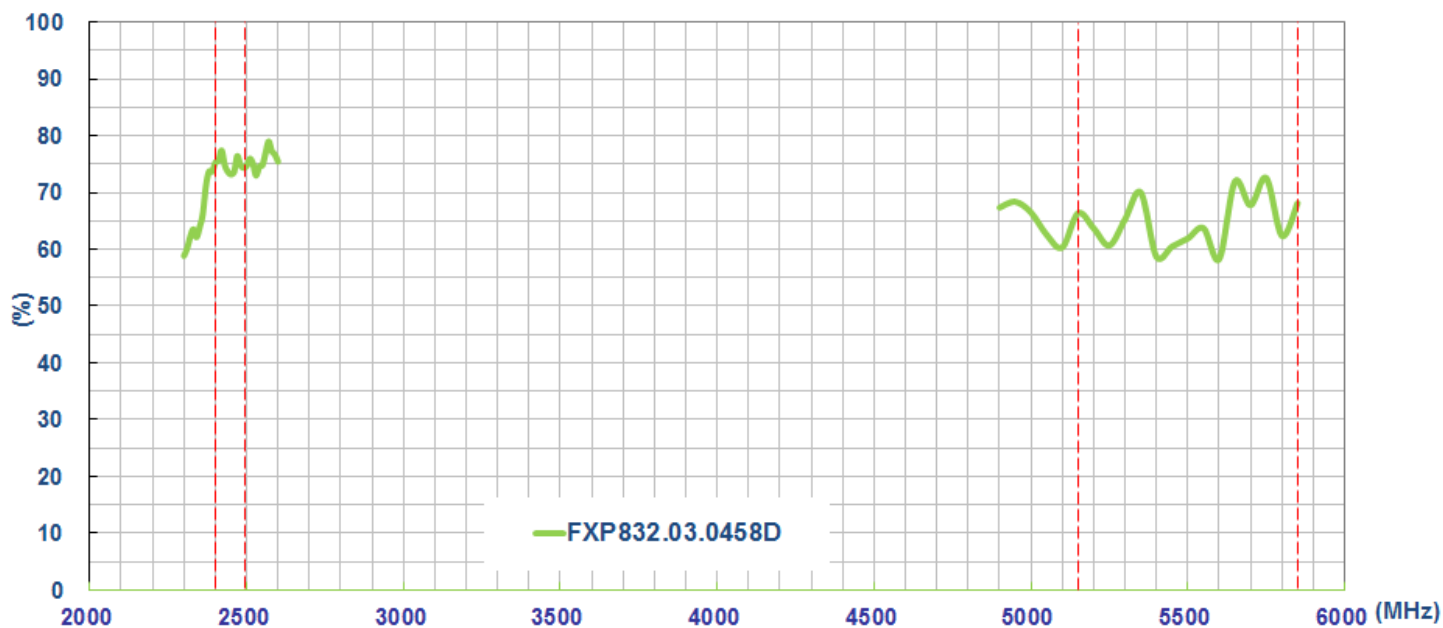
* FXP832 is likely to be mounted on plastic in many applications so we provide the antenna measurement on a 2mm thickness ABS plastic.

3. Antenna Characteristics

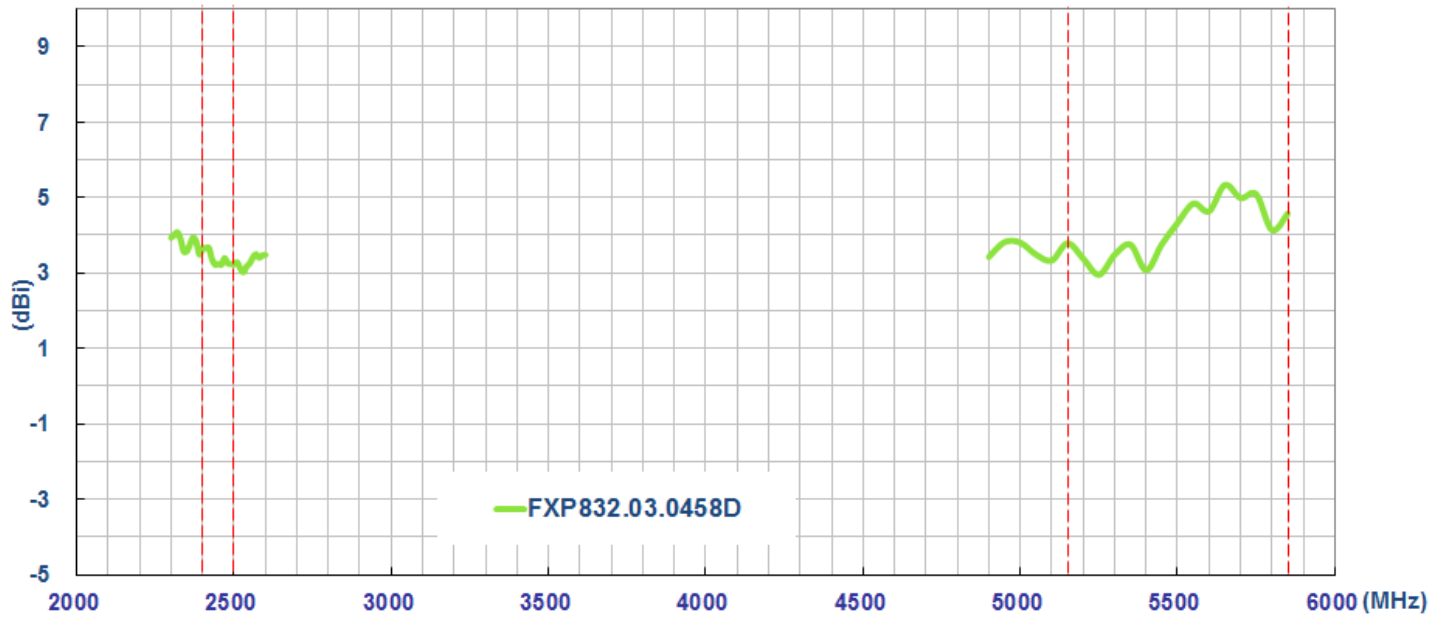
3.1. Return Loss



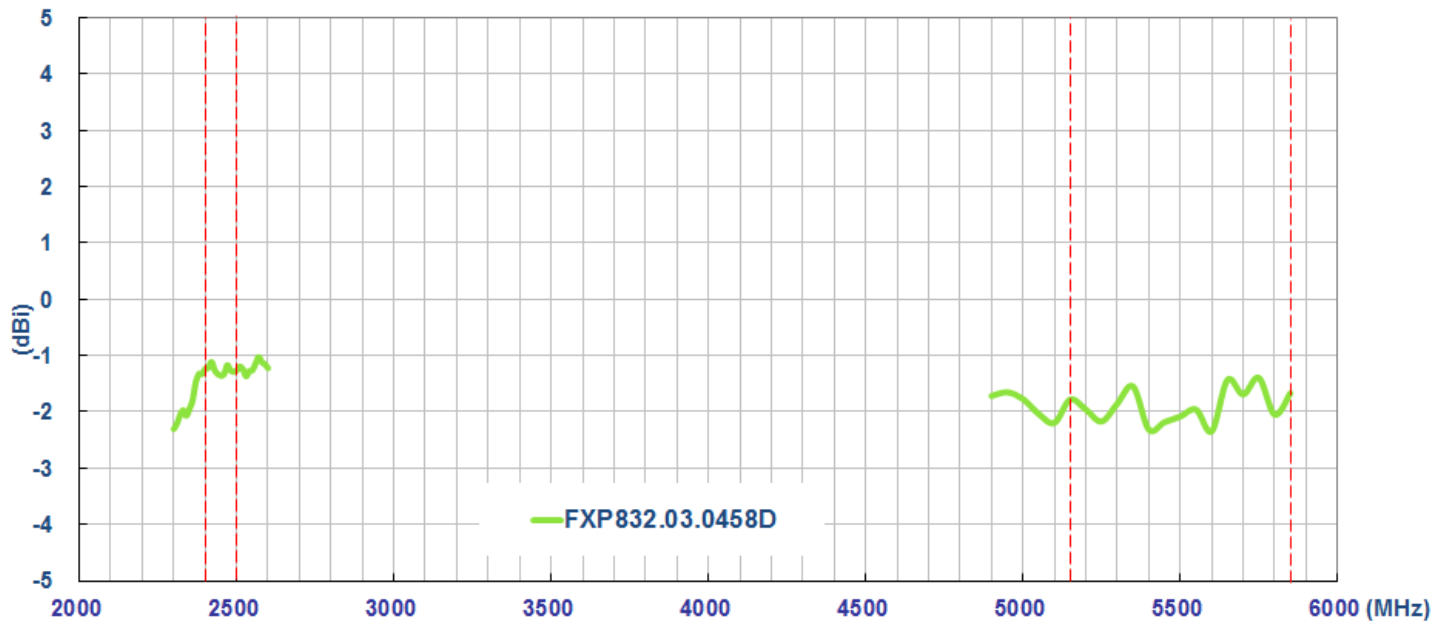
3.2. Antenna Efficiency



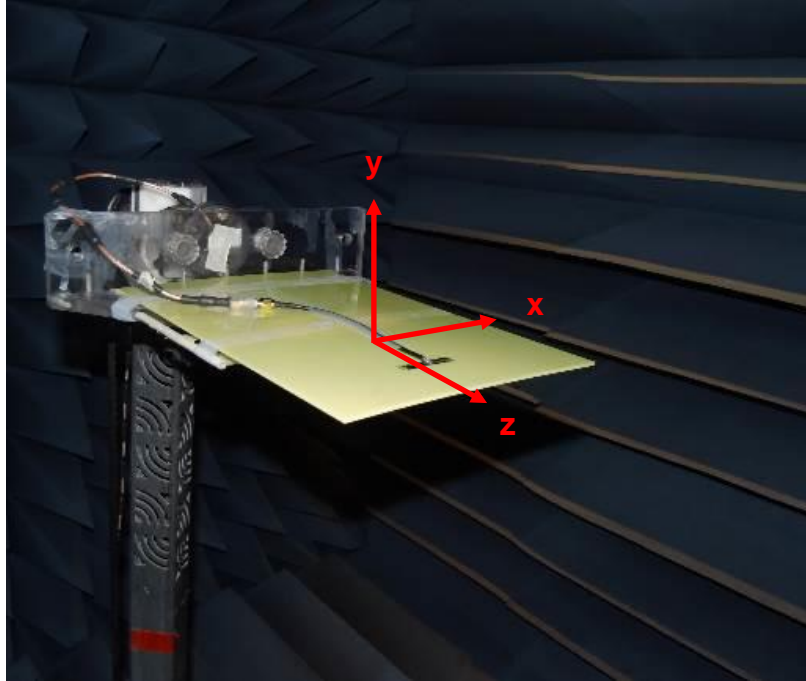
3.3. Antenna Peak Gain



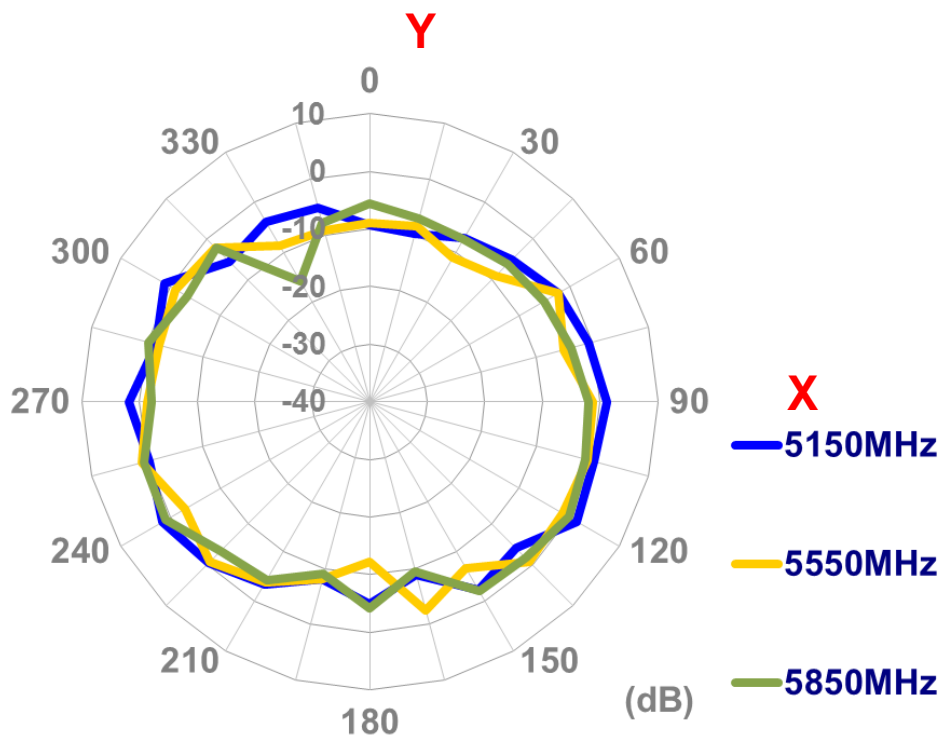
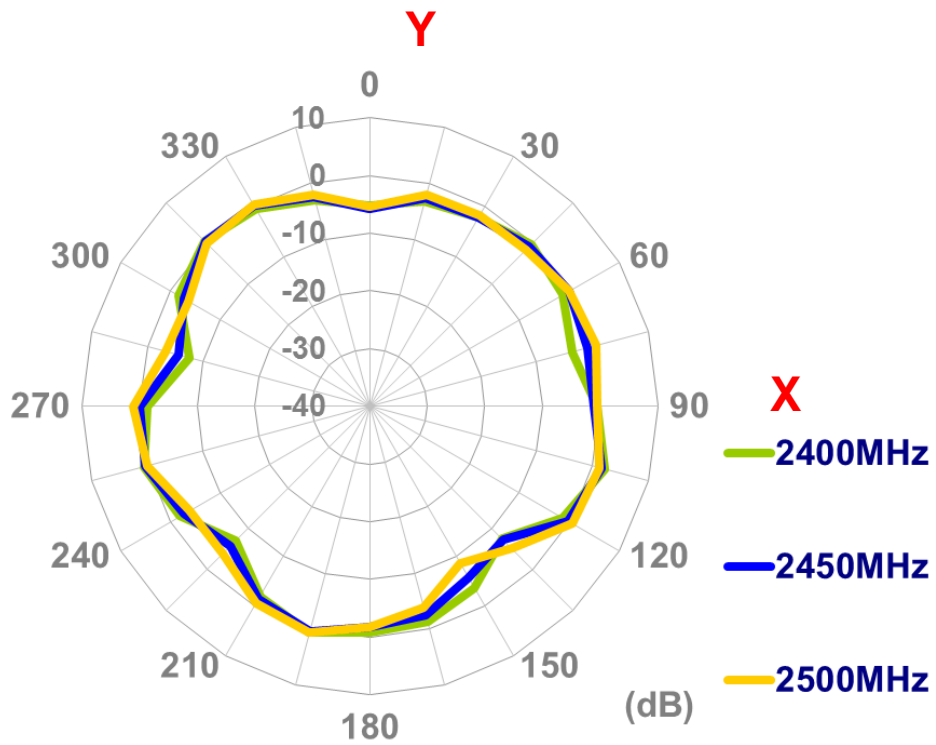
3.4. Antenna Average Gain



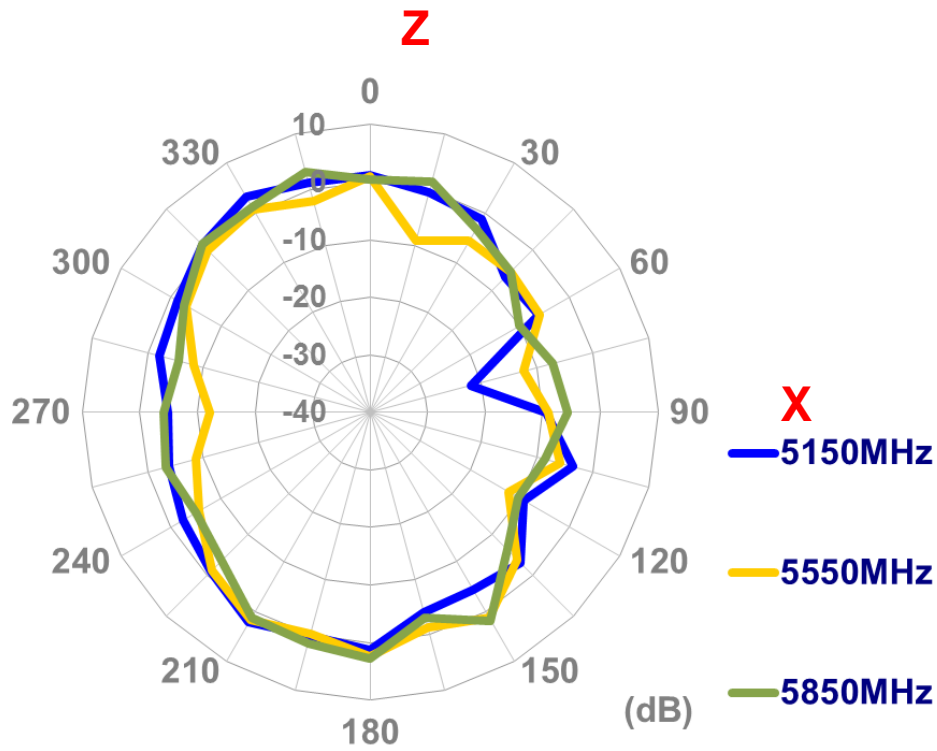
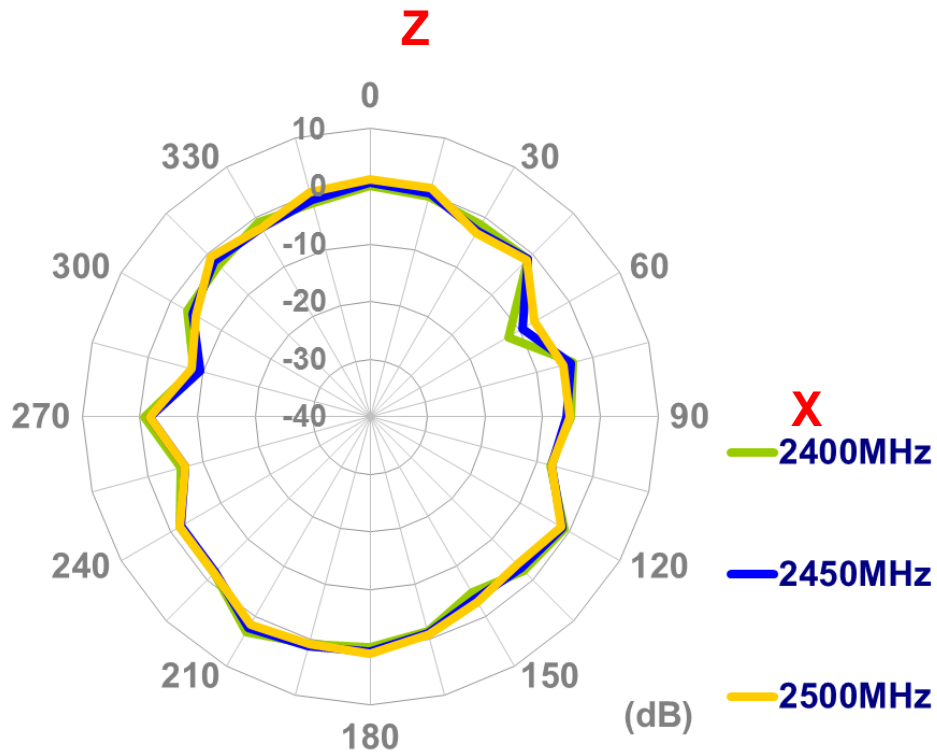
3.5. Radiation Pattern for FXP832 on 2mm ABS



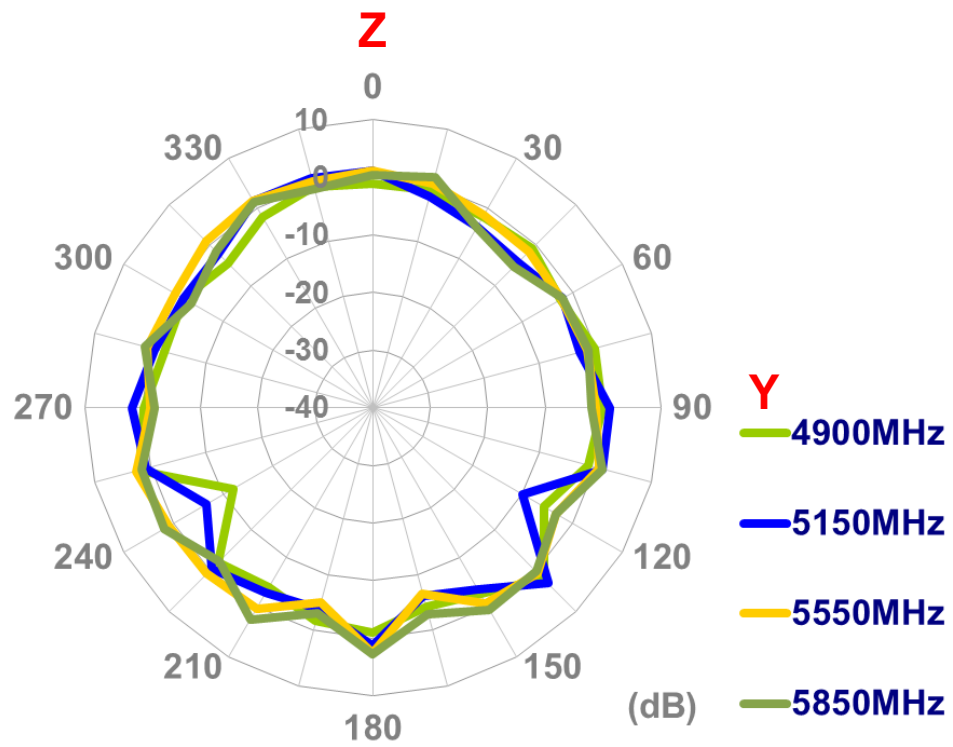
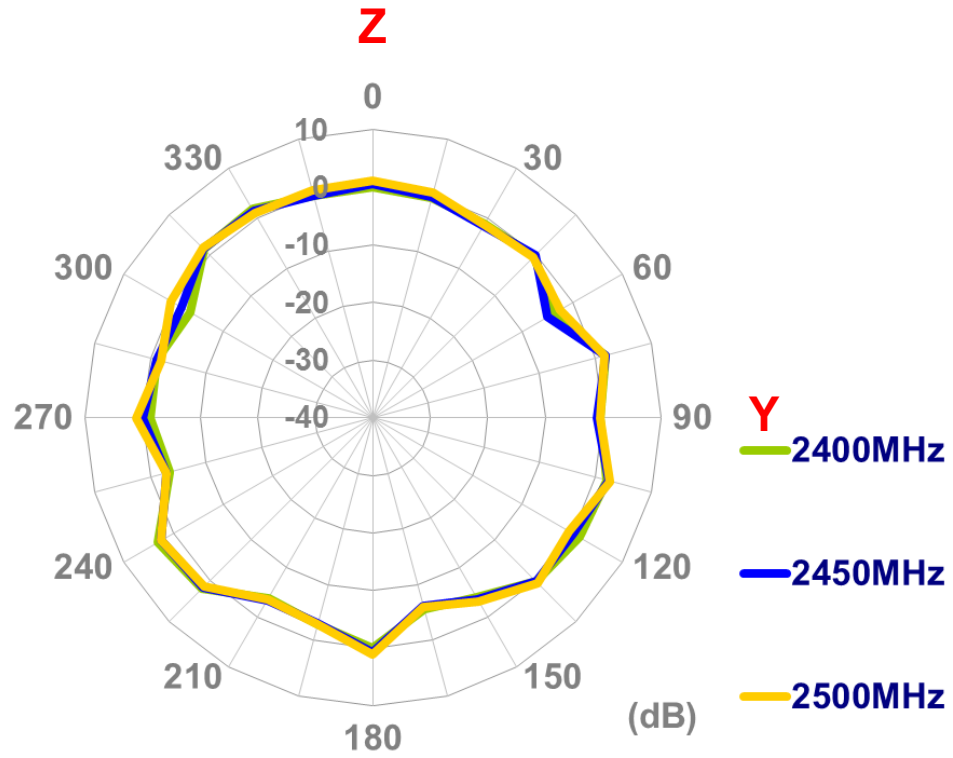
XY-plane



XZ-plane



YZ-plane



3.6. 3D Radiation Pattern for FXP832

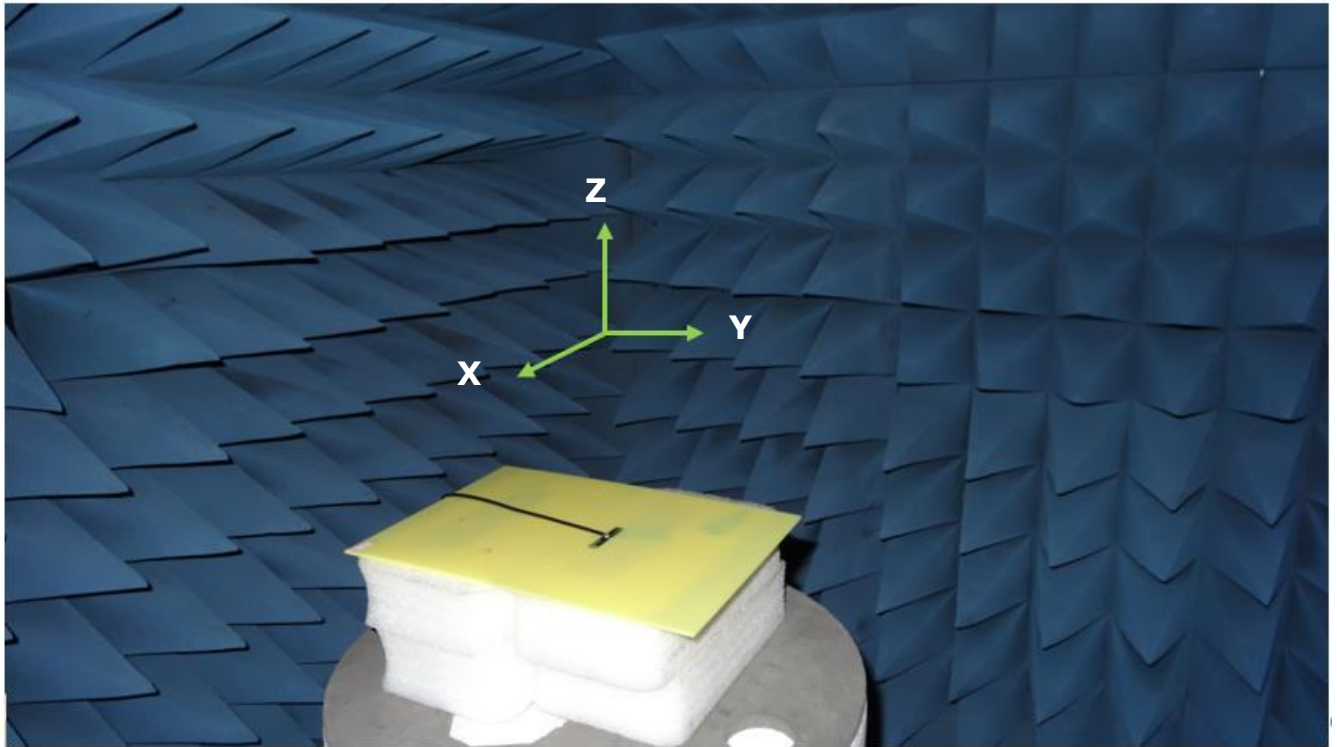


Figure 1. OTA setup

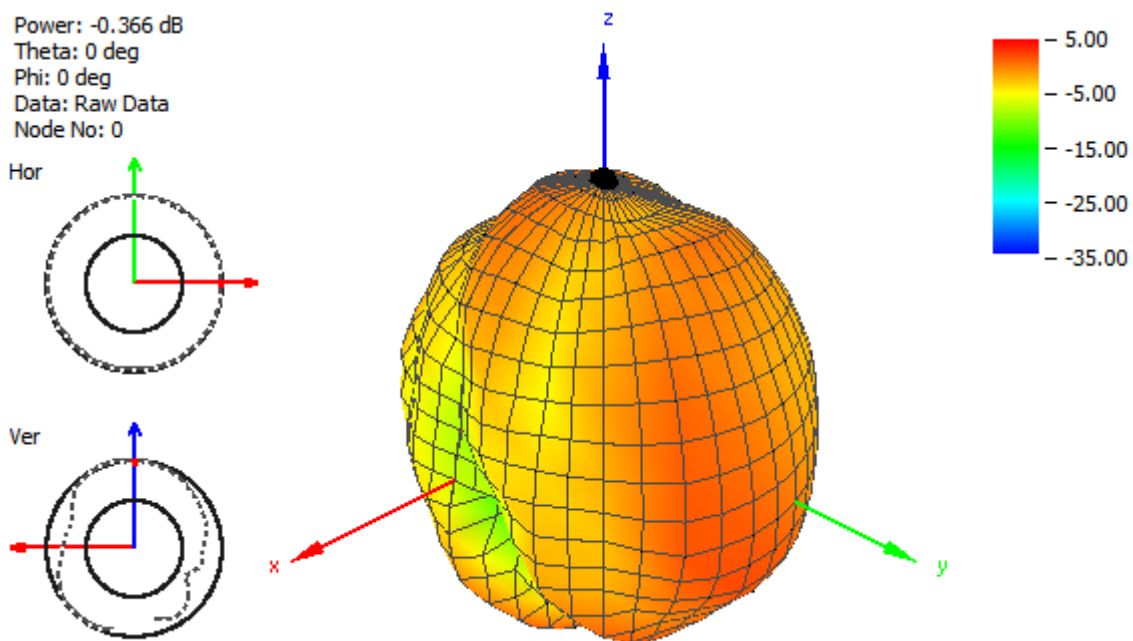


Fig 2. Radiation pattern at 2400 MHz

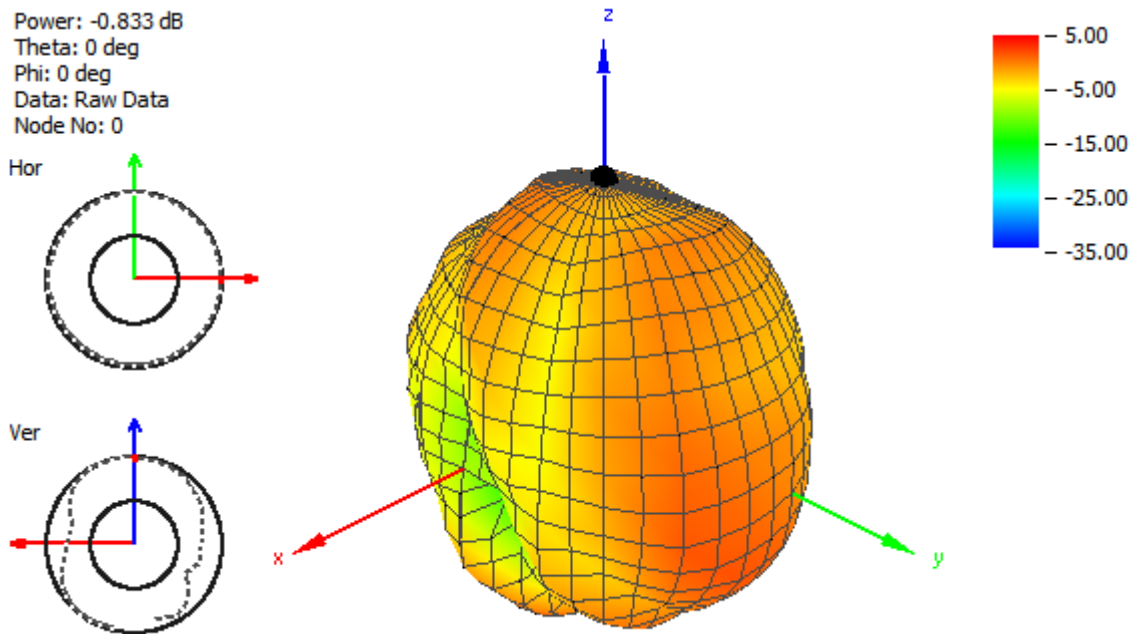


Fig 3. Radiation pattern at 2450 MHz

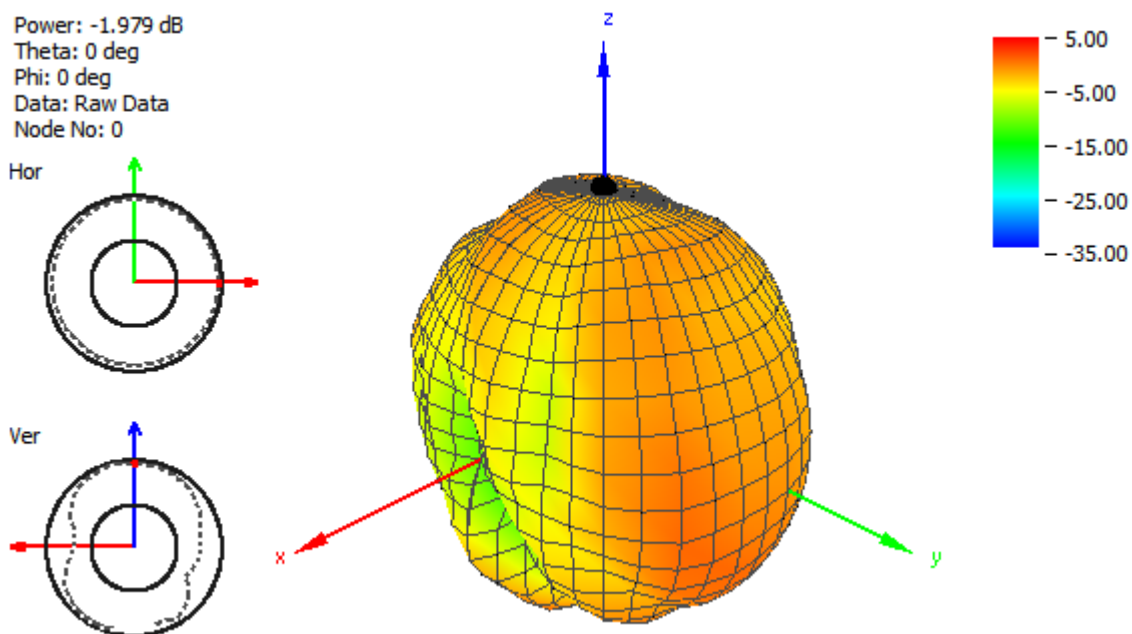


Fig 4. Radiation pattern at 2500MHz

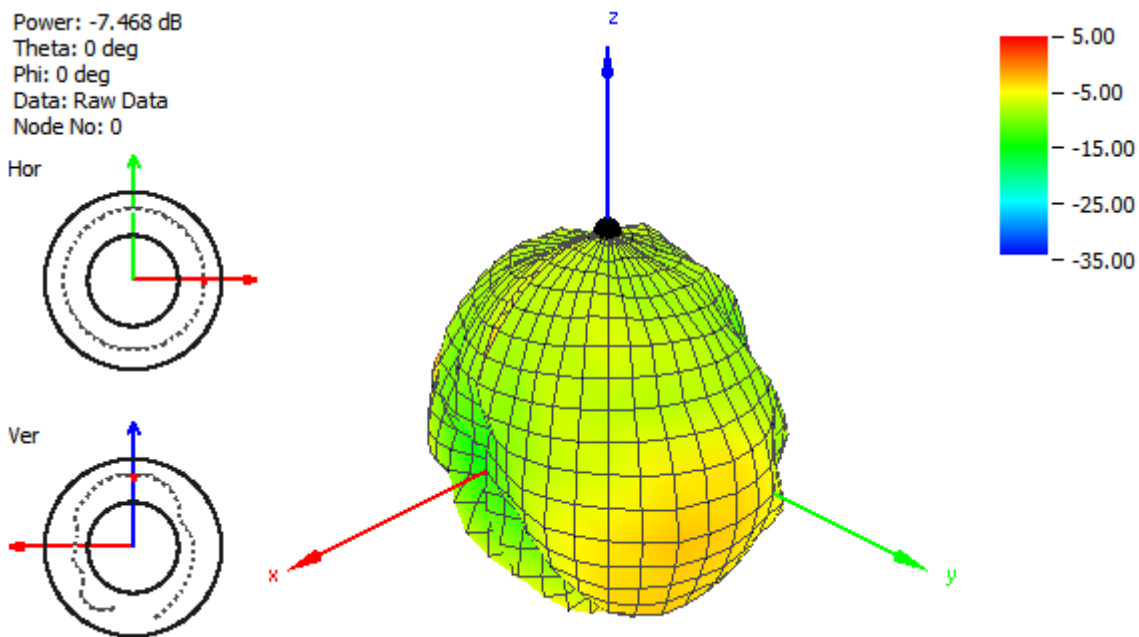


Fig 5. Radiation pattern at 4900 MHz

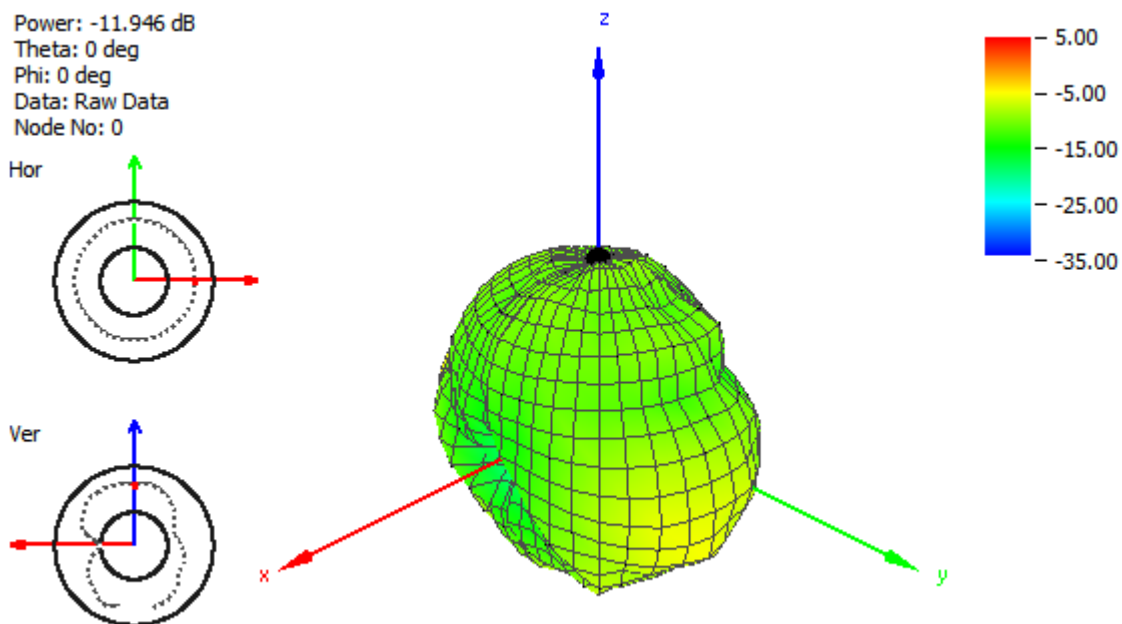


Fig 6. Radiation pattern at 5150 MHz

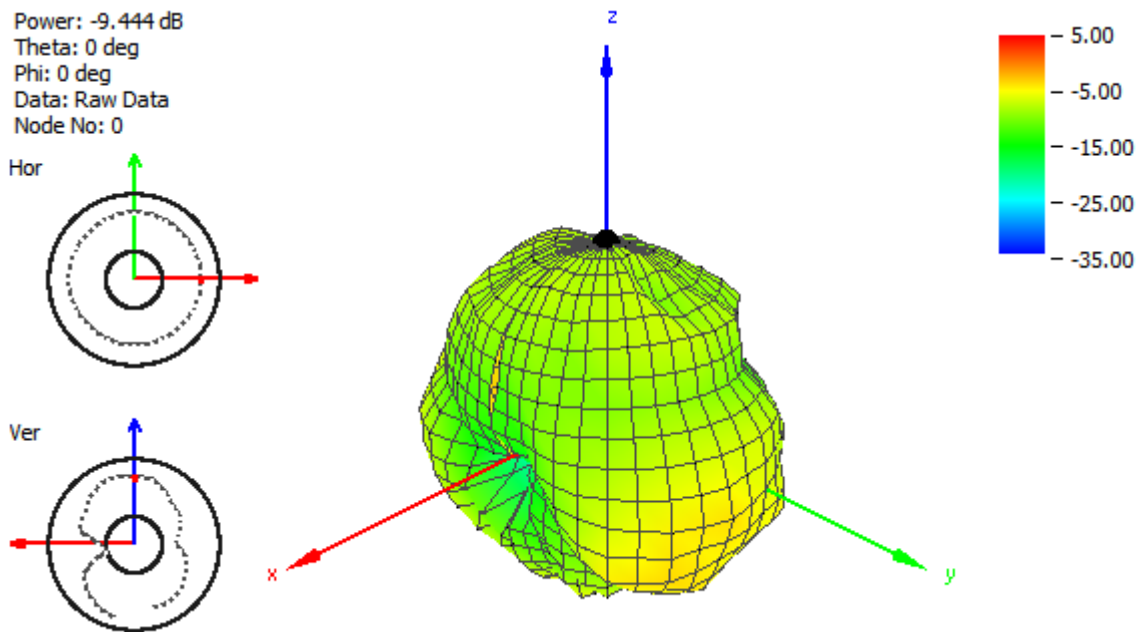


Fig 7. Radiation pattern at 5550 MHz

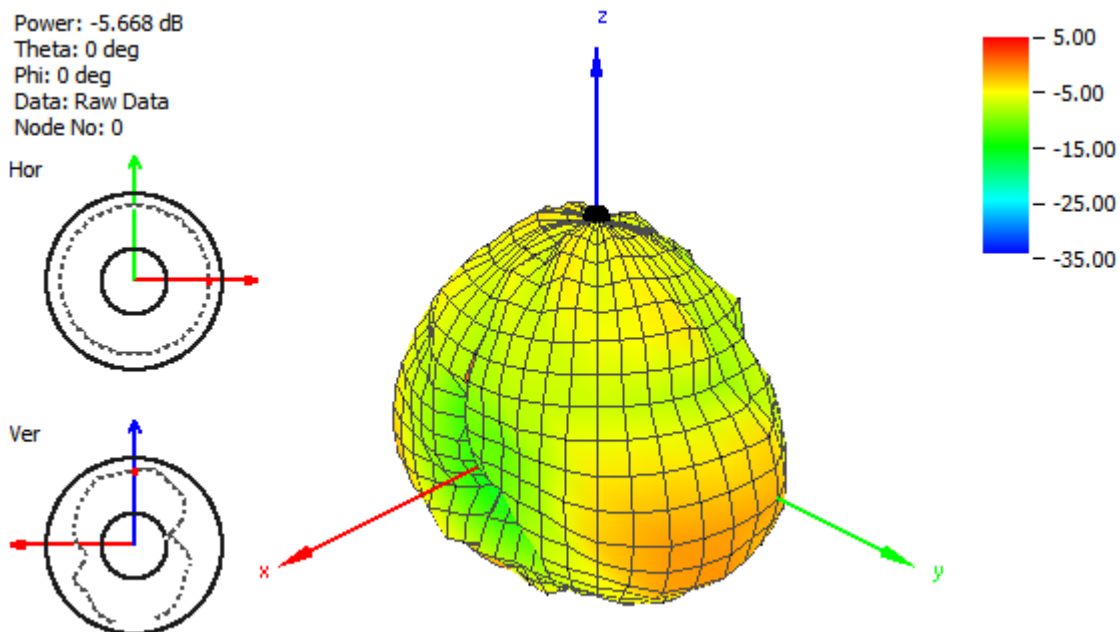
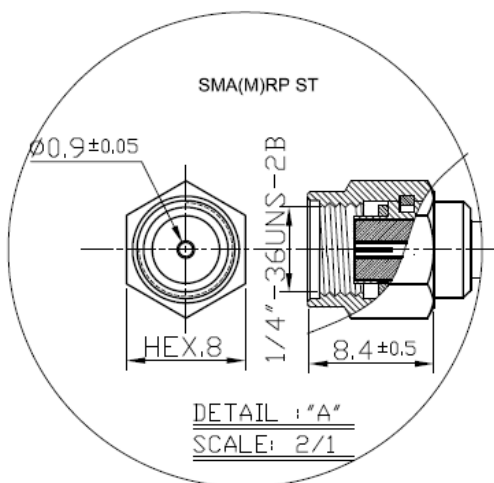
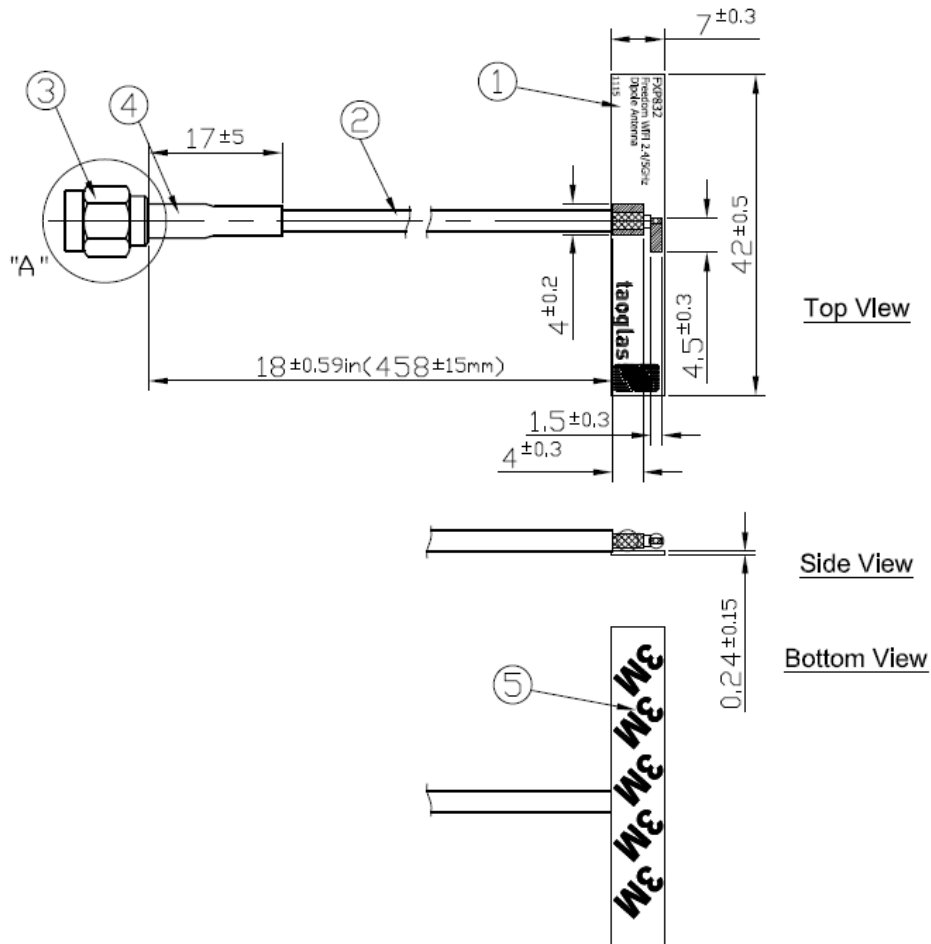


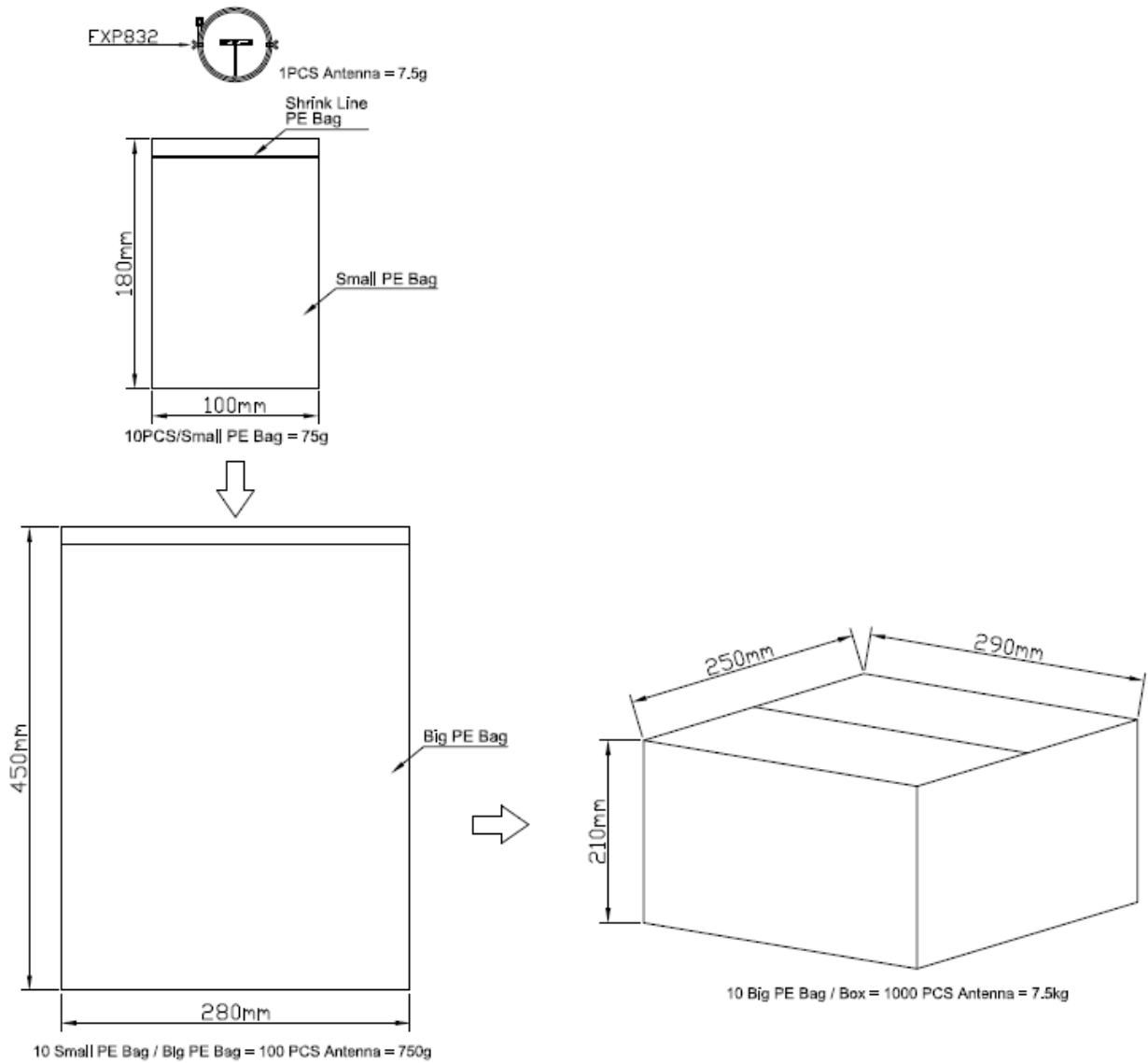
Fig 8. Radiation patterns at 5850MHz

4. Antenna Drawing



	Name	Material	Finish	QTY
①	FXP832 FPCB	FPCB 0.15t	Black	1
②	RG174 Coaxial Cable	PVC	Black	1
③	SMA(M)RP ST	Brass	Gold	1
④	Heat Shrink Tube	PE	Black	1
⑤	Double Side Adhesive	3M 467	Brown Liner	1

5. Packaging



AMEYA360

Components Supply Platform

Authorized Distribution Brand :



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