



Antenna Information

Product: XBee 3 LTE Cat 1
FCC ID: MCQ-XB3C2
IC: 1846A-XB3C2

Bluetooth antennas

The following antennas are approved for use with the Bluetooth radio by FCC and by ISED.

Part number	Description	Type	Gain	Application
31000022-01	Integral antenna	PCB	-0.67 dBi	Fixed/Mobile
A24-HASM-450	Half-wave articulated RPSMA-4.5"	Dipole	2.1 dBi	Fixed/Mobile
A24-HABUF-P5I	Half-wave bulkhead mount U.FL w/ 5" pigtail	Dipole	2.0 dBi	Fixed/Mobile
A24-HASM-525	Half-wave articulated RPSMA-5.25"	Dipole	2.0 dBi	Fixed/Mobile
FXP74.07.0100A	Taoglas FXP74 Black Diamond antenna	Patch	4.0 dBi	Fixed/Mobile

Cellular antennas

Per cellular module grant, antenna gain must be below:

Frequency band	Maximum Antenna Gain			
	Global variant (55002112-03)		North American variant (55002112-02)	
	FCC limit	ISED limit	FCC limit	ISED limit
GSM/GPRS 850	5.00 dBi		N/A	
PCS1900	5.00 dBi		N/A	
WCDMA/LTE Band 2	5.00 dBi		8.01 dBi	
WCDMA/LTE Band 4	5.00 dBi		5.00 dBi	
WCDMA/LTE Band 5	5.00 dBi		9.40 dBi	6.10 dBi
LTE Band 7	5.00 dBi		N/A	
LTE Band 8	5.00 dBi		N/A	
LTE Band 12	5.00 dBi		8.70 dBi	5.61 dBi
LTE Band 13	5.00 dBi		9.16 dBi	5.93 dBi
LTE Band 14	N/A		9.23 dBi	N/A
LTE Band 26	5.00 dBi		9.30 dBi	6.10 dBi
LTE Band 38	5.00 dBi		N/A	
LTE Band 41	5.00 dBi		N/A	
LTE Band 66	5.00 dBi		5.00 dBi	
LTE Band 71	N/A		8.48 dBi	5.45 dBi

PASSIVE 3D ANTENNA PATTERN MEASUREMENTS



OTA 2018.01.04

EUT:	OTA
Serial Number:	2335
Customer:	Digi International Inc
Attendees:	None
Customer Project:	None
Tested By:	Christopher Heintzelman
Test Run Description:	Passive_2400-2500_Run2

Work Order:	DGII0462
Date:	9/27/2022
Temperature:	22.2 °C
Relative Humidity:	34.1% RH
Bar. Pressure:	1025 mbar
Job Site:	MN10

COMMENTS

None

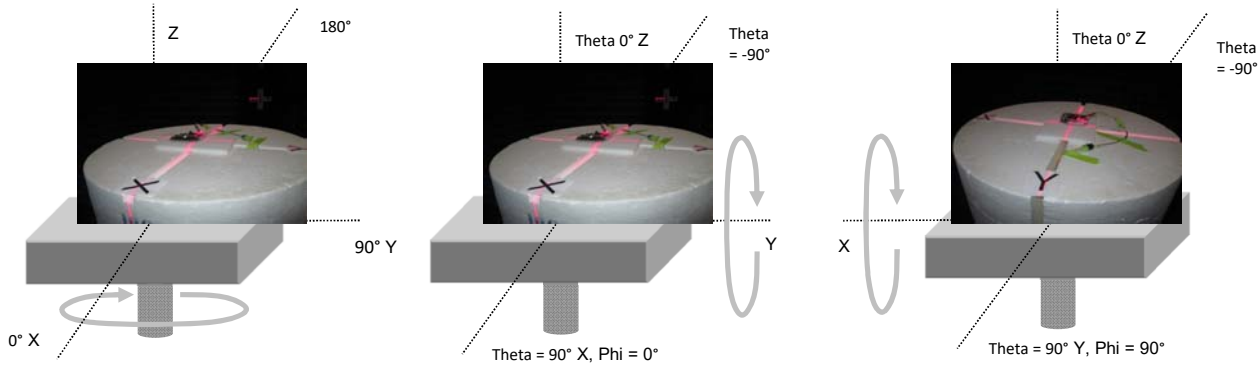
Max dBi Gain -0.67

3D PATTERN DATA												
Frequency (MHz)	2400	2402	2404	2406	2408	2410	2412	2414	2416	2418	2420	2422
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-8.74	-8.68	-8.59	-8.51	-8.44	-8.37	-8.29	-8.19	-8.13	-8.03	-7.93	-7.81
Peak EIRP (dBm)	-4.65	-4.61	-4.44	-4.52	-4.29	-4.25	-4.23	-4.24	-4.18	-4.04	-3.98	-3.98
Directivity (dBi)	4.08	4.07	4.14	3.99	4.15	4.12	4.06	3.96	3.95	3.99	3.95	3.83
Efficiency (dB)	-8.74	-8.68	-8.59	-8.51	-8.44	-8.37	-8.29	-8.19	-8.13	-8.03	-7.93	-7.81
Efficiency (%)	13.38	13.54	13.84	14.10	14.33	14.57	14.83	15.16	15.40	15.73	16.11	16.56
Gain (dBi)	-4.65	-4.61	-4.44	-4.52	-4.29	-4.25	-4.23	-4.24	-4.18	-4.04	-3.98	-3.98
Average Gain (dB)	-8.74	-8.68	-8.59	-8.51	-8.44	-8.37	-8.29	-8.19	-8.13	-8.03	-7.93	-7.81
E-Plane 3 dB BW (°)	39.00	40.00	39.00	42.00	39.00	40.00	40.00	42.00	40.00	40.00	42.00	42.00

Azimuth Cut (Theta Axis = 90°)

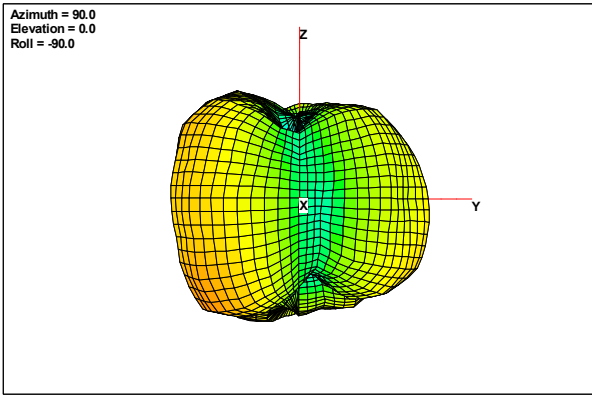
Elevation Cut (Phi Axis = 0°)

Elevation Cut (Phi Axis = 90°)

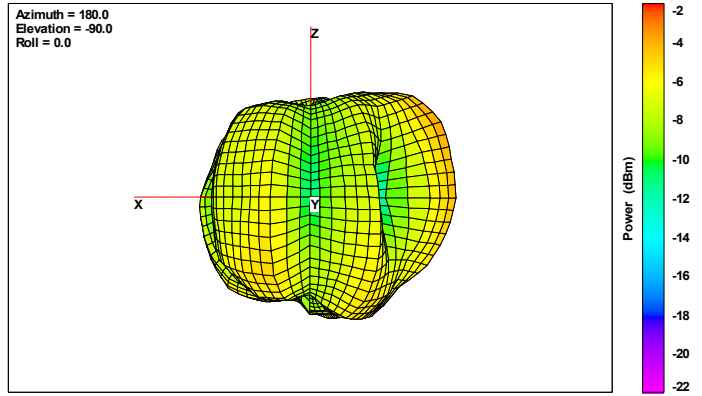


Antenna 3100022-01 (XBee 3 LTE Cat 1)

Total Power - 2442 MHz

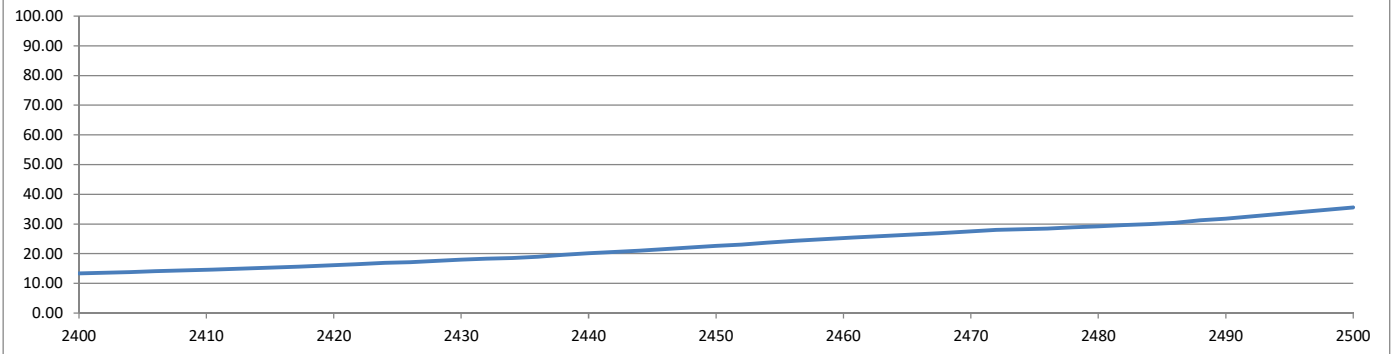


Total Power - 2442 MHz



	2424	2426	2428	2430	2432	2434	2436	2438	2440	2442	2444	2446	2448
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	-7.72	-7.65	-7.56	-7.45	-7.37	-7.31	-7.21	-7.08	-6.96	-6.87	-6.78	-6.67	-6.57
	-3.85	-3.79	-3.73	-3.63	-3.52	-3.44	-3.35	-3.18	-3.07	-2.93	-2.81	-2.74	-2.73
	3.88	3.86	3.82	3.82	3.84	3.87	3.86	3.90	3.89	3.94	3.97	3.93	3.83
	-7.72	-7.65	-7.56	-7.45	-7.37	-7.31	-7.21	-7.08	-6.96	-6.87	-6.78	-6.67	-6.57
	16.89	17.17	17.54	17.99	18.33	18.59	19.00	19.58	20.12	20.57	20.99	21.53	22.05
	-3.85	-3.79	-3.73	-3.63	-3.52	-3.44	-3.35	-3.18	-3.07	-2.93	-2.81	-2.74	-2.73
	-7.72	-7.65	-7.56	-7.45	-7.37	-7.31	-7.21	-7.08	-6.96	-6.87	-6.78	-6.67	-6.57
	41.00	49.00	40.00	48.00	49.00	49.00	49.00	49.00	48.00	48.00	49.00	49.00	50.00

Efficiency (%)



Antenna 3100022-01 (XBee 3 LTE Cat 1)

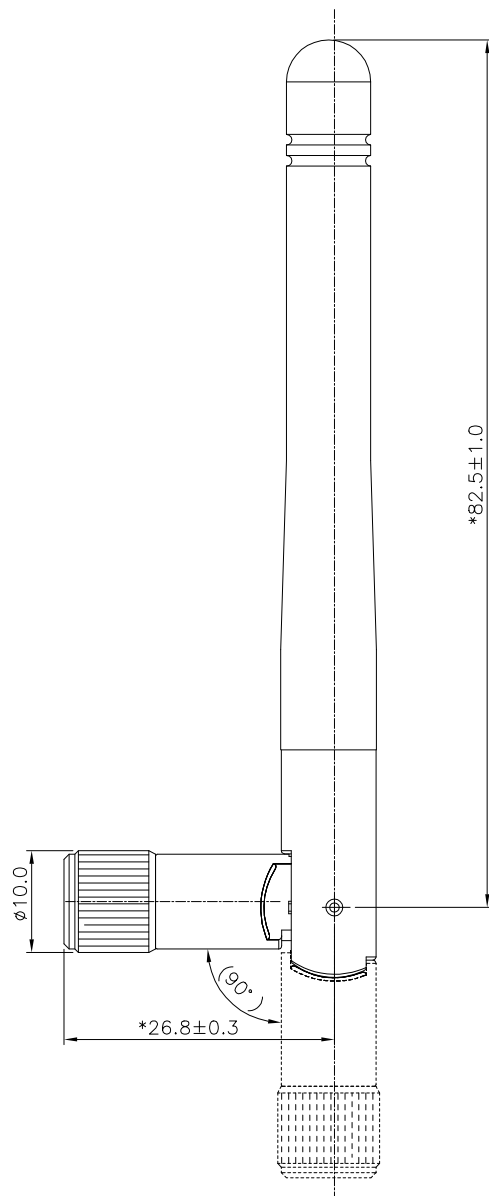
2450	2452	2454	2456	2458	2460	2462	2464	2466	2468	2470	2472	2474
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-6.45	-6.37	-6.25	-6.15	-6.06	-5.98	-5.89	-5.81	-5.75	-5.69	-5.61	-5.53	-5.49
-2.52	-2.46	-2.31	-2.30	-2.16	-2.06	-1.97	-1.95	-1.89	-1.85	-1.69	-1.68	-1.62
3.93	3.91	3.94	3.86	3.90	3.92	3.92	3.86	3.87	3.84	3.92	3.84	3.87
-6.45	-6.37	-6.25	-6.15	-6.06	-5.98	-5.89	-5.81	-5.75	-5.69	-5.61	-5.53	-5.49
22.66	23.07	23.71	24.26	24.80	25.25	25.78	26.22	26.58	26.97	27.49	28.01	28.23
-2.52	-2.46	-2.31	-2.30	-2.16	-2.06	-1.97	-1.95	-1.89	-1.85	-1.69	-1.68	-1.62
-6.45	-6.37	-6.25	-6.15	-6.06	-5.98	-5.89	-5.81	-5.75	-5.69	-5.61	-5.53	-5.49
49.00	49.00	48.00	49.00	48.00	48.00	47.00	48.00	48.00	48.00	48.00	48.00	48.00

Antenna 3100022-01 (XBee 3 LTE Cat 1)

2476	2478	2480	2482	2484	2486	2488	2490	2492	2494	2496	2498	2500
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5.46	-5.40	-5.34	-5.29	-5.24	-5.17	-5.06	-4.97	-4.87	-4.78	-4.68	-4.58	-4.48
-1.58	-1.56	-1.54	-1.41	-1.37	-1.35	-1.22	-1.11	-1.01	-0.91	-0.80	-0.72	-0.67
3.88	3.83	3.80	3.88	3.87	3.82	3.83	3.86	3.86	3.87	3.88	3.86	3.82
-5.46	-5.40	-5.34	-5.29	-5.24	-5.17	-5.06	-4.97	-4.87	-4.78	-4.68	-4.58	-4.48
28.42	28.87	29.25	29.59	29.94	30.39	31.22	31.83	32.56	33.27	34.05	34.84	35.60
-1.58	-1.56	-1.54	-1.41	-1.37	-1.35	-1.22	-1.11	-1.01	-0.91	-0.80	-0.72	-0.67
-5.46	-5.40	-5.34	-5.29	-5.24	-5.17	-5.06	-4.97	-4.87	-4.78	-4.68	-4.58	-4.48
47.00	47.00	48.00	47.00	48.00	48.00	49.00	47.00	48.00	48.00	48.00	48.00	49.00

A1RFRD10

REVISION RECORD				
REV	ECO	DESCRIPTION	DRFT	CHKD
△		修改model no,與P/N	Andy	9/15/04
△		Drawing modification	Nicole	5/21/04



NOTE:

ELECTRICAL PROPERTIES

- 1.DESCRPTION : 1/4 λ SWIVEL TYPE DIPOLE ANTENNA
ø9x82.5+ SMA
- △ 2.MODEL NO. : AN-A1-X0C
- 3.FREQUENCY : OPTION
- 4.IMPEDANCE : 50 Ohms nominal
- 5.V.S.W.R. : 2.0 max. IN BAND
- △ 6.GAIN : 1.14~2.14 dBi, VERTICAL DIRECTION
- 7.ADMITTED POWER RADLATION : 1W
- 8.TYPE OF RADLATION : TOROIDAL
- 9.POLARIZATION : VERTICAL
- 10.ELECTRICAL LENGTH : 1/4 λ ,DIPOLE
- 11.RADIATION : 0 mni
- 12.CONNECTOR TYPE : SMA (MALE/FEMALE OPTION)

MECHANICAL PROPERTIES

- 1.CABLE : RG-178, 50ohm
- 2.OPERATING TEMPERATURE RANGE : -20°C~+65°C
- 3.STORAGE TEMPERATURE RANGE : -30°C~+75°C
- 4.ANTENNA COVER : TPE
- 5.COLOR : OPTION

PART NUMBER : E421X-2000AX

△ CONNECTOR
C:R-SMA (FEMALE)
D:SMA (MALE)

COLOR
1:BLACK
3:GRAY
4:GRAY(PANTONE COOL GRAY 8C)
7:GRAY(PANTONE 429C)
8:GRAY(PANTONE Cool Gary 7C)

DETACHED LISTS	← MM →	DFTO Sam DATE 9/27/02'	FULL RISE ELECTRONIC CO., LTD	
	TOLERANCES EXCEPT AS NOTED	CHKD Cha Chi DATE 05/31/04'		
	.0 ± 0.2	MFO LMJ DATE 05/31/04'		
	.00 ± 0.15	APPVL YUAN DATE 05/31/04'		
.000 ± 0.075	MATERIAL :	TITLE ANTENNA ø9+SMA CONNECTOR		
ANGLES ± 0.5	QT'Y :	DRAWING NO. GE423A04		SIZE REV
	FINISH :	/PART NO. SEE NOTE		A3 2
SCALE : 2:1	DO NOT SCALE DRAWING		SHEET 1 OF 1	



SPECIFICATION FOR PRELIMINARY

APPROVAL SIGNATURE
DATE :

CUSTOMER : DIGI **PART NO :** A24-HABUF-P5I **REV.**

DESCRIPTION : Antenna

PLEASE SIGN AND RETURN ONE COPY.

ALL PRODUCTION UNITS WILL BE BUILT ACCORDING
TO THIS SPECIFICATIONS.

MODEL NO: AN2400-37A19BX

AGENCY APPROVAL: _____

PRESENTED BY: _____ **NO.** _____

CHECKED BY: Johnson Lin

APPROVED BY: Johnson Lin

DATE : 03/10/2014

19F, NO.102, HSIN TAI WU ROAD SEC.1, HSIH-JR CITY, TAIPEI HSIEN, TAIWAN

TEL# (886)2-2696-0007

FAX# (886)2-2696-8786

WEBSITE: www.bobbintron.com

EMAIL: sales@bobbintron.com

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1. Specification

Sample Photo



A. Electrical Characteristics

Frequency	2400 ~ 2500 MHz
S.W.R.	≤ 2.0
Antenna Gain	2 dBi
Polarization	Linear
Impedance	50 Ohm

B. Material & Mechanical Characteristics

Material of Radiator	Cu
Material of Plastic	Body: TPE Hinge: PC+ABS Holder: PC+ABS
Cable Type	O.D. 1.13 mm
Connector Type	I-PEX
Connector Pull Test	≥ 1 Kg
Connector Torque Test	/

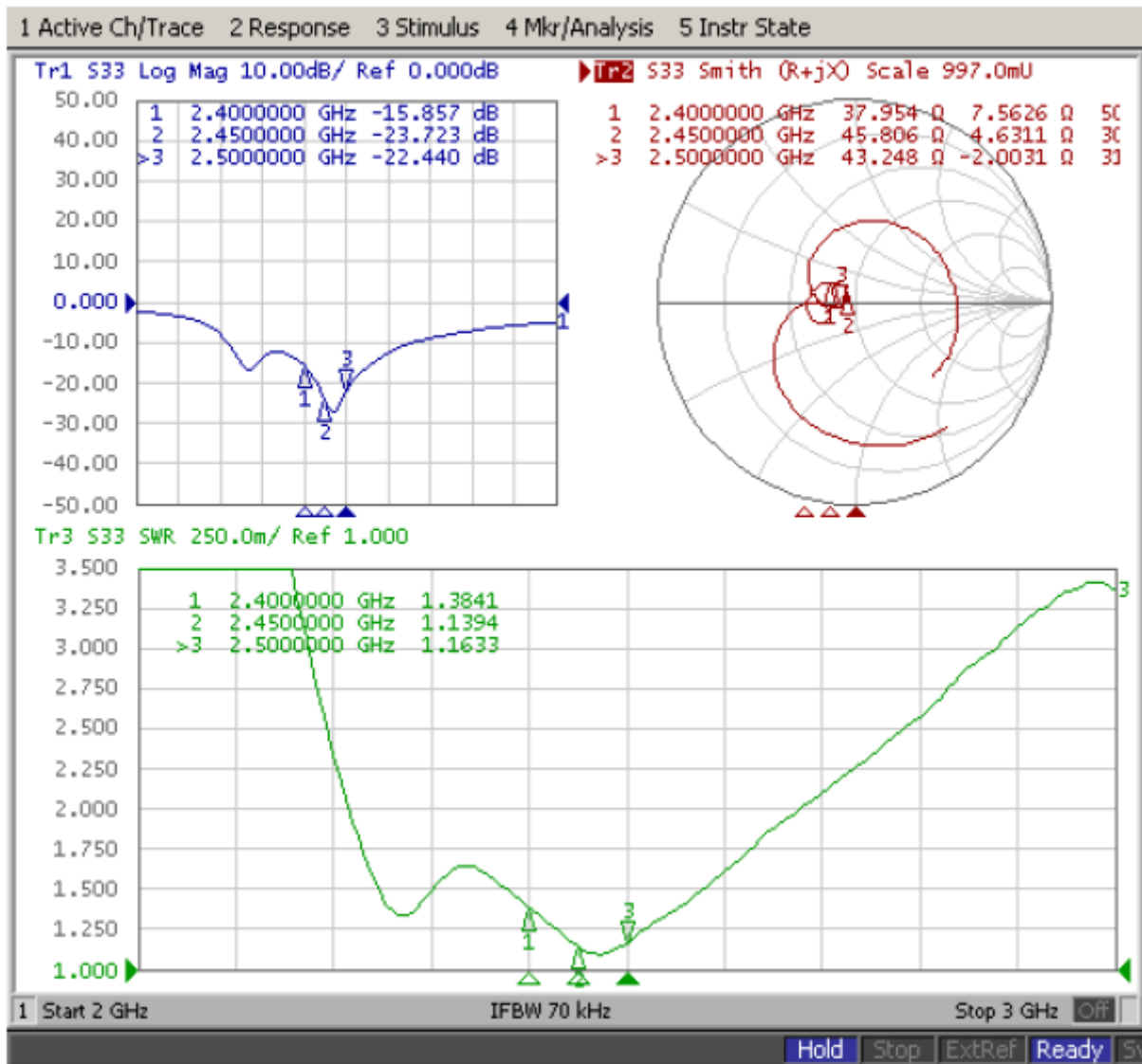
C. Environmental

Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C

2. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	MIL-STD-202G, 201A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
M2	Random Drop	Height: 1.5 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M3	Solderability	MIL-STD-202G, 210F, cond. A Solder iron: 350±10°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal-Torque Test	MIL-STD-202G, 211A, cond. E Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M6	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	MIL-STD-202G, 101E, cond. B Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	MIL-STD-202G, 103B, cond. B Temp: 40°C; RH: >= 95%; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	1 Cycle: - 40°C (30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E4	Life (High Temp.)	MIL-STD-202G, 108A, cond. A Temp: 85°C; Time: 96 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2002/95/EC
R2	PFOS	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC
R3	PFOA	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC

3. Antenna - S Parameter Test Data



4. Antenna - Radiation Pattern Test Data

Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m

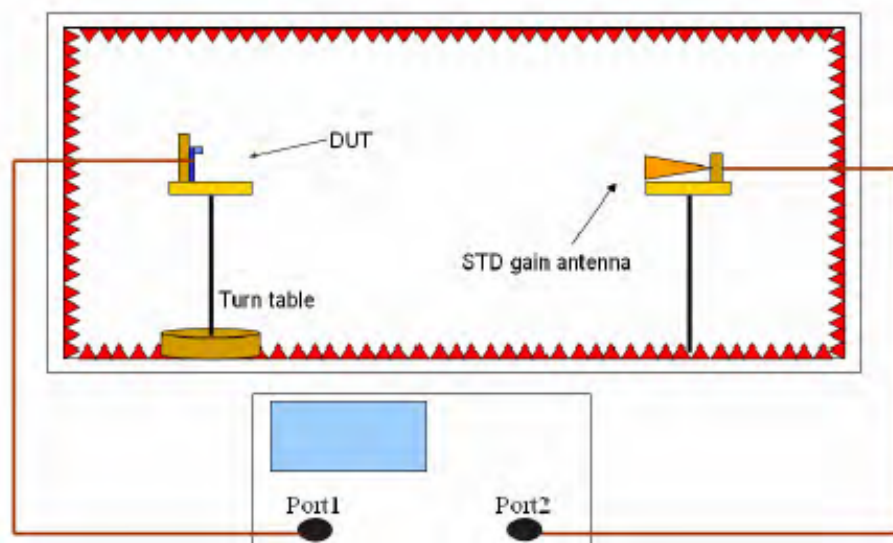
Quiet Zone: 600mm @1 GHz

Isolation: >100dB @ 1 MHz ~ 10 GHz

Testing Equipment: Agilent 5071B

Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration

Double Ridged Horn Antenna



5. Mechanical Drawing

See attached files

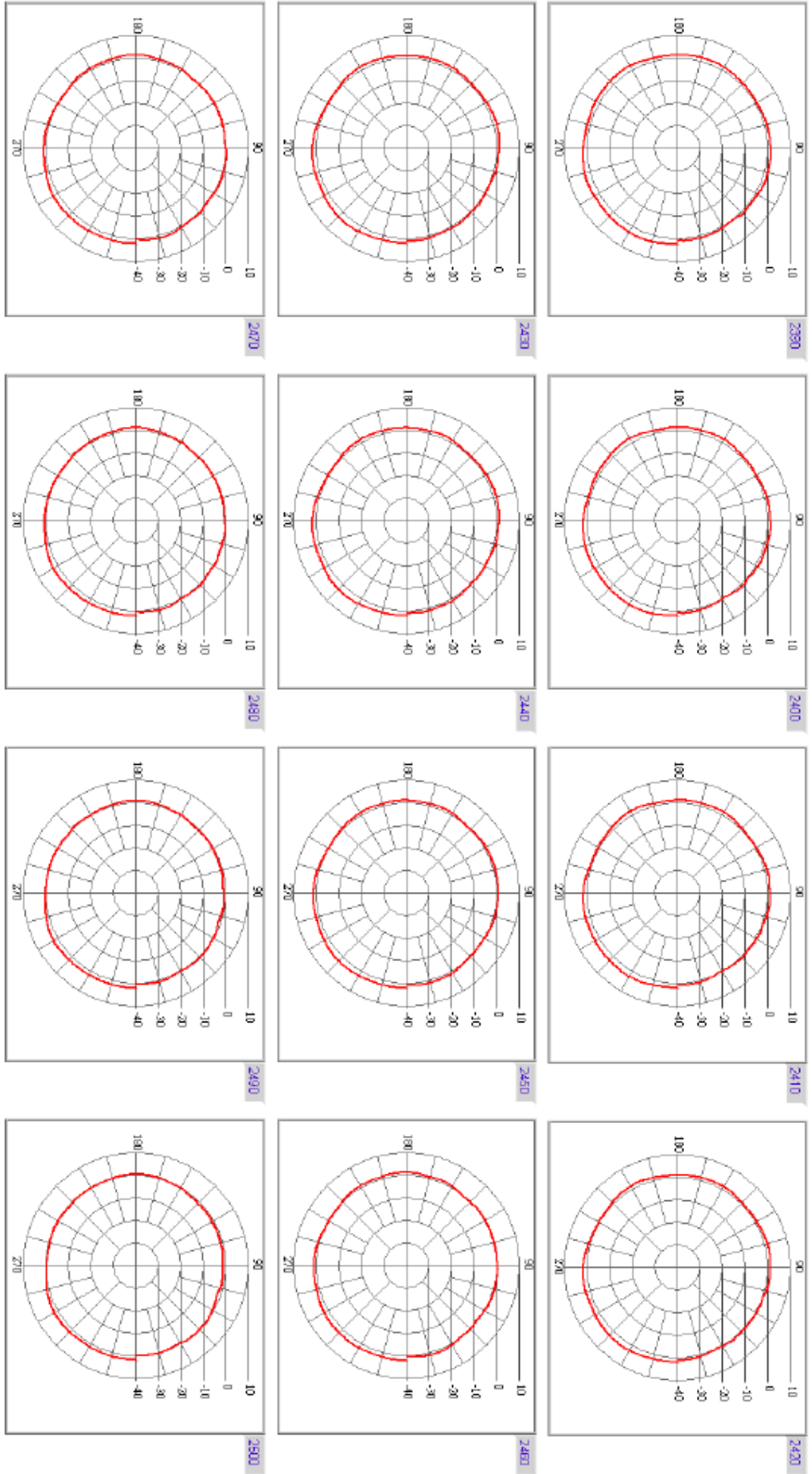
6. Material Description and RoHS Test Report

See attached files

Model : 24SHZ-Antenna
 Remask : H-Plane // Vertical Polarization
 Tested by : Antenna 3D Lab // Zhao Yao Rong

Location : Chamber
 Date : 2009/4/3
 Temperature (°C) : 22.00
 Humidity (%) : 55.00
 Time : 17:41:02.13325
 Approved by :

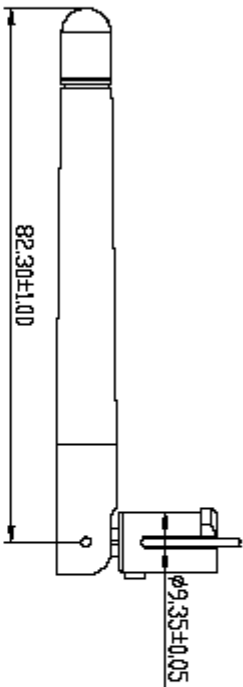
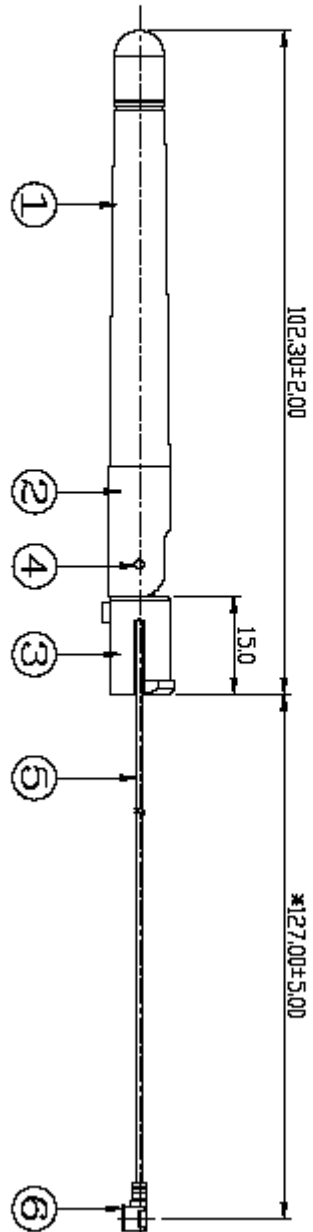
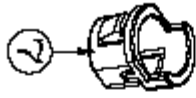
Peak Gain (dBi)	Peak Angle (deg)	AV Gain (dBi)
2390	3.07	1.84
2400	2.91	1.82
2410	2.82	1.81
2420	2.73	1.79
2430	2.64	1.77
2440	2.54	1.75
2450	2.45	1.73
2460	2.35	1.71
2470	2.25	1.69
2480	2.15	1.67
2490	2.05	1.65
2500	1.95	1.63
2510	1.85	1.61
2520	1.75	1.59
2530	1.65	1.57
2540	1.55	1.55
2550	1.45	1.53
2560	1.35	1.51
2570	1.25	1.49
2580	1.15	1.47
2590	1.05	1.45
2600	0.95	1.43
2610	0.85	1.41
2620	0.75	1.39
2630	0.65	1.37
2640	0.55	1.35
2650	0.45	1.33
2660	0.35	1.31
2670	0.25	1.29
2680	0.15	1.27
2690	0.05	1.25
2700	0.00	1.23



ROHS

Compatible

REV	DATE	DESCRIPTION	APPROVER
A	08.10.29	Add packing criterion	Roger
A	09.04.13	Change packing from ZIP CAPS bag to 1PC50PE bag	Roger
A			



No.	Part Number	Description	Material	Finish	Qty
7	R-AN07-05-POM	Holder	POM	Black 180°	1
6	CH-113	Conn		Mini Conn	1
5	R-CB-113B	Cable		φ 1.13mm Black	1
4	R-AN01-1213Z	Hinge Pin	Cu	Black Zn Plated	2
3	R-AN3701-01A	Base	PC+ABS	Black	1
2	R-AN57-05	Body-2	PC+ABS	Black	1
1	R-AN57-03	Body-1	TPE	Black	1

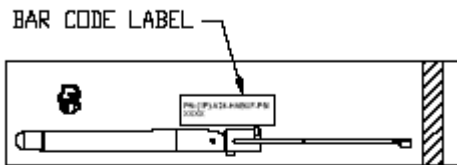
- Note:
1. Dimension: Take * is the important dimension
 2. Tolerance: Unmarked tolerance refer to the standard tolerance please
 3. CONN orientation is as shown

PART NAME: ANTENNA-2.4GHz-2B1		DWG NAME: AN2400-37A19BX.dwg	
PART NO.: AN2400-37A19BX			
APPROVED BY	CHECKED BY	DESIGNED BY	UNITS: mm
Grant	Jack	Roger	SCALE: 1/1
2009/04/13	2009/04/13	2009/04/13	REVISION: 0
Tolerance		XX ±0.10	
		XXX ±0.05	
		X ±	
		X1 ±	

Part Number : AN2400-37A19BX	Revision : C
Name: AP ANTENNA	Customer : ALL

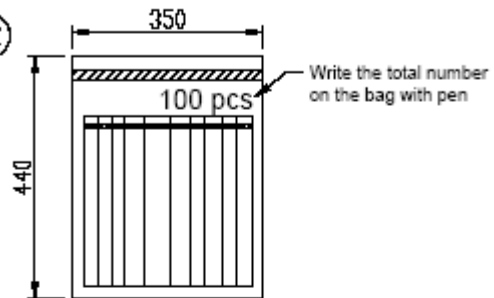
一. WITH THE ANT AND HOLDER INTO BAG

①



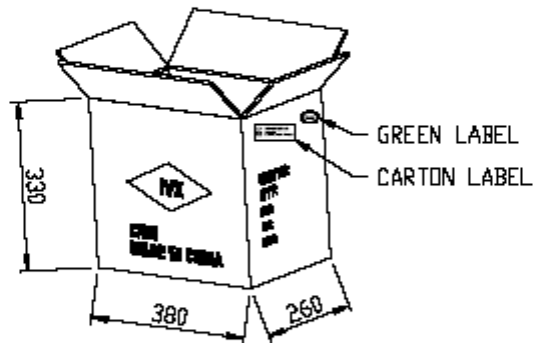
1PCS / SELF-ADHESIVE BAG

②



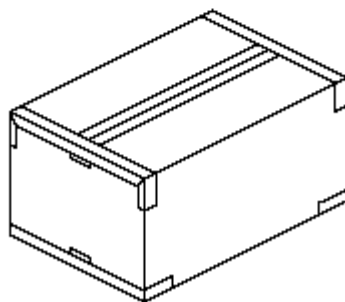
100PCS/PE BAG

二. PACKING

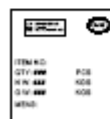


1500PCS ANTENNA AND HOLDER / CARTON

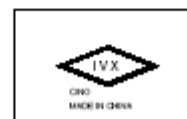
三. SEALING



SIDE

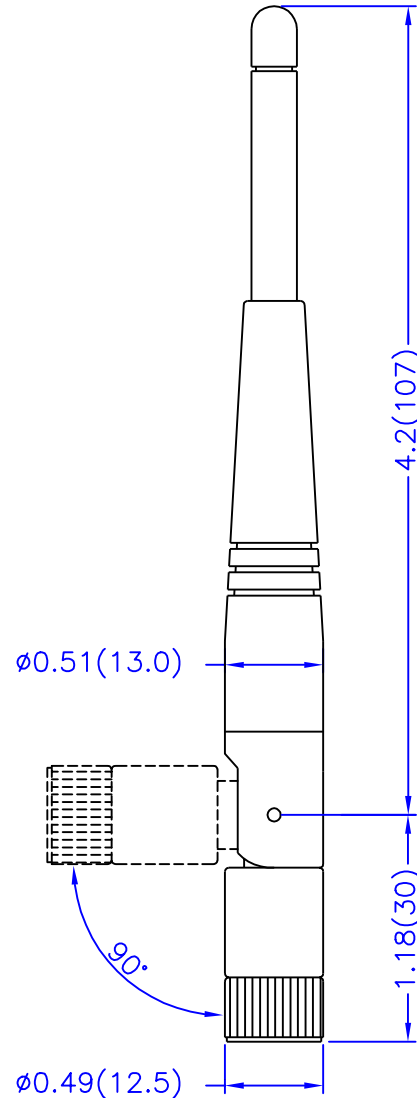


FRONT



UNITS: mm

SMA Reverse Polarity Plug(female)



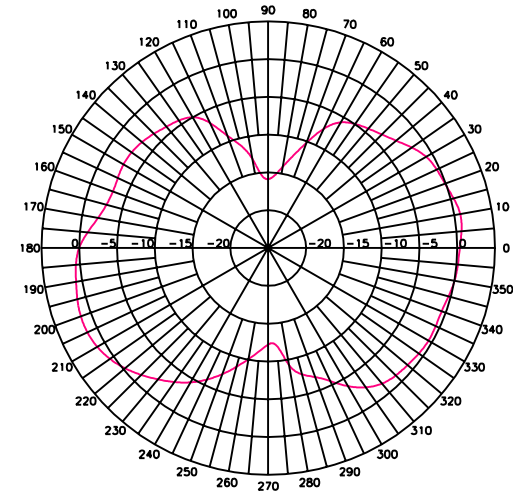
Electrical Properties:

Frequency Range: 2.4~2.5 GHz
 Impedance: 50Ω nominal
 VSWR: <2.0:1
 Gain: 2 dBi
 Radiation: Omni
 Polarization: Vertical
 Wave: Half Wave Dipole

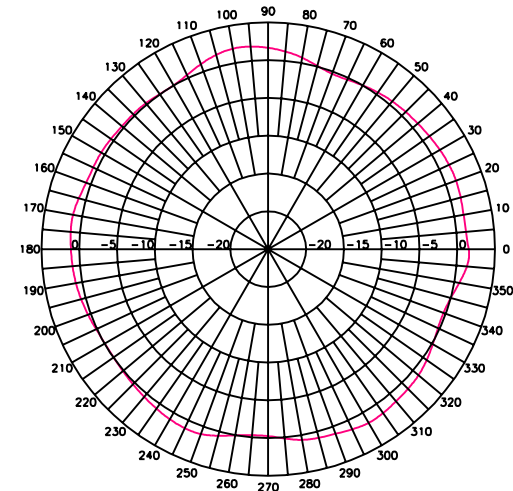
Mechanical Properties:

Connector: **RPSMA Plug (male)**
 Material:
 Whip: Polyurethane(Black)
 Swivel Mechanism: Polycarbonate(Black)
 Connector: Brass with black chrome plating
 Operation Temp.: -20°C to +65°C
 Storage Temp.: -30°C to +75°C

E-Plane Pattern @ 2.45GHz



H-Plane Pattern @ 2.45GHz



TITLE	2.4GHz Swivel Ant		VER
UNIT	DWG. NO.	A24-HASM-525	
in.(mm)			
SCALE	MaxStream, Inc.		
1:1			

SPECIFICATION

Patent Granted

FXP74 Black Diamond 2.4GHz Band Antenna

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

Product Name : FXP74 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 & Reach Compliant



1. Introduction

The FXP74 Black Diamond is a small ultra-low profile antenna for 2.4GHz band that includes Bluetooth, Zigbee and Wi-Fi single band application. The FXP74 has a peak gain of 4dBi at 2.4GHz and efficiencies of above 50%.

This Taoglas patent granted 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 FXP74 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.

Many module manufacturers specify peak gain limits for any antennas that are to be connected to that module. Those peak gain limits are based on free-space conditions. In practice, the peak gain of an antenna tested in free-space can degrade by at least 1 or 2dBi when put inside a device. So ideally you should go for a slightly higher peak gain antenna than mentioned on the module specification to compensate for this effect, giving you better performance.

Upon testing of any of our antennas 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 limits. Taoglas can then issue a specification and/or report for the selected antenna in your device that will clearly show it complying with the peak gain limits, so you can be assured you are meeting regulatory requirements for that module.

For example, a module manufacturer may state that the antenna must have less than 2dBi peak gain, but you don't need to select an embedded antenna that has a peak gain of less than 2dBi in free-space. This will give you a less optimized solution. It is better to go for a slightly higher free-space peak gain of 3dBi or more if available.

Once that antenna gets integrated into your device, performance will degrade below this 2dBi peak gain due to the effects of GND plane, surrounding components, and device housing. If you want to be absolutely sure, contact Taoglas and we will test. Choosing a Taoglas antenna with a higher peak gain than what is specified by the module manufacturer and enlisting our help will ensure you are getting the best performance possible without exceeding the peak gain limits.

2. Specification

Communication System	Bluetooth	WiFi	ZigBee	2.4GHz ISM
		2401-2480	2412-2462	2410-2480
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 °C ~ +85 °C			
Storage Temperature	-40 °C ~ +85 °C			
RoHS Compliant	Yes			

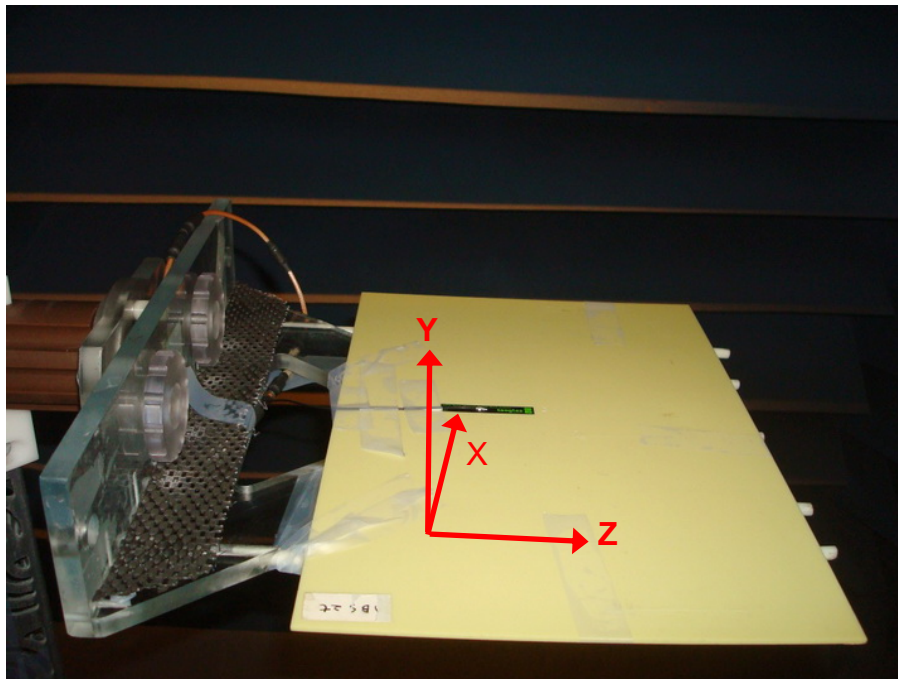
3. Antenna Characteristics

3.1. Test Setup

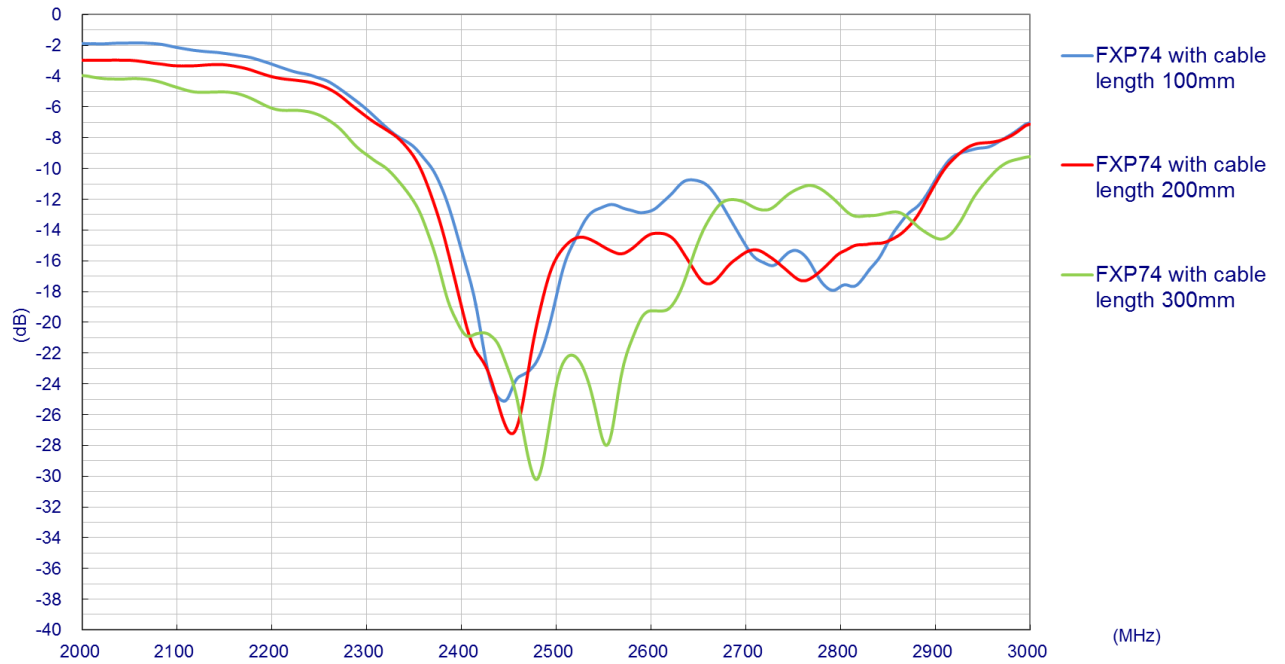
Rohde & Schwarz ZNB 8 Vector Network Analyzer



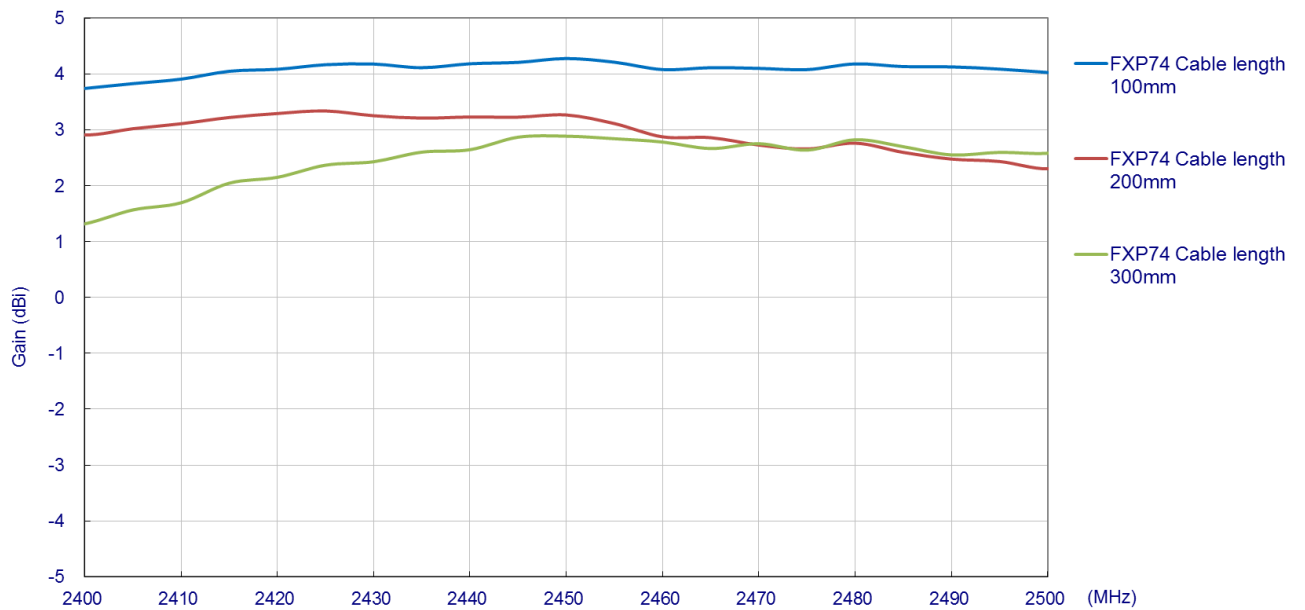
ETS 3D Radiation Scan System with Anechoic Chamber



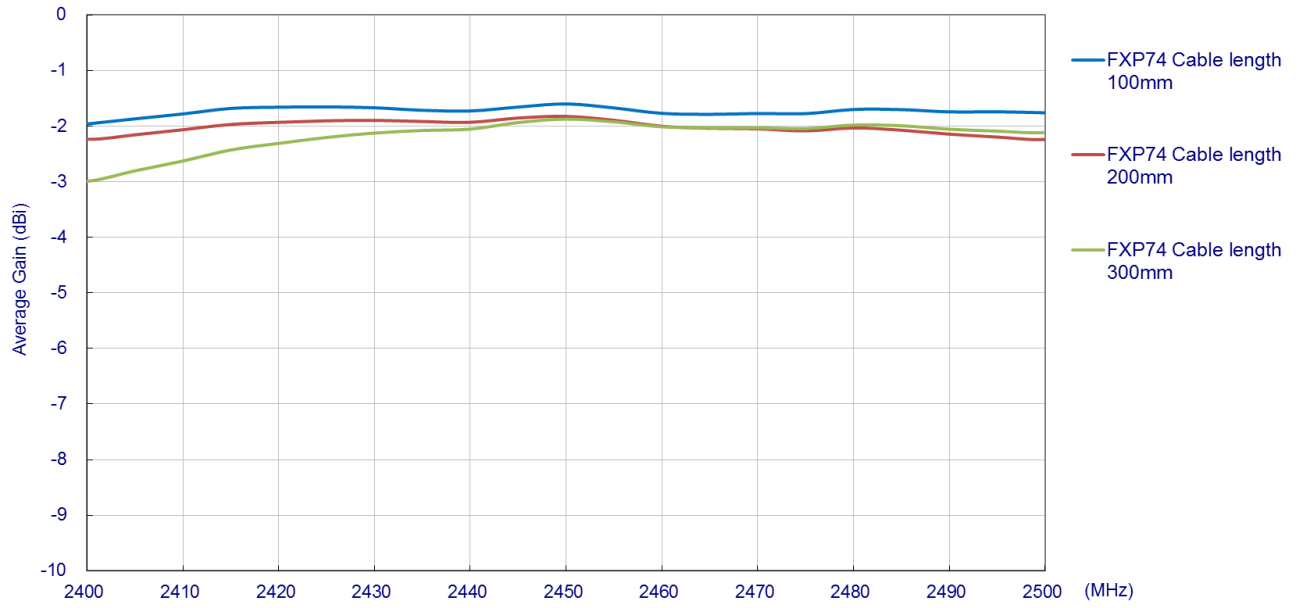
3.2. Return Loss



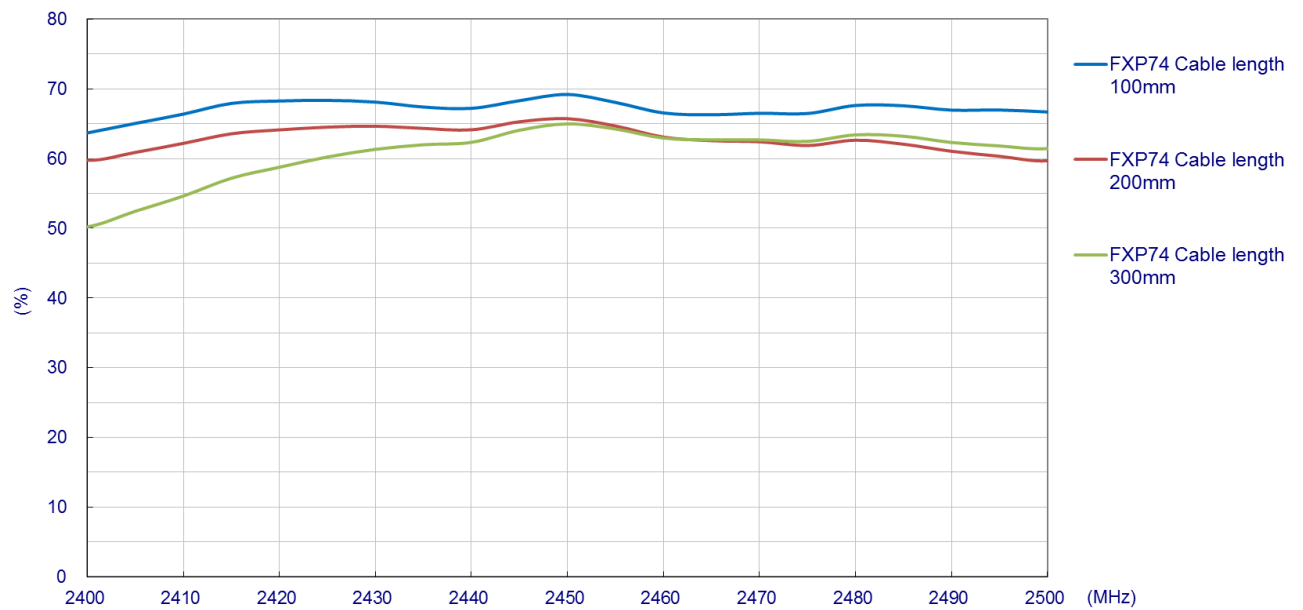
3.3. Peak Gain



3.4. Average Gain

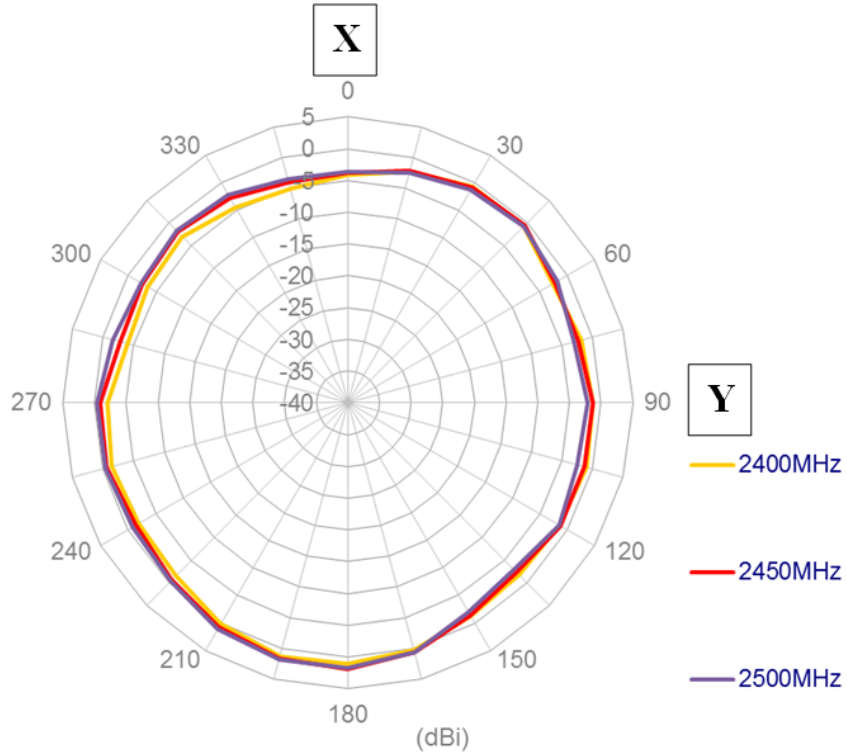


3.5. Efficiency

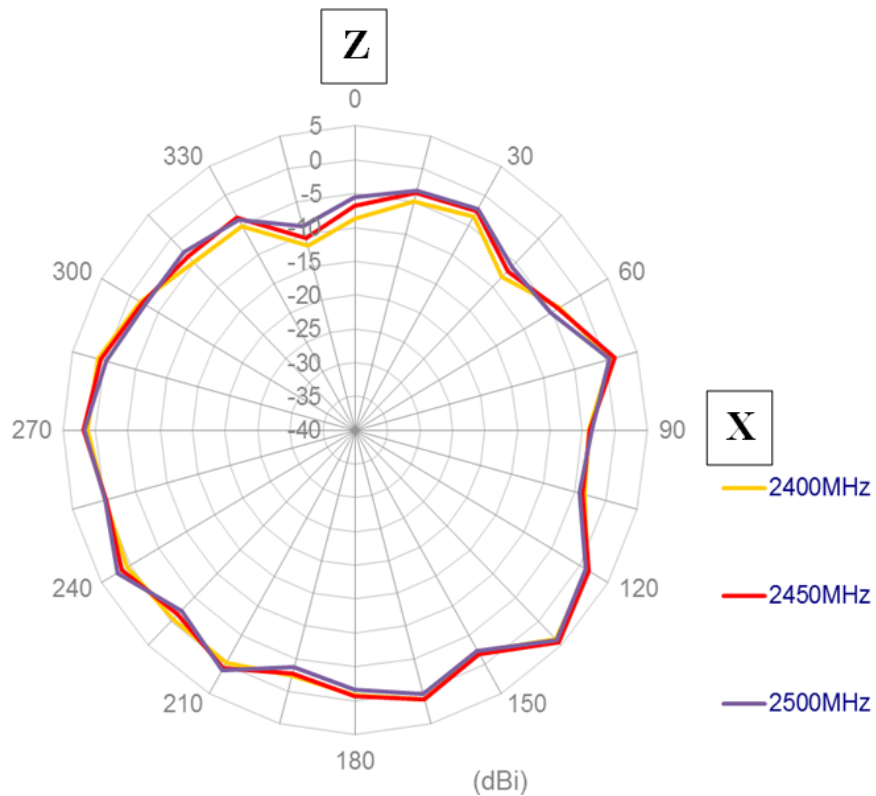


4. Antenna Radiation Pattern

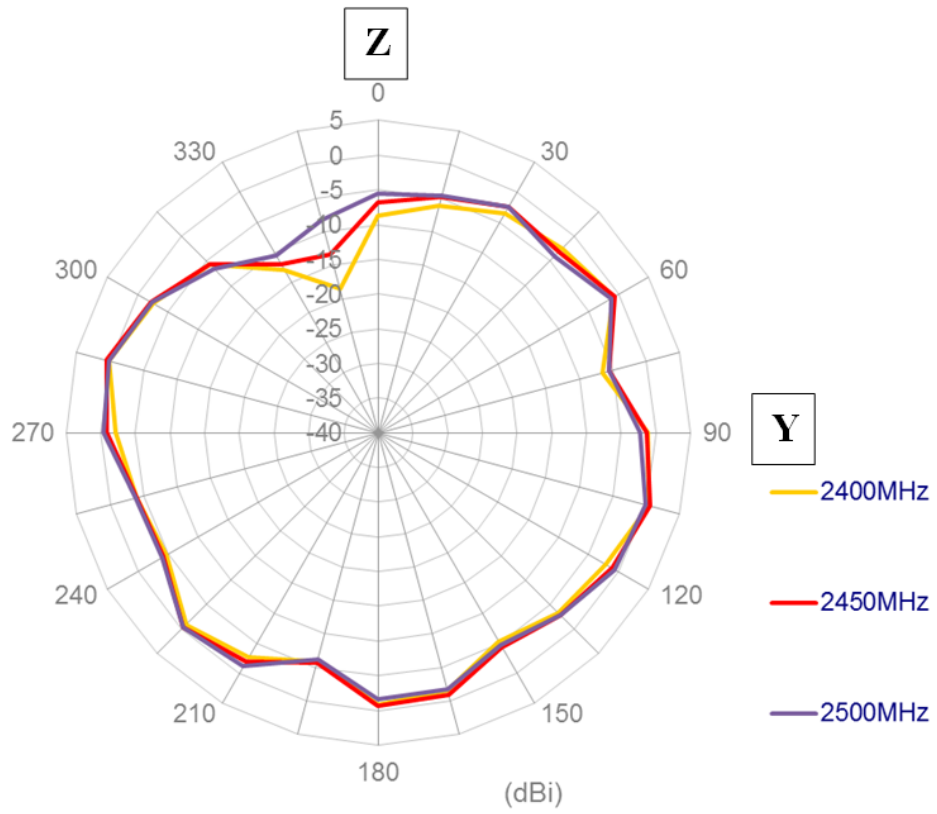
XY-plane



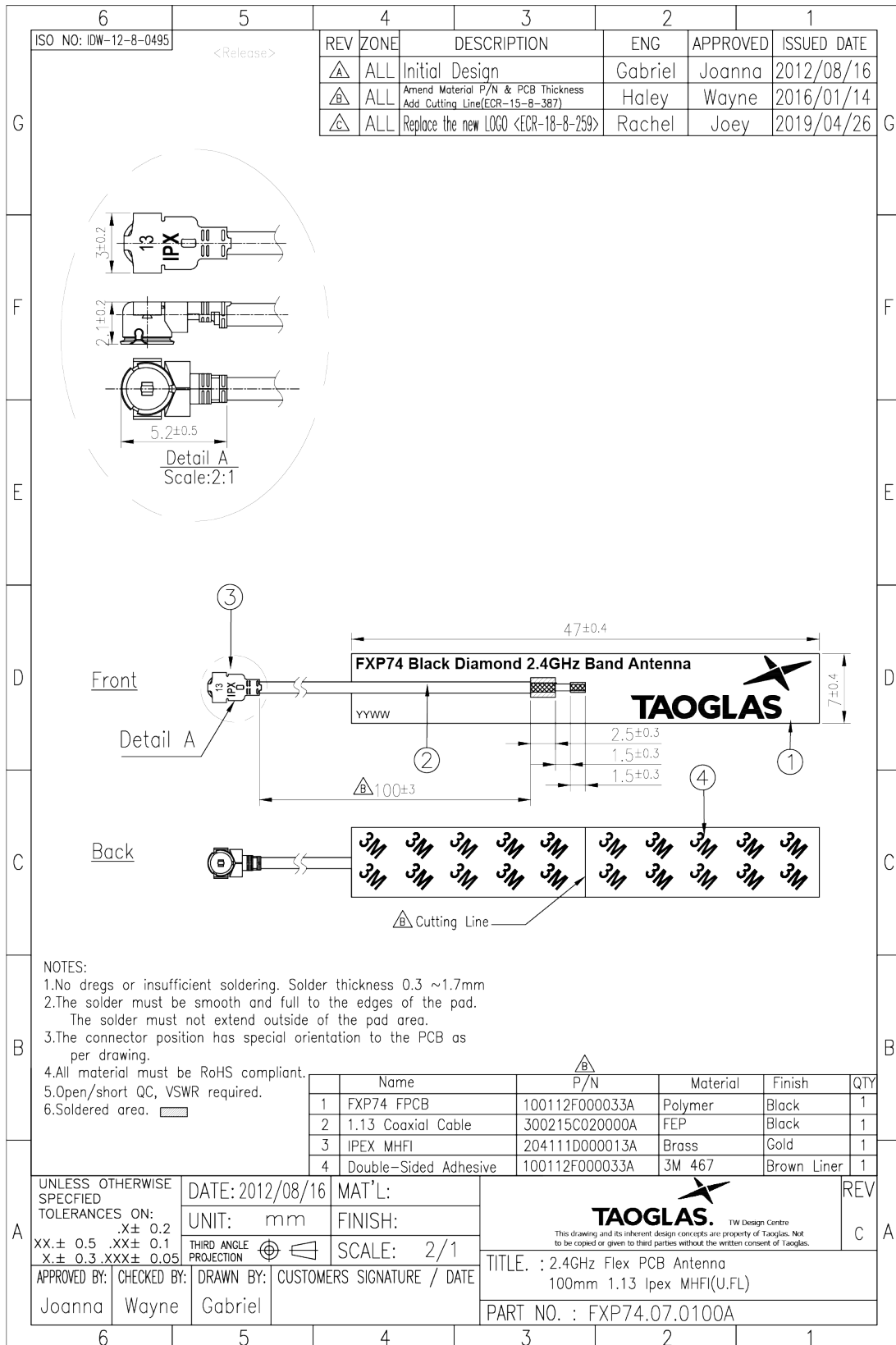
XZ-plane



YZ-plane



5. Antenna Drawing



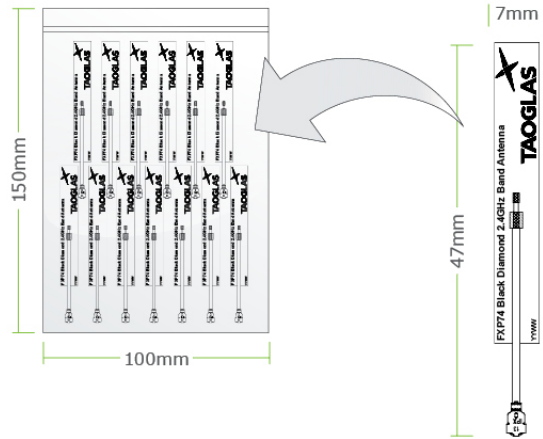
- NOTES:**
- No dregs or insufficient soldering. Solder thickness 0.3 ~1.7mm
 - The solder must be smooth and full to the edges of the pad. The solder must not extend outside of the pad area.
 - The connector position has special orientation to the PCB as per drawing.
 - All material must be RoHS compliant.
 - Open/short QC, VSWR required.
 - Soldered area.

Name	P/N	Material	Finish	QTY
1 FXP74 FPCB	100112F000033A	Polymer	Black	1
2 1.13 Coaxial Cable	300215C020000A	FEP	Black	1
3 IPEX MHFI	204111D000013A	Brass	Gold	1
4 Double-Sided Adhesive	100112F000033A	3M 467	Brown Liner	1

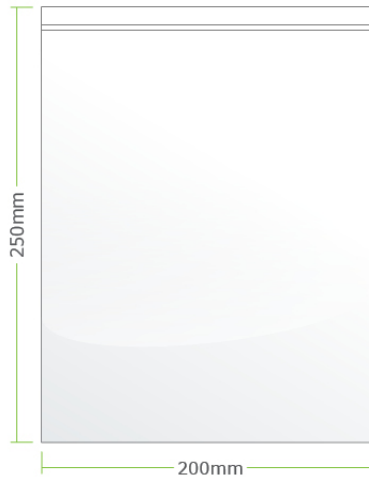
UNLESS OTHERWISE SPECIFIED TOLERANCES ON:	DATE: 2012/08/16	MAT'L:	TAOGLAS I/W Design Centre <small>This drawing and its inherent design concepts are property of Taoglas. Not to be copied or given to third parties without the written consent of Taoglas.</small>	REV
	X ± 0.2 XX ± 0.1 XXX ± 0.05	UNIT: mm		
THIRD ANGLE PROJECTION	SCALE: 2/1		TITLE. : 2.4GHz Flex PCB Antenna 100mm 1.13 IpeX MHFI(U,FL)	
APPROVED BY: Joanna	CHECKED BY: Wayne	DRAWN BY: Gabriel		
			PART NO. : FXP74.07.0100A	

6. Packaging

100pcs FXP74.07.0100A per PE Bag
Dimensions: 150*100mm
Weight: 1.02Kg



1000pcs per Large Bag
Carton Dimensions: 250*200mm
Weight: 10.2Kg



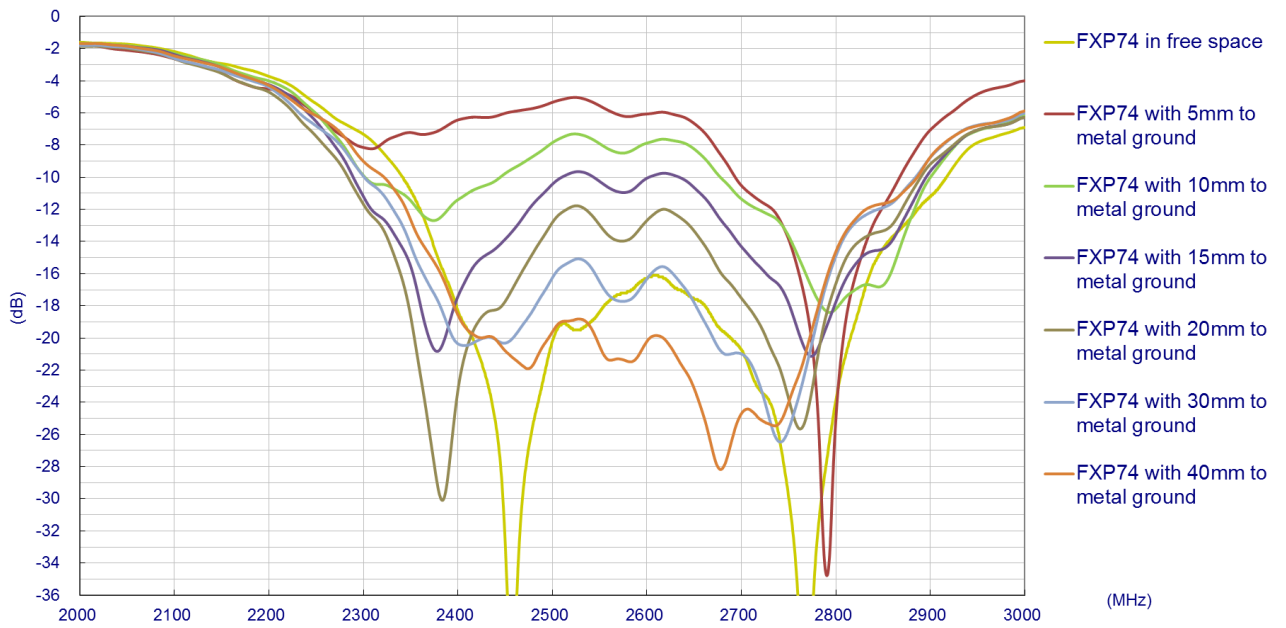
7. Return Loss – environmental effects

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

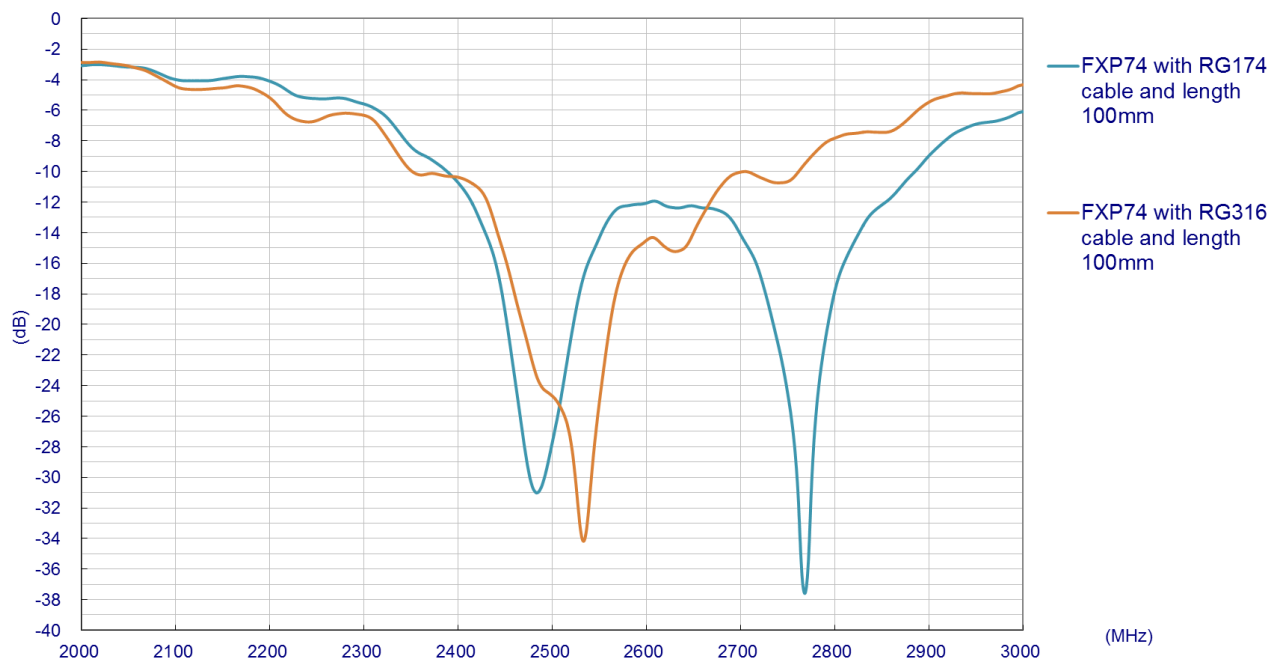
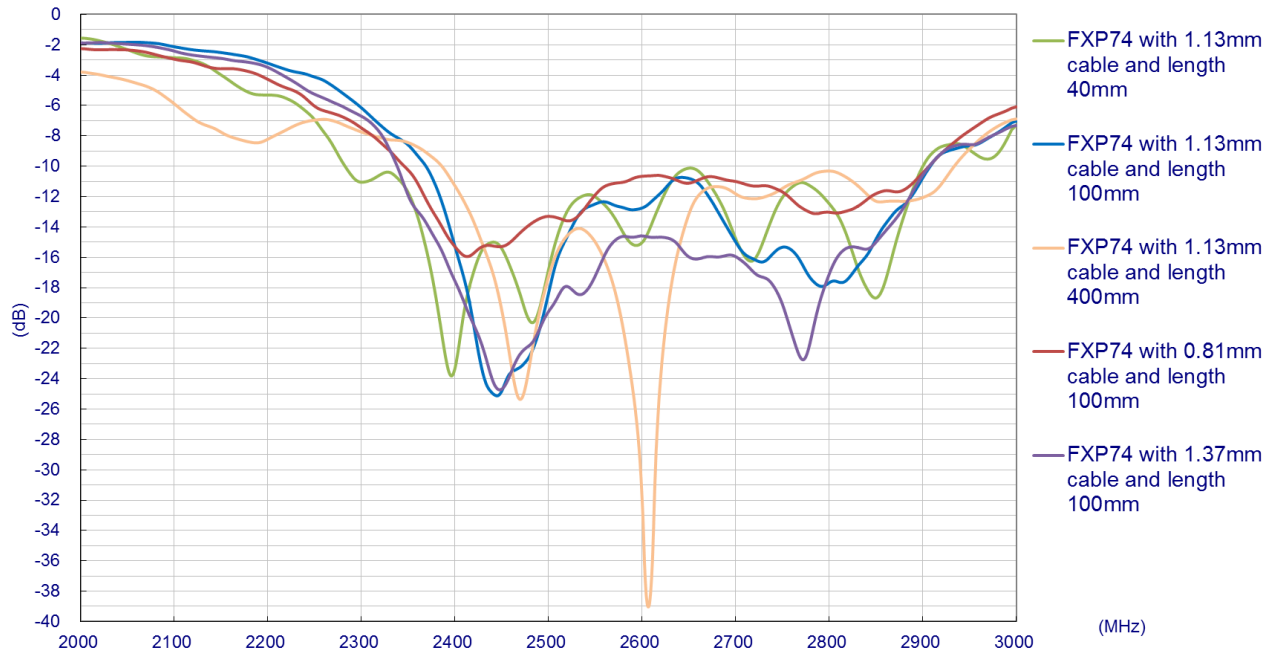


7.2. Proximities to metal ground plane

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



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



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