SPECIFICATION

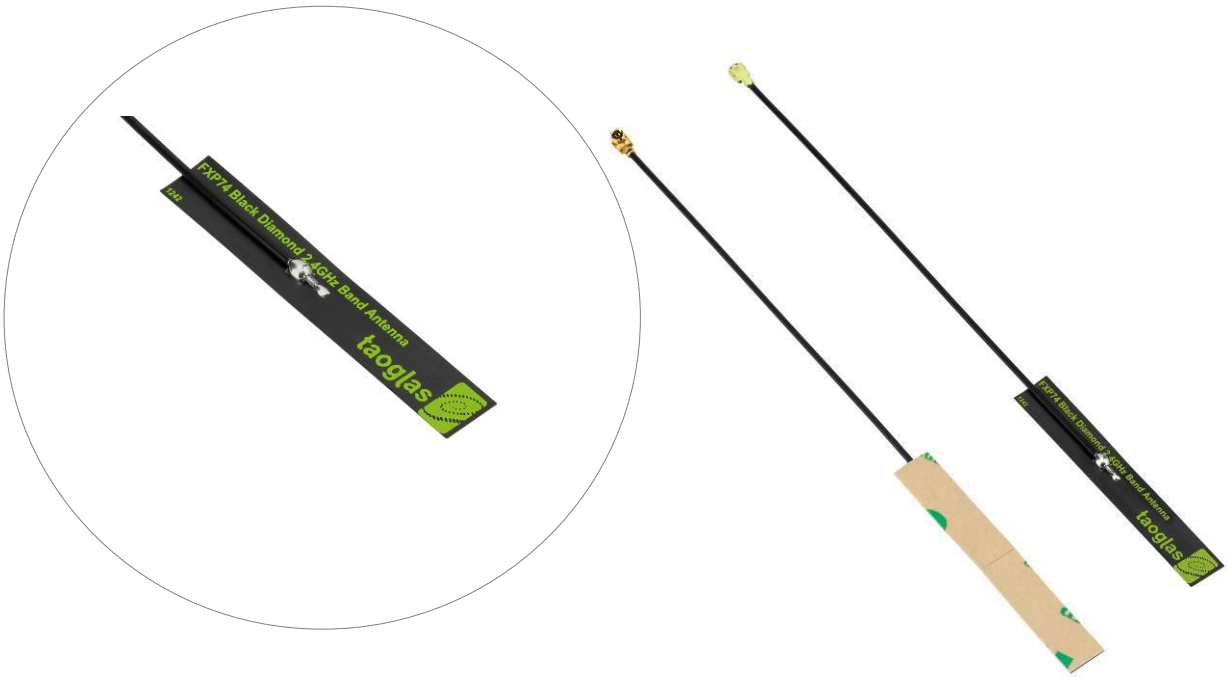
Patent Pending

FXP74 Black Diamond 2.4GHz Band Antenna

Part No. : **FXP74.07.0100A**

Product Name : FXP.74 Black Diamond 2.4GHz Antenna

Feature : 4dBi Peak Gain
Flexible, Ultra Low Profile
IPEX MHF I Connector (U.FL compatible)
100mm 1.13 Mini-Coaxial Cable
47*7*0.1 mm
RoHS Compliant✓



1. Introduction

The FXP.74 Black Diamond is a small ultra-low profile antenna for 2.4GHz band that includes Bluetooth, Zigbee and Wi-Fi single band application. The FXP.74 has a peak gain of 4dBi at 2.4GHz and efficiencies of above 50%.

This Taoglas patent pending antenna is unique in the market with exceptionally stable performance different applications. It is made from a flexible polymer, has a tiny form factor (14mm*7.0mm*0.1mm) and has double-sided 3M tape for easy and robust "peel and stick" mounting.

The FXP.74 is the ideal all-round antenna solution for fitting into narrow spaces and still maintaining high performance, for example on the inside top or adjacent side applied directly to the plastic housing of LCD monitors, tablets, smartphones, small AP routers, etc.

Customized cable lengths and connector versions can be supplied.

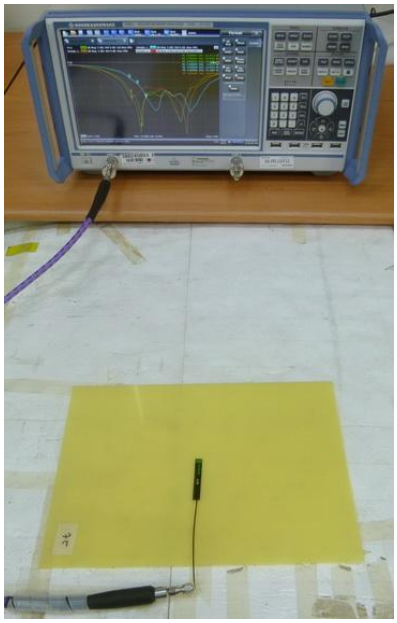
2. Specification

Communication System	Bluetooth	WiFi	ZigBee	2.4GHz ISM
	2401-2480	2412-2462	2410-2480	2400-2483.5
Efficiency	50%			
Gain	4dBi			
Return Loss	< -10dB			
Impedance	50 Ohms			
VSWR	≤ 2:1			
Polarization	Linear			
Power Handled	5 W			
MECHANICAL				
Dimensions	47*7*0.1 mm			
Weight	1.2 g			
Connector	MHFI (U.FL Compatible)			
Cable Standard	Mini-Coax 1.13 mm			
Cable Length and color	100mm, Black			
Adhesive tape	3M 467			
ENVIRONMENTAL				
Operation Temperature	-40 ºC ~ +85 ºC			
Storage Temperature	-40 ºC ~ +85 ºC			
RoHS Compliant	Yes			

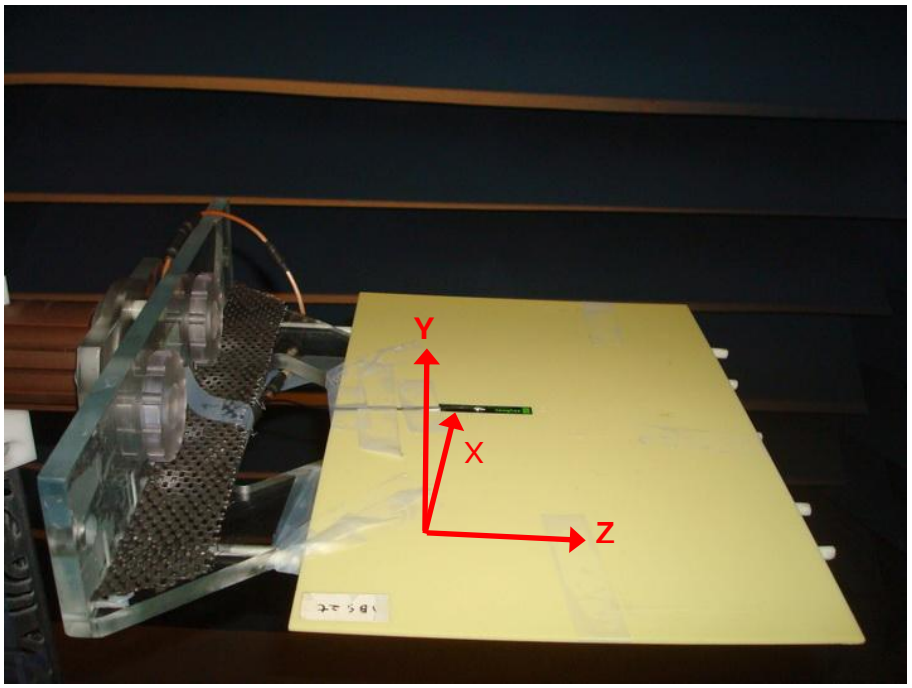
3. Antenna Characteristics

3.1. Test Setup

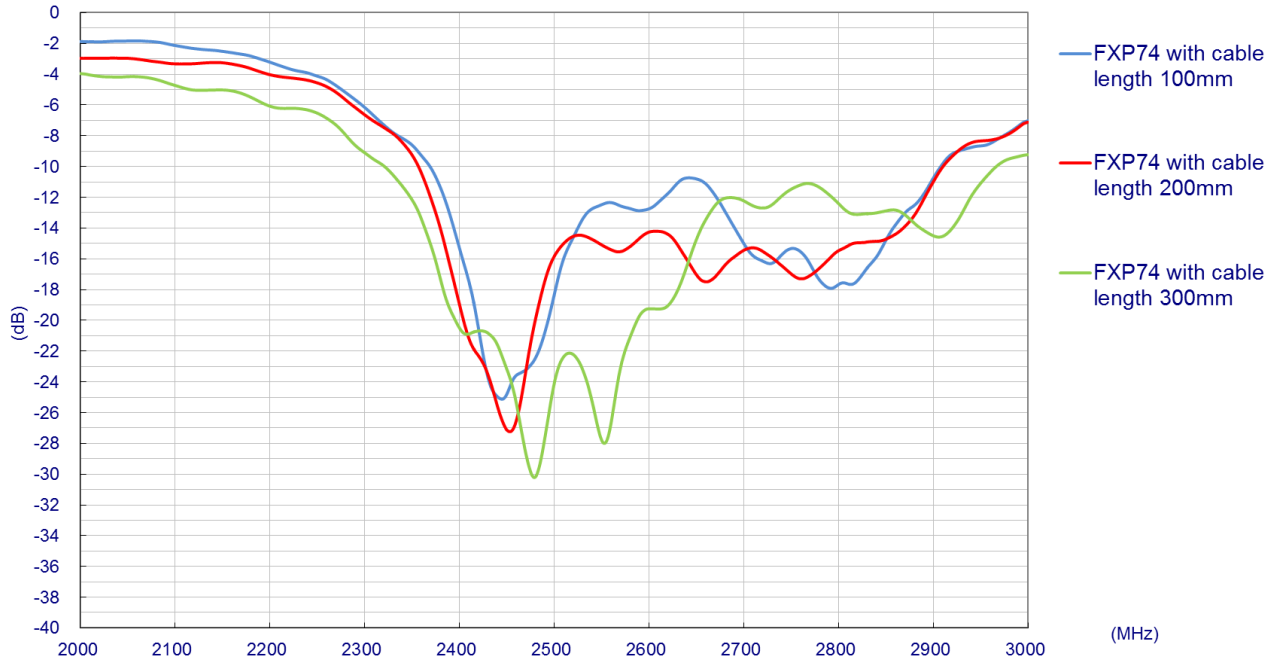
Rohde & Schwarz ZNB 8 Vector Network Analyzer



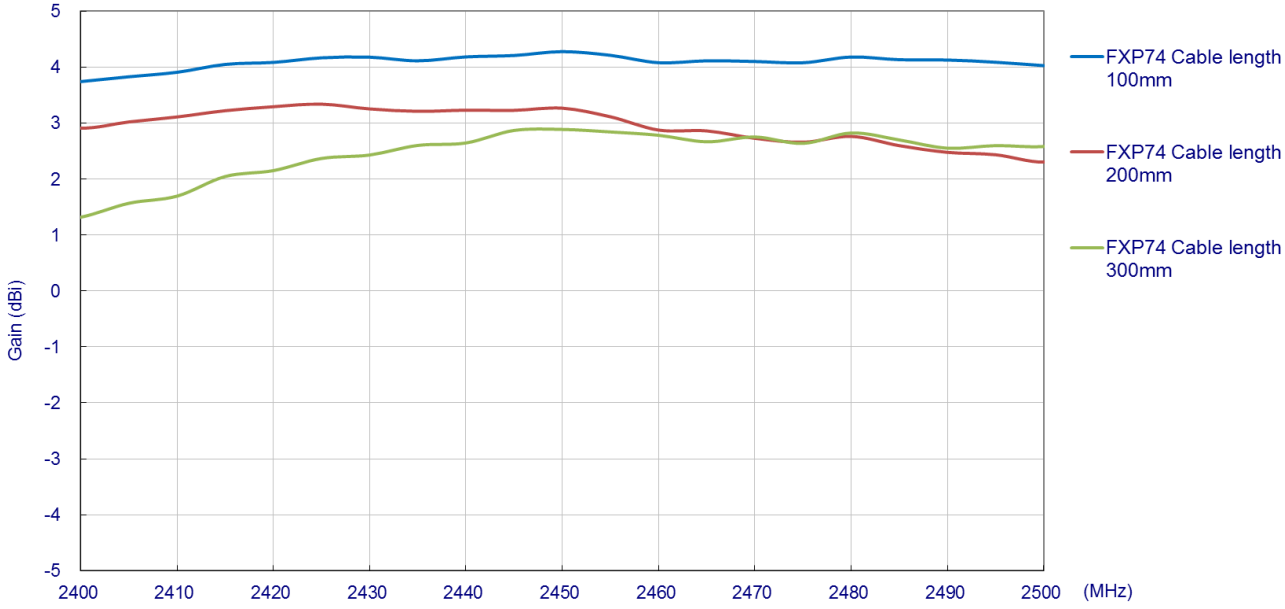
ETS 3D Radiation Scan System with Anechoic Chamber



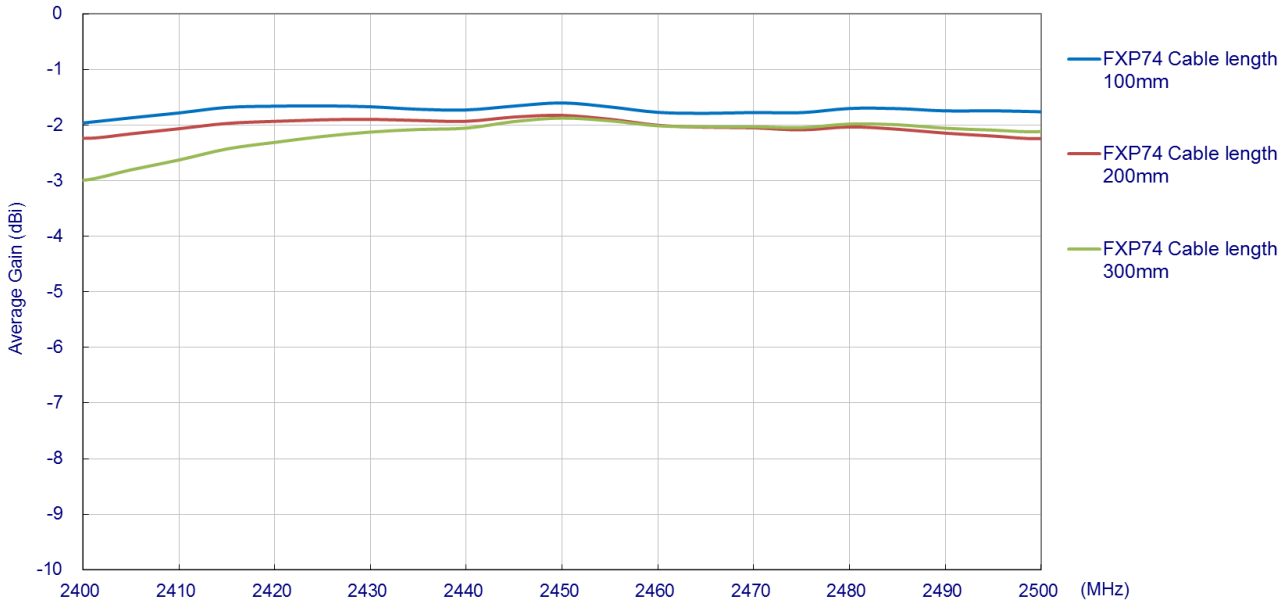
3.2. Return Loss



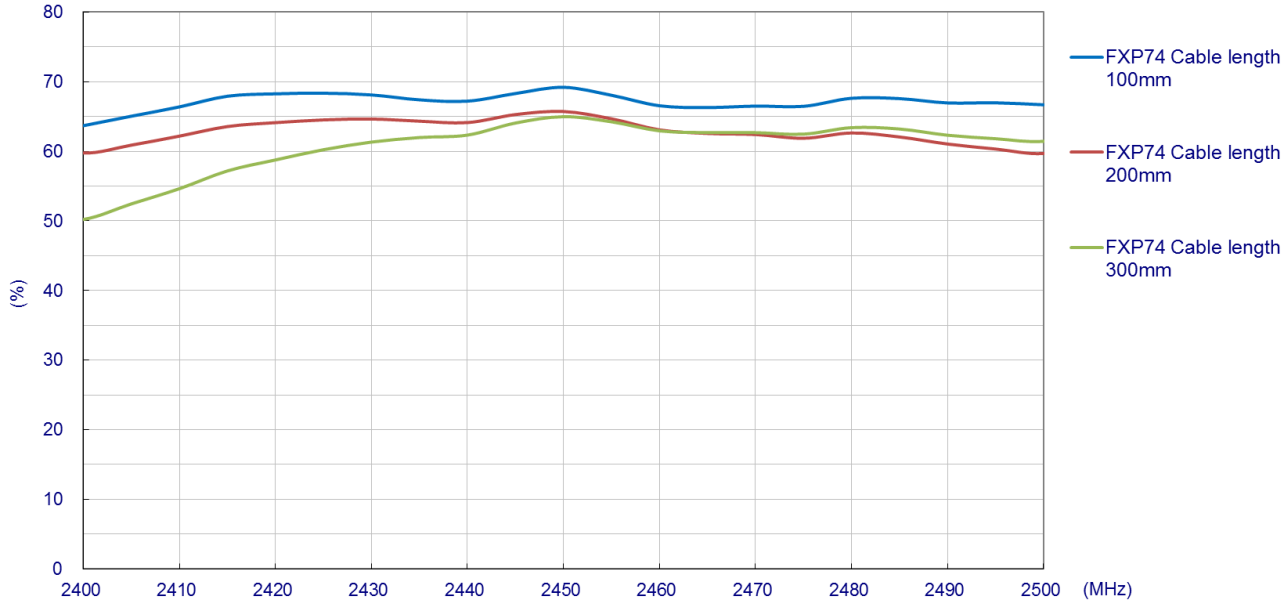
3.3. Peak Gain



3.4. Average Gain

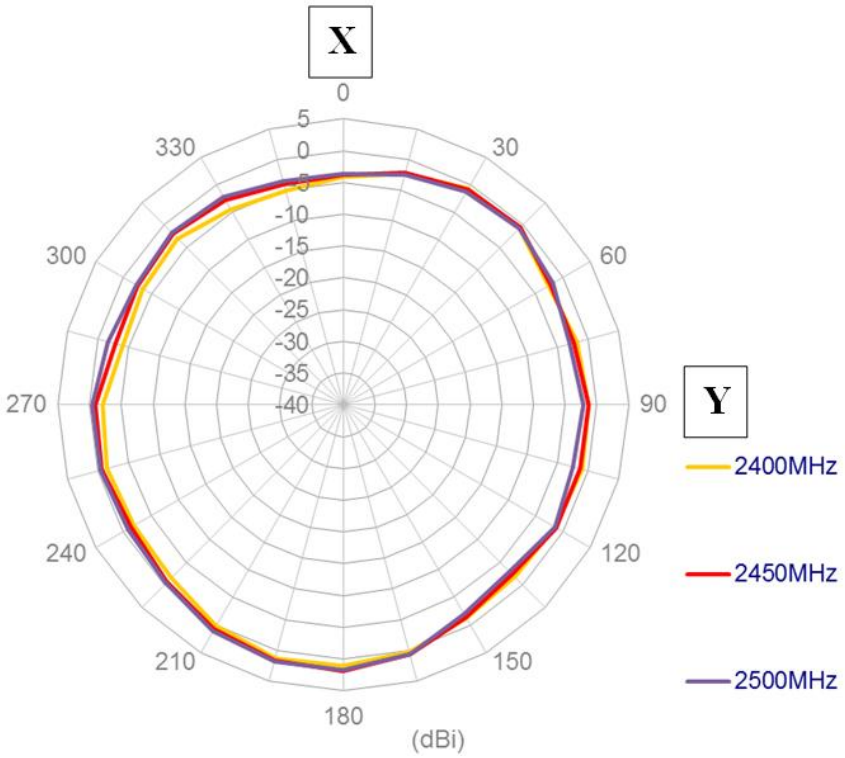


3.5. Efficiency

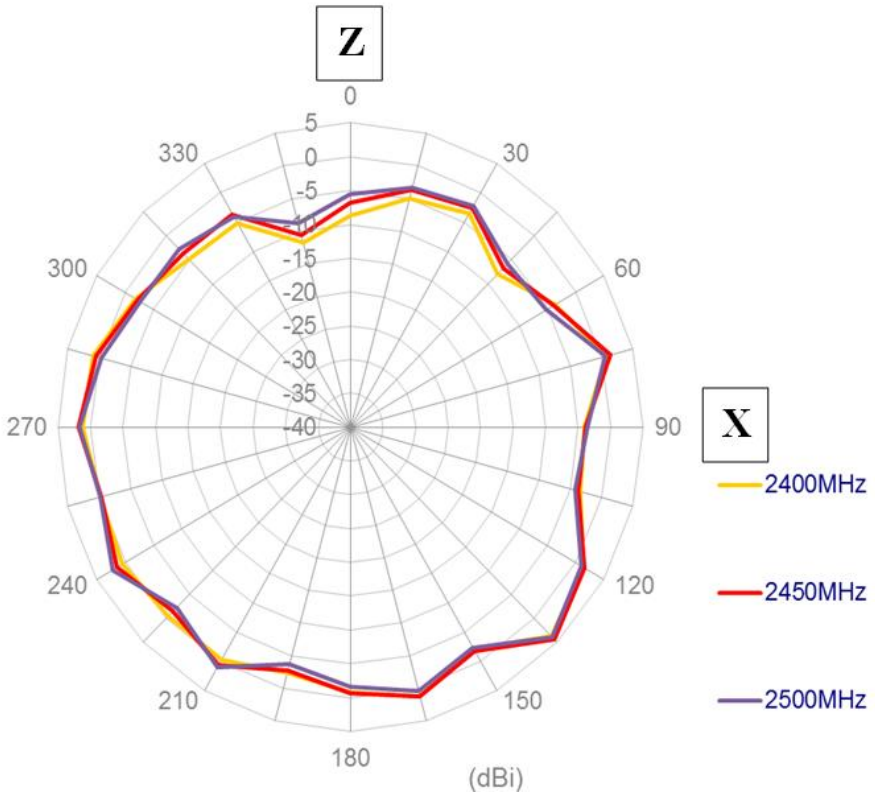


4. Antenna Radiation Pattern

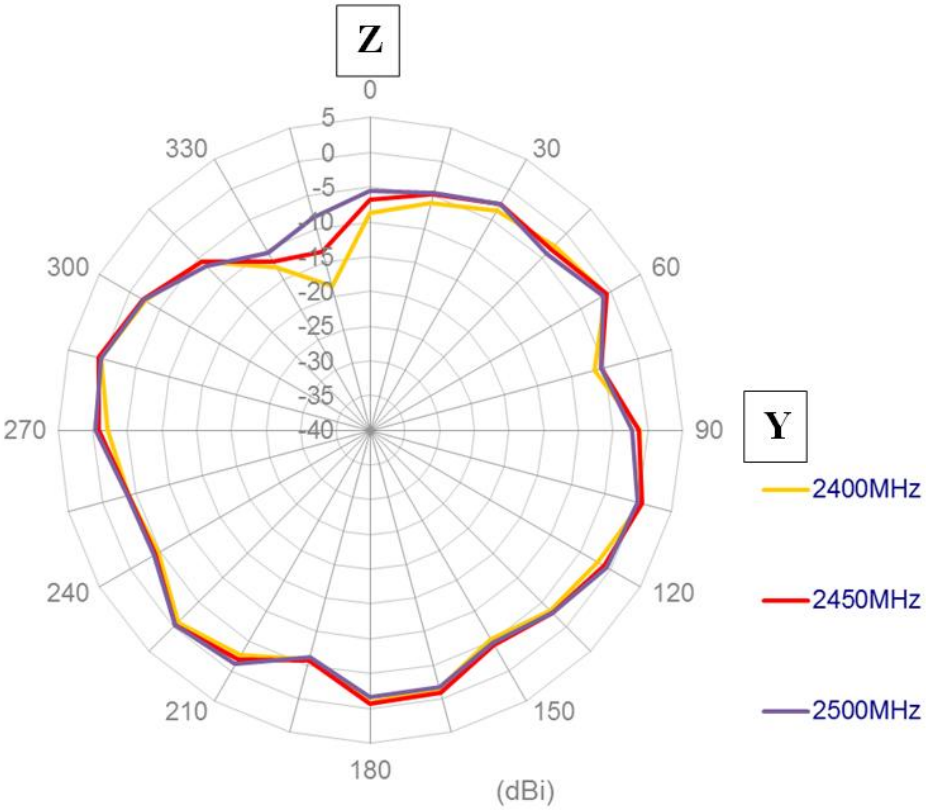
XY-plane



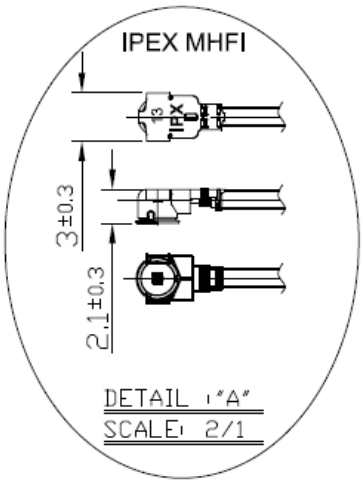
XZ-plane

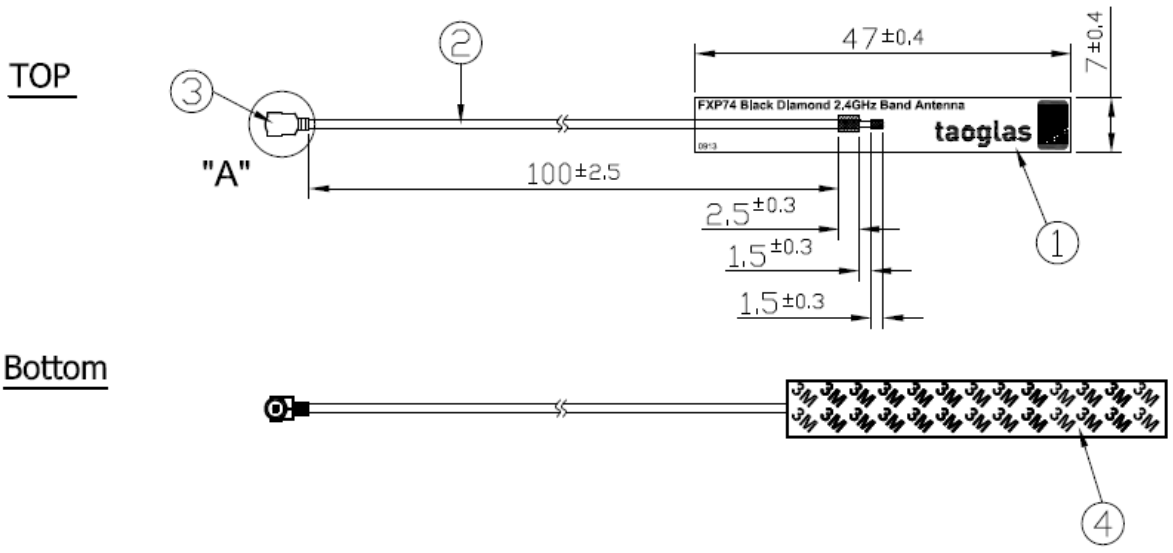


YZ-plane



5. Antenna Drawing

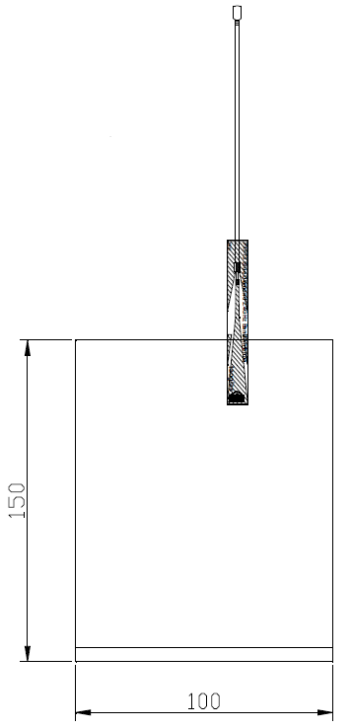




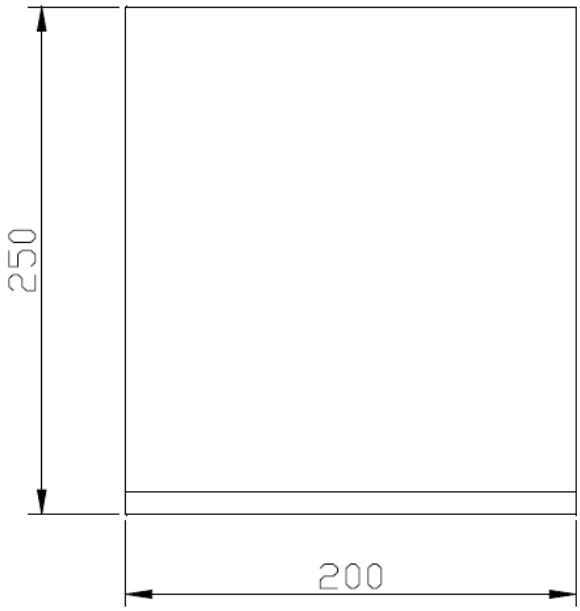
	Name	P/N	Material	Finish	QTY
①	FXP74 PCB	100112F000033A	FPCB 0.15t	Black	1
②	1.13 Mini-Coaxial Cable	OD.113.AD	FEP	Black	1
③	IPEX MHFI	IPEX.MHFI.113	Brass	Gold	1
④	Double-Sided Adhesive	100111D0000XXA	3M 467	Brown Liner	1

6. Packaging

100pcs per small PE bag



10pcs small PE bags per 1 big PE bag

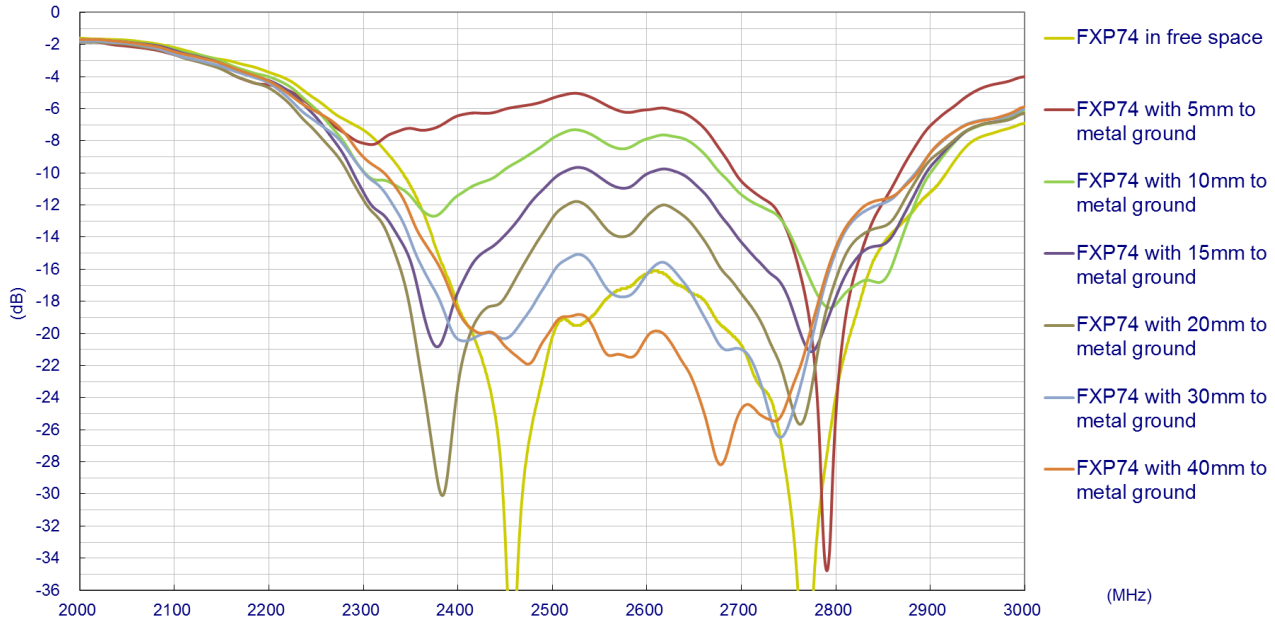


7. Return Loss – environmental effects

7.1. Antenna on different ABS thickness (Cable Length 100mm)

7.2. Proximities to metal ground plane

(Cable Length 100mm, antenna stuck on 2mm ABS base)



7.3. Antenna with different cable type (Antenna stuck on 2mm ABS base)