

APPROVAL SHEET

PCB ANTENNA

2.4 GHz Working Frequency

Halogens Free Product

P/N: RFPCA430816IMAB301

Customer : _____
Customer 's Part No. : _____
Approval No. : _____
Issue Date : _____

*Contents in this sheet are subject to change without prior notice.

Version	Date	Description	Author
V01	2020 Apr.	New Release	SHLEE

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	2.4 ~ 2.5 GHz(Note-1)
Return Loss	-10 dB(Max)
Gain(peak)	3.12 dBi
VSWR	< 2.0
Impedance	50 Ohm Nominal
Radiation	Omni-directional
Polarization	Linear Vertical
Operation Temperature	-20°C ~ +65°C

*Note 1. Central Frequency should be defined after customers' application approval.

MATERIAL TABLE

Items	Description
Antenna	PCB FR4 T=0.6mm(黑漆板)
Cable	Ø1.13 Cable (Black)
Connector	IPEX Compatible(Gold)
Double Tape	3M9888T

ORDERING RULE

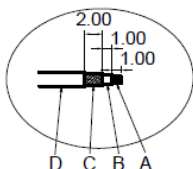
RF	PCA	4308	16	I	M	A	B	3	01
Type Code	Product Code	PCB Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	PCB Antenna	Per 2 digits of length, width e.g.: 4308 Length 43mm, Width 8.5mm	2 digits for cable length e.g.: 16 Length 16cm	A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None	A: Reverse Female B: Reverse Male F: Female M: Male N: None	0: 0GHz 3: 3GHz 5: 5GHz 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band N: NFC T: LTE band W: WCDMA band	B: MP T: During Test X: Pile Run	0:None 1:∅ 0.81 2:∅ 1.32 3:∅ 1.13 4:Low Loss ∅ 1.13 5:∅ 0.5 6:RG316 7: ∅ 1.37 8:RG178 9:Low Loss ∅ 1.37	01~99 series number

Dimensions

ELECTRICAL

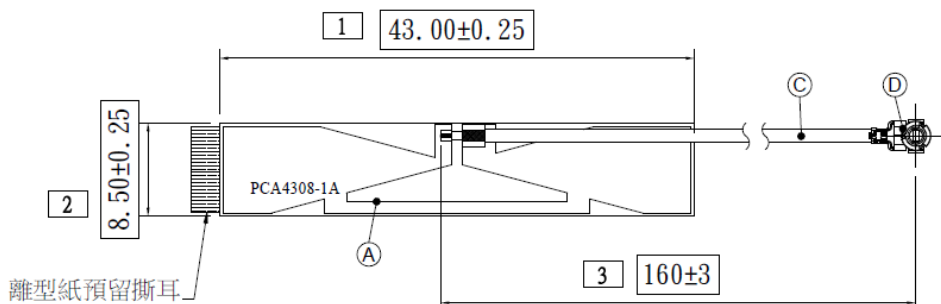
Frequency : 2.4~2.5 GHz

NO	DESCRIPTION	Color	QTY
A	Body	PCB FR4(Single Layer),T=0.6mm	Black 1
B	Double Tape	3M9888T	— 1
C	Coaxial cable	(ϕ 1.13)	Black 1
D	Connector	IPEX Compatible(2130800037)	Gold 1

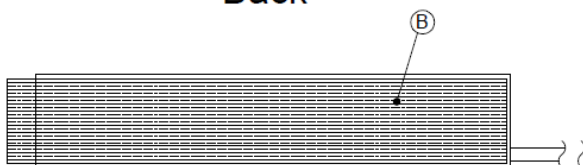


A - center conductor
B - Dielectric
C - Outer conductor
D - Jacket

Front



Back



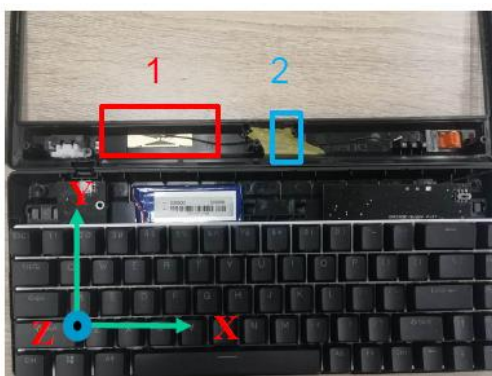
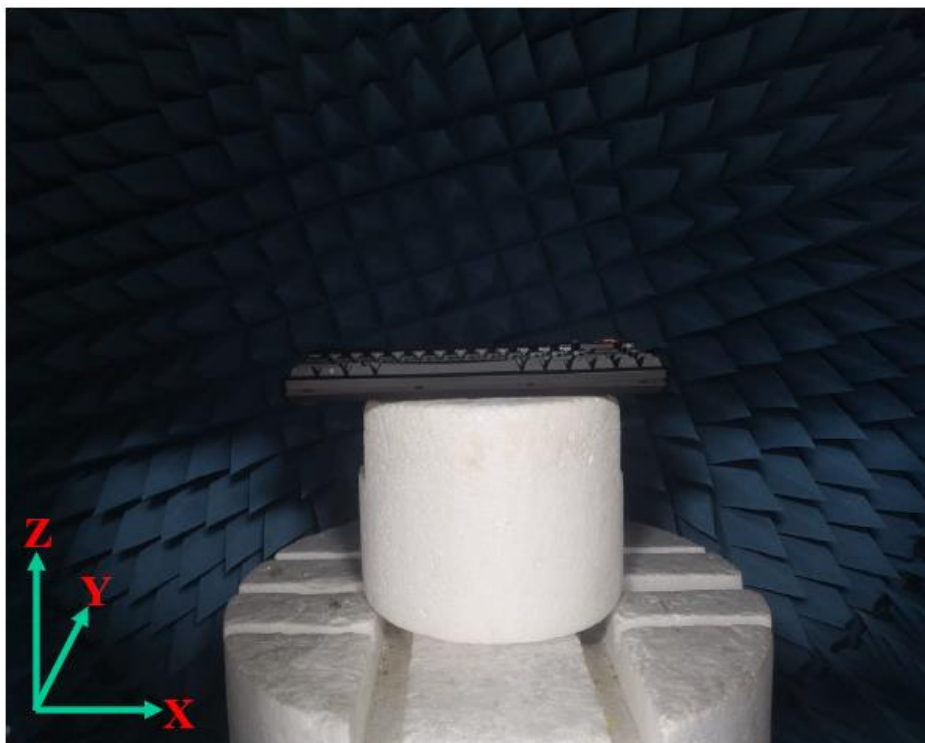
IPEX方向:
100mm : $\pm 90^\circ$
200mm : $\pm 135^\circ$
200mm以上不管控

※標記 記號者, 為重點檢驗尺寸

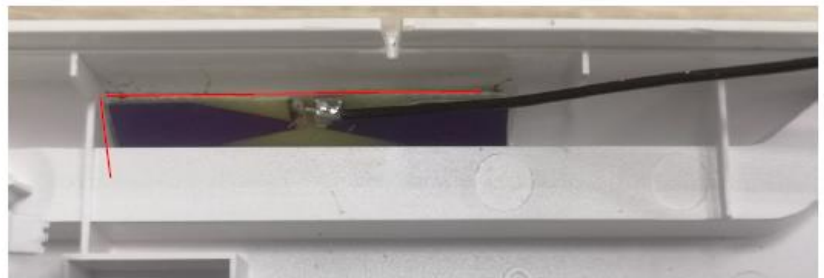
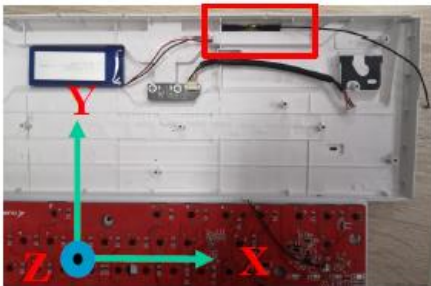
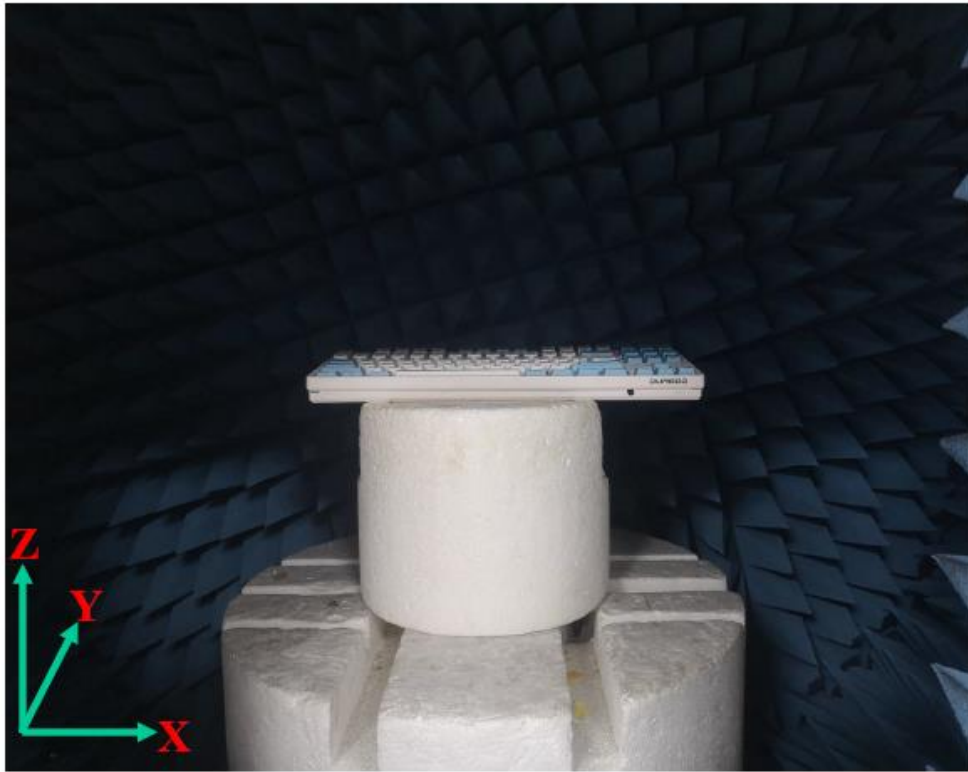
		設計 DR.	SHLEE	2020.04.09	品名	版本 REV.		
		核准 卹	MARCO		ARTICLE	A		
		容許公差 TOLERANCE			RFPCA430816IMAB301			
LTR		DESCRIPTION	DATE	REQ. BY			單位 UNIT	比例 SCALE
		6以下..... ± 0.2					mm	****
		6以上~30..... ± 0.5					張數 SHEET	1
		30以上~120..... ± 0.8						
		120以上~315..... ± 1.2						
		315以上~1000..... ± 2.0						
		1000以上~2000..... ± 3.0						

Test Report

■ Experimental Setup

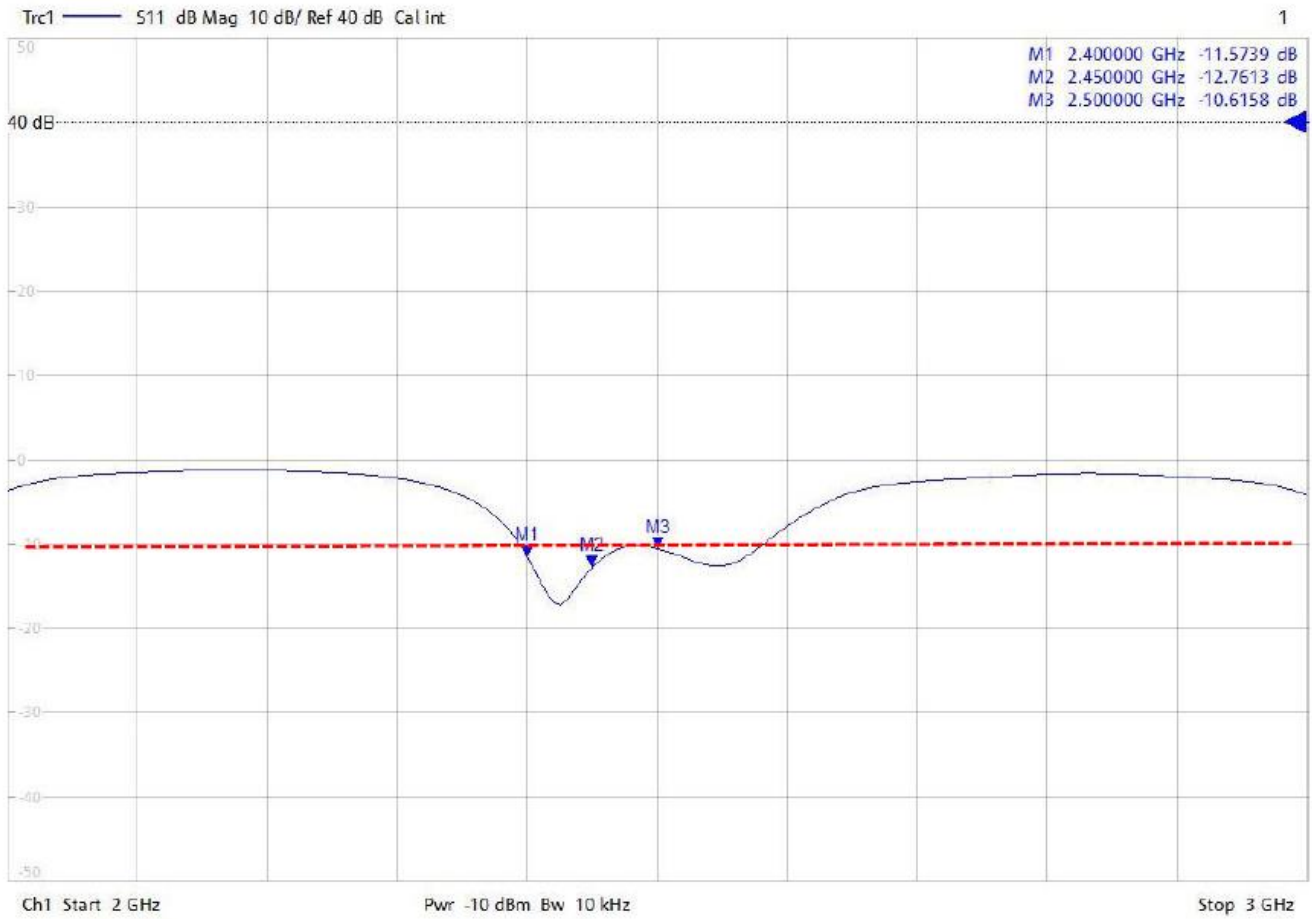


- 1.依图所示安装天线
- 2.增加胶带固定线材



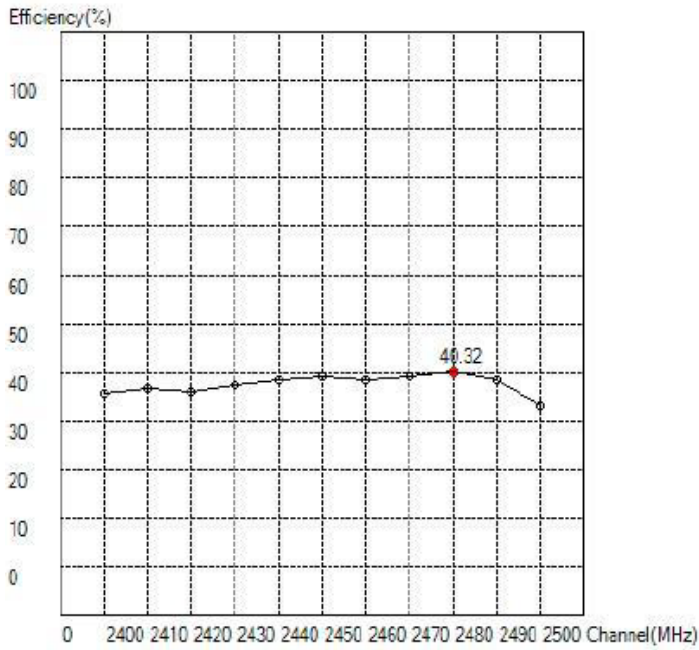
ELECTRICAL CHARACTERISTICS

Return Loss

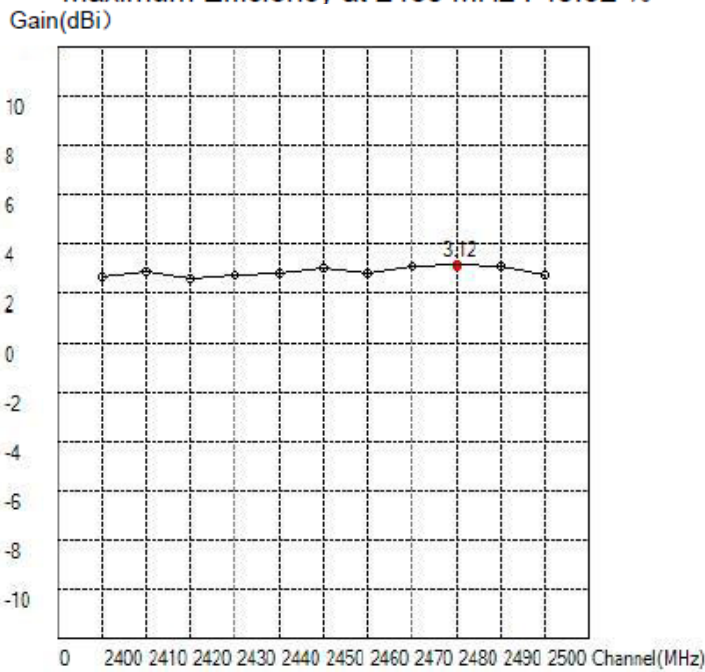


Antenna Efficiency & Peak Gain

2400~2500 MHz



Maximum Efficiency at 2480 MHz : 40.32 %



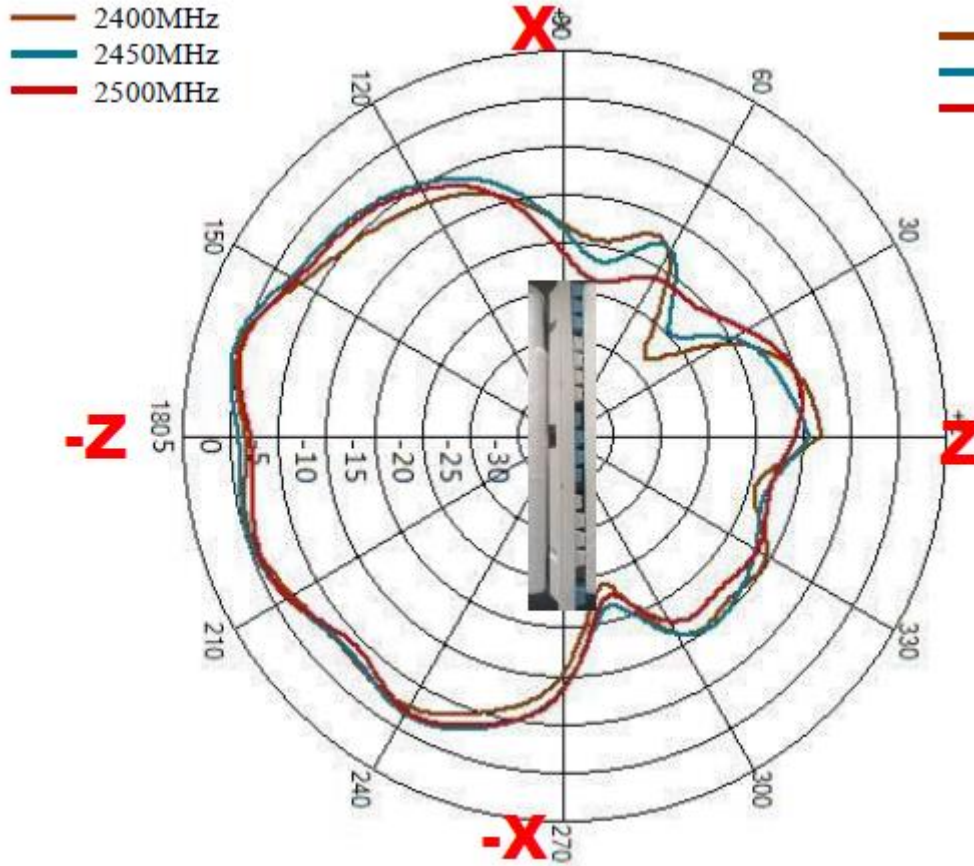
Maximum Peak Gain at 2480MHz : 3.12 dBi

RADIATION PATTERN

2400~2500 MHz

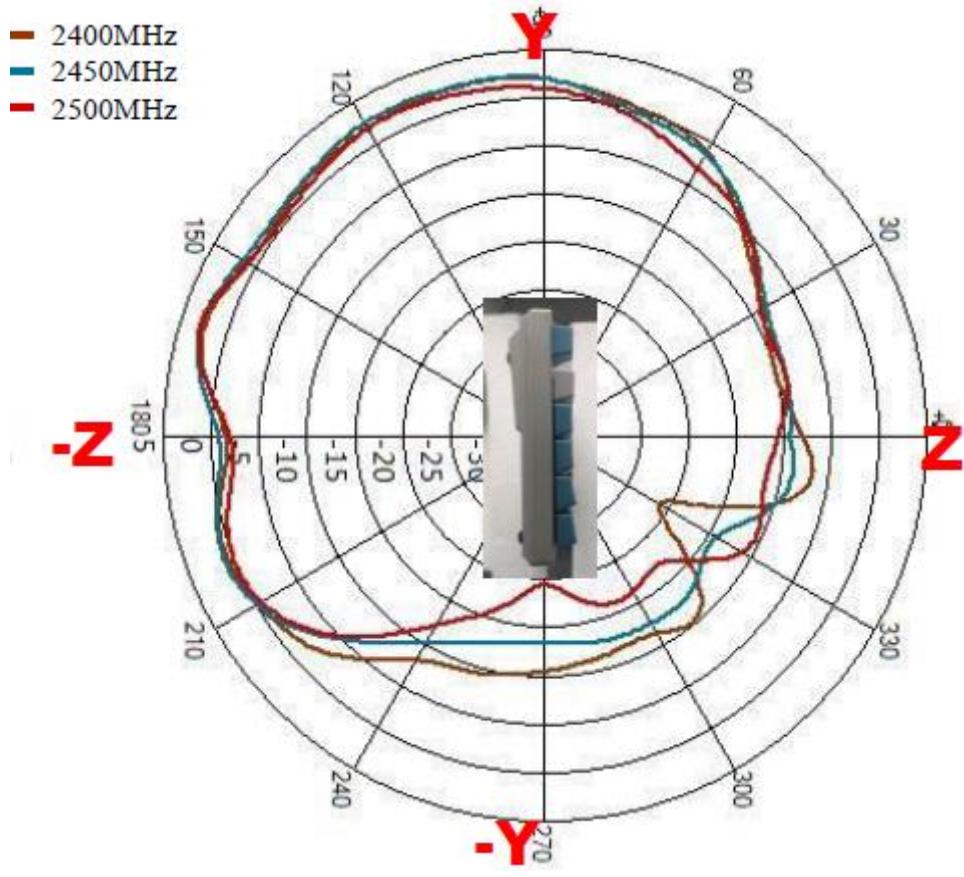
Phi=0.00deg

Gain . dB



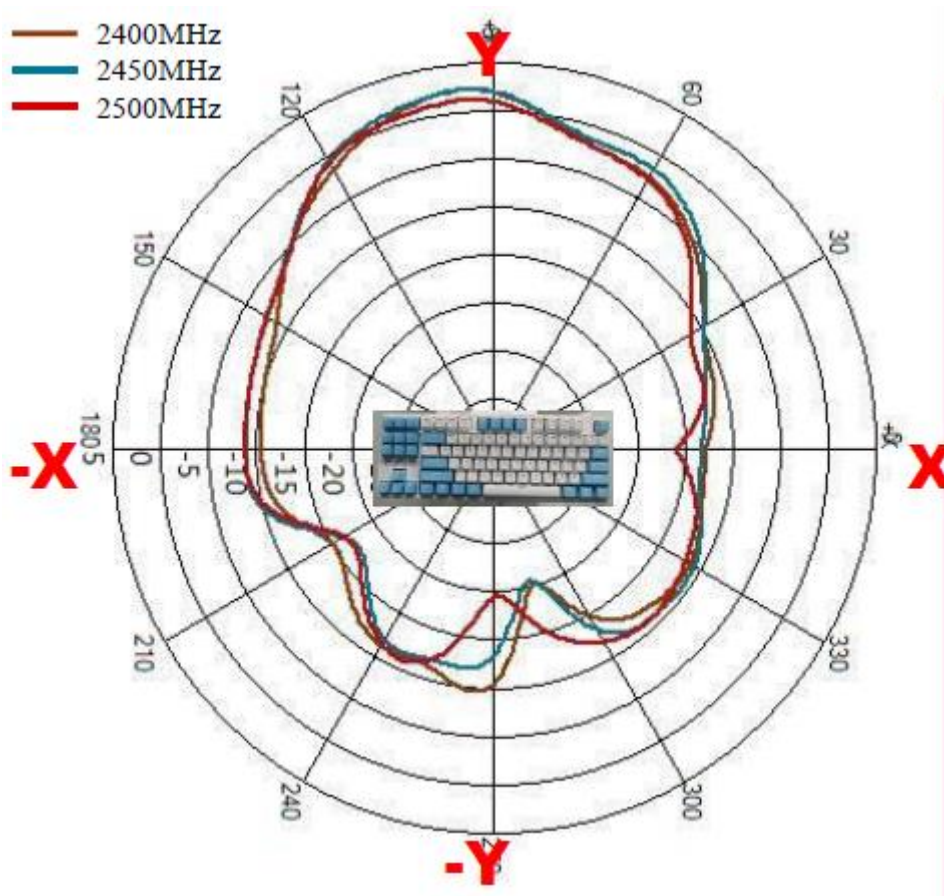
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	0.40	-5.97	2.46	-1.90	2.15	-5.38
2450	0.85	-5.33	2.84	-1.82	2.21	-4.97
2500	0.12	-5.92	2.69	-2.56	1.14	-5.68