



深圳市联笙科技有限公司

ShenZhen LianSheng Technology Co.,Ltd.

SPECIFICATION FOR APPROVAL

Date 2025/02/07

File No SA0001003

Revision 1.0

CUSTOMER: _____

CUSTOMER NO: 33.01.0012

PART NAME: BT Antenna

SUPPLIER NO: LSF.A1602.0000.00

Date:

Q"TY: PCS

CUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR
SUPPLIER SIGNATURE		
APPROVAL	CHECK	DESIGN
ChenGuoqiang	LinBin	XieLi

Tel:0755-82885545

Company Add: 22C2, Building 6, Manhaining North District, Longping Community, Dalang Street, Longhua District, Shenzhen

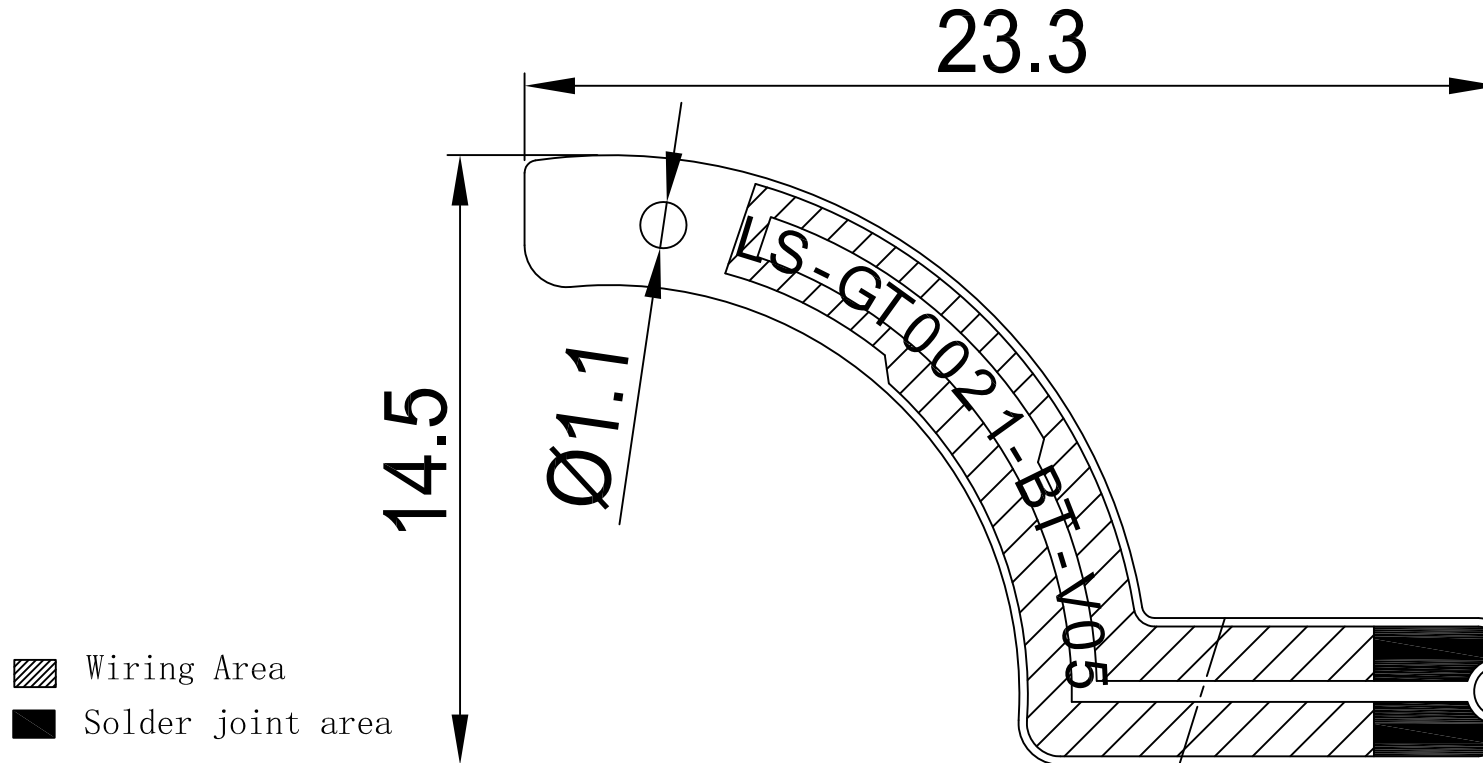
Spec Item

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9	N/A	N/A	N/A
10	-	-	-
11	-	-	-
12	-	-	-
13	-	-	-

RoHS

Compatible

REV.	DESCRIPTION	DATE
A	Initial release	2024-08-22
B	Modify the line	2024-09-18
C	Modify the shape and route	2024-09-27
D	Modify the line	2024-10-12
E	Modify the line	2024-11-04



Notes:

- Material: a pair and a half of substrate; FPC thickness: 0.1mm.
- Color/surface treatment: gold plating of solder joints; 3M tape split line on the back
Color: black ink, white silk screen.
- Size: Belt * is the key size.
- Tolerance: Tolerance is not marked with reference to standard tolerance.
- Packing: Ship with micro-adhesive packaging.

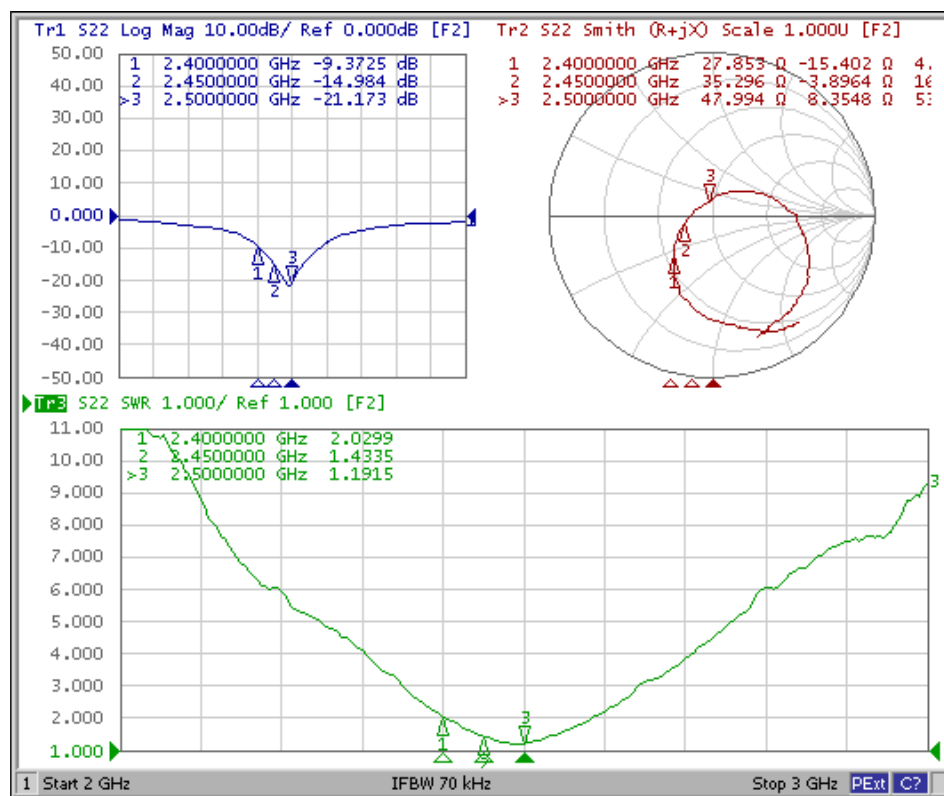
 深圳市联笙科技有限公司 ShenZhen LianSheng Technology Co.,Ltd.			Tel:0755-82885545 MP:13823198410		
PART NAME: BT Antenna					
PART NO.: LSF.A1602.0000.00			DATE: 2024-11-04		
APPROVED BY	CHECKED BY	DESIGNED BY		Tolerance	
Shane	Deng Lei	Liao Guangxi		UNITS: mm	X.X ±0.50
				SCALE: 1/1	X.XX±0.15
				REVISION: E	X° ±3°

Antenna Specification

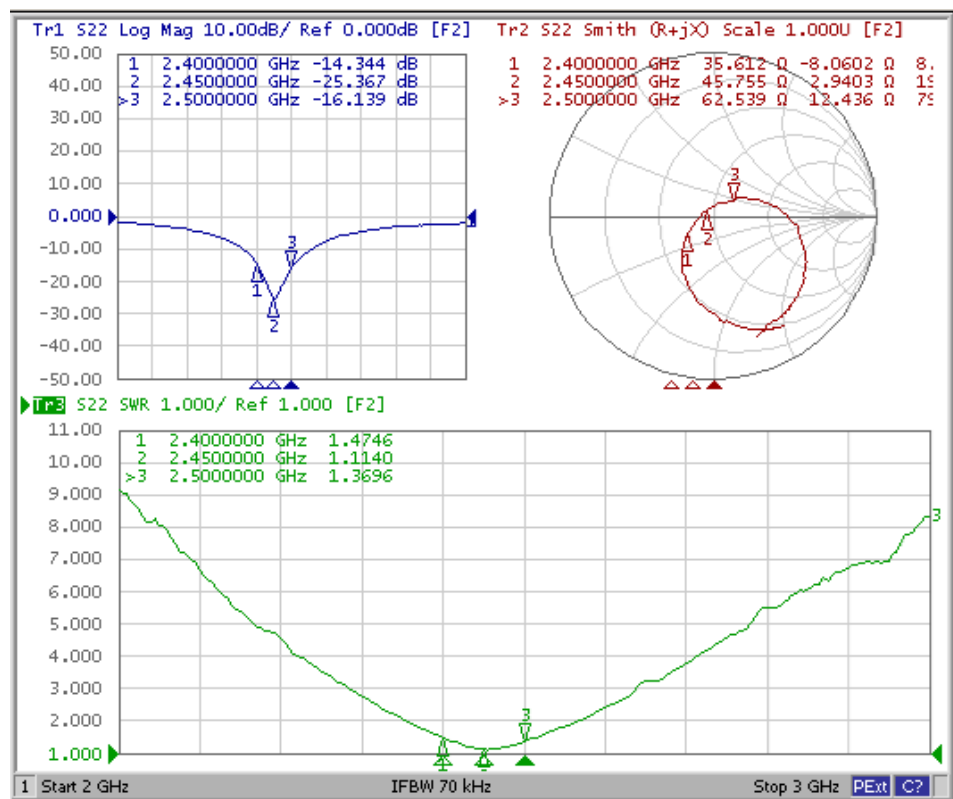
Electrical Properties	
Frequency	2.4-2.5GHz
Impedance	50 Ohm Nominal
V.S.W.R	2.0 Max
Gain	free space: 2.2 dBi Wear it on the arm: 1.7 dBi
Radiation	Omni-directional
Polarization	Linear
Physical Properties	
Connector	None
Cable Type	None
Cable Length	None
Cable Color	None
Operating Temp.	-40 ~ +85 °C
Storage Temp / Humidity	25±5°C / <70%

Antenna Performance Test

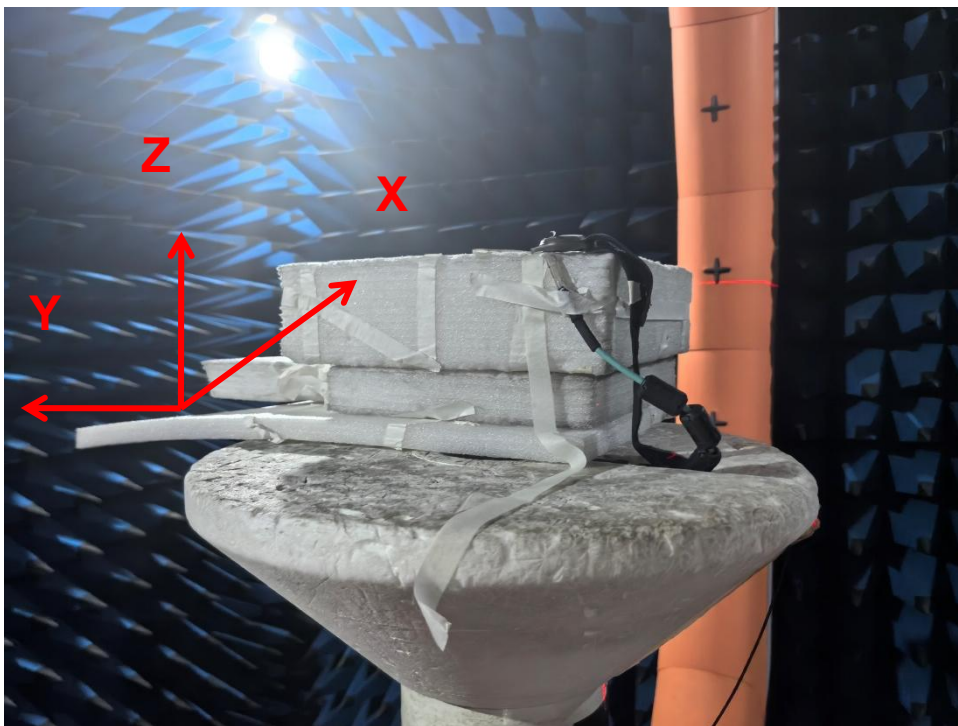
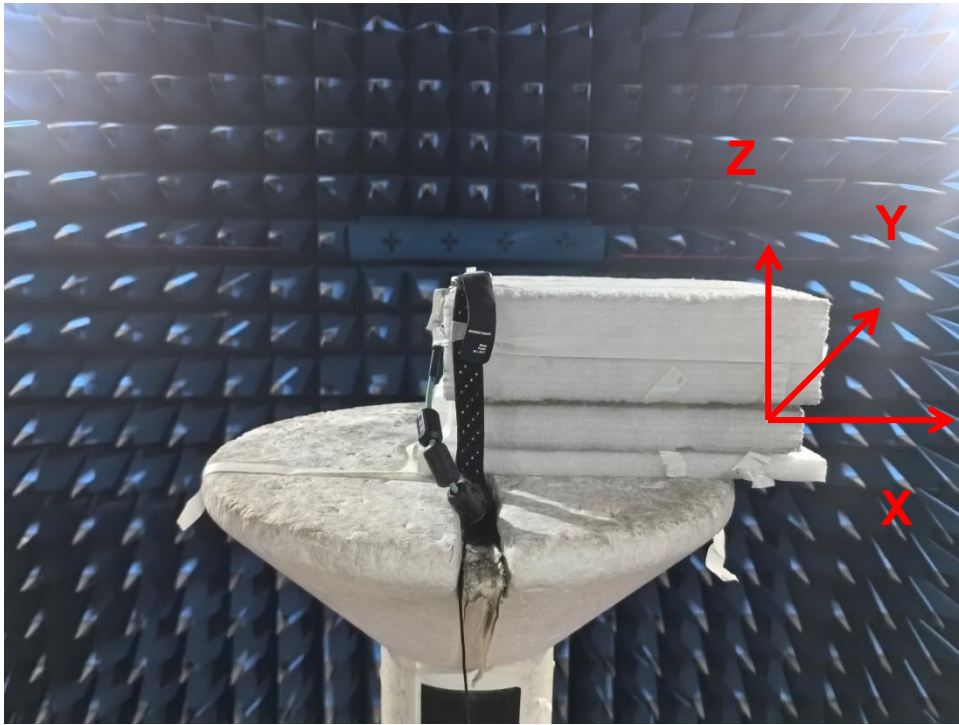
**Agilent
E5071B
S11
Parameter
Test //
BT
Antenna
(free space)**



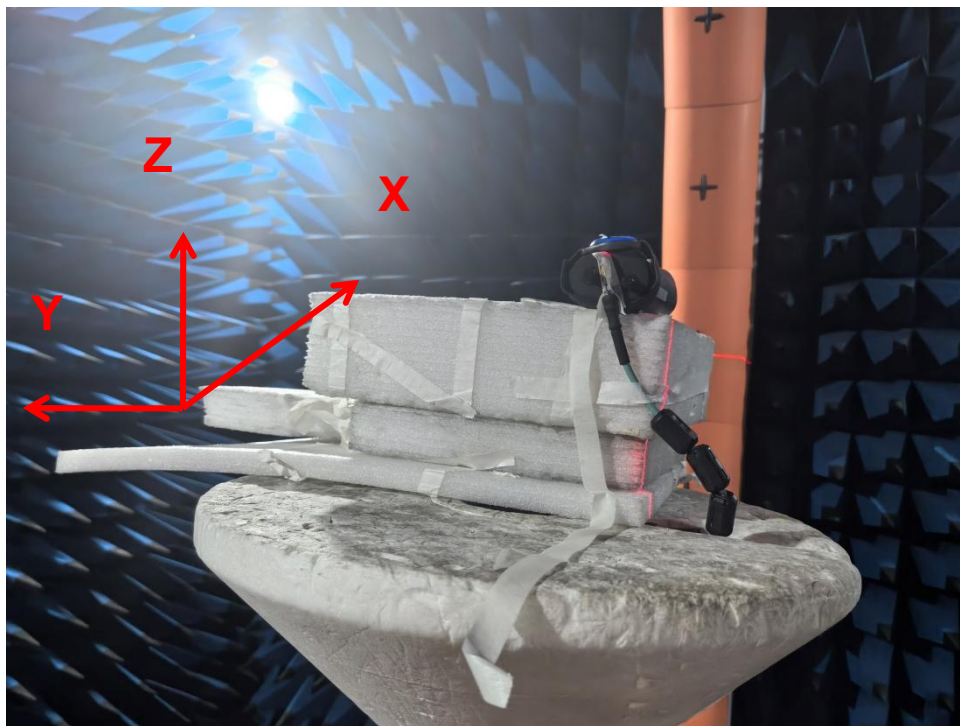
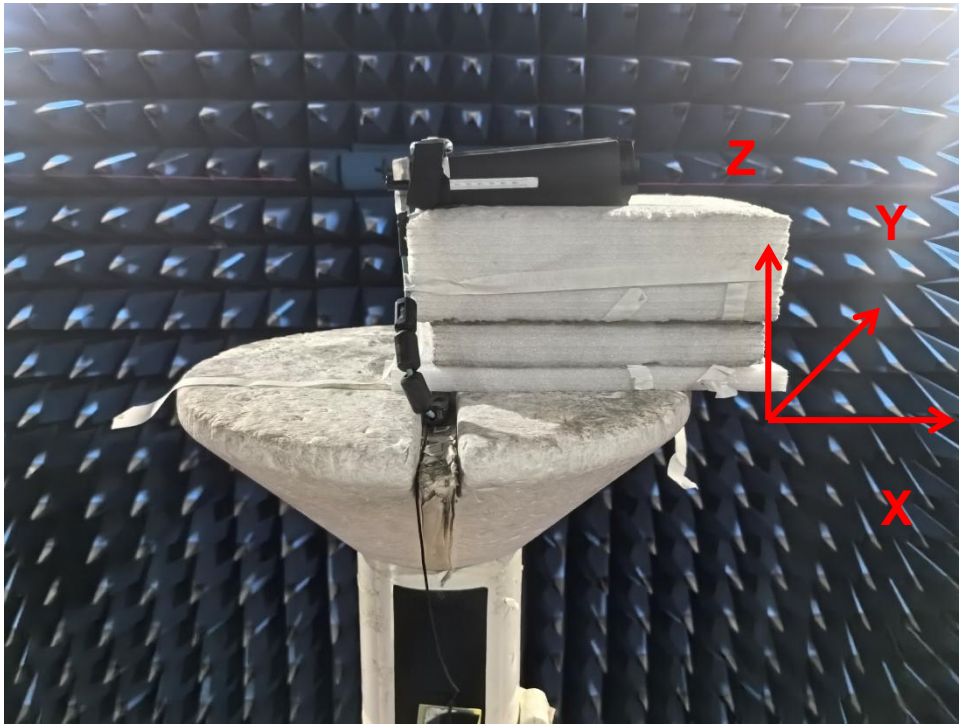
**Agilent
E5071B
S11
Parameter
Test //
BT
Antenna
(Wear it on
the arm)**



Antenna Passive Test (free space)



Antenna Passive Test (Wear it on the arm)



Passive Test For BT Antenna(*free space*)

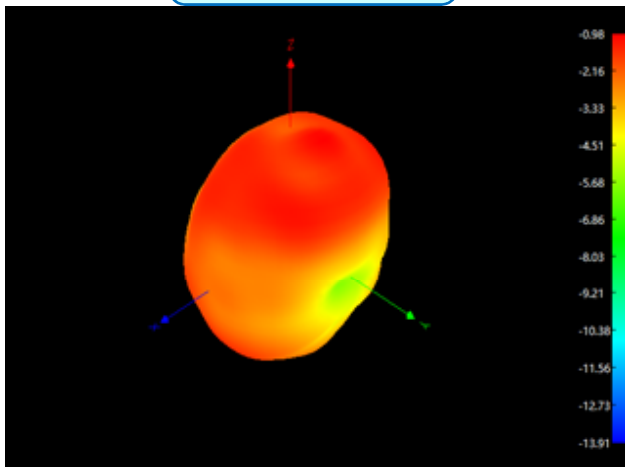
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	31.1	-5.1	-1.0
2410	32.5	-4.9	-0.8
2420	33.3	-4.8	-0.6
2430	36.1	-4.4	-0.3
2440	38.6	-4.1	-0.4
2450	40.9	-3.9	-0.1
2460	40.9	-3.9	-0.1
2470	43.4	-3.6	0.3
2480	44.9	-3.5	2.2
2490	42.9	-3.7	0.5
2500	40.8	-3.9	0.1

Passive Test For BT Antenna (*Wear it on the arm*)

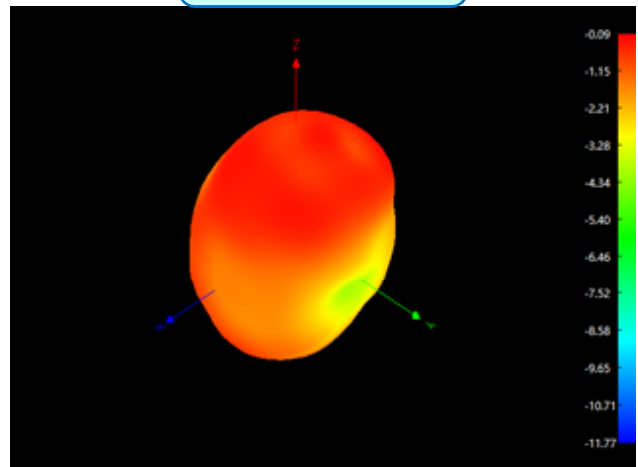
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	19.5	-7.1	-2.1
2410	20.0	-7.0	-2.1
2420	20.3	-6.9	-2.2
2430	21.3	-6.7	-2.1
2440	22.4	-6.5	-1.9
2450	23.6	-6.3	-1.8
2460	23.4	-6.3	-1.5
2470	24.3	-6.2	-1.6
2480	22.4	-6.5	1.7
2490	21.7	-6.6	-1.6
2500	20.5	-6.9	-1.7

Radiation Pattern For BT Antenna (*free space*)

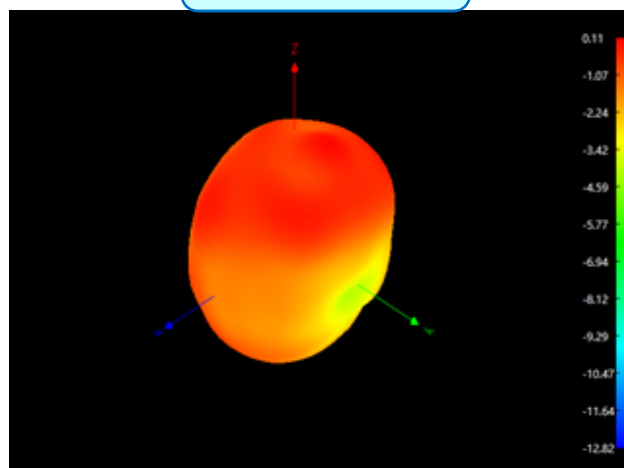
2400MHz



2450MHz

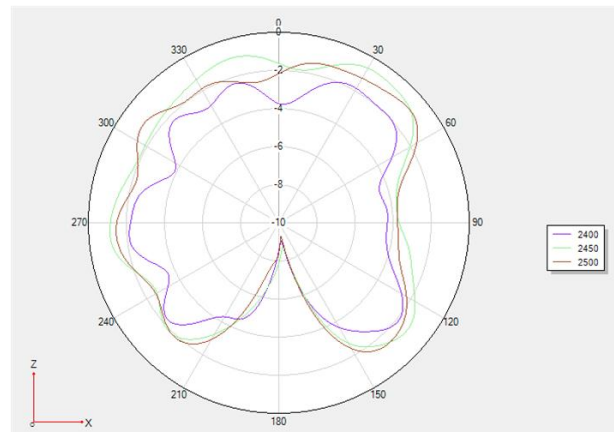


2500MHz

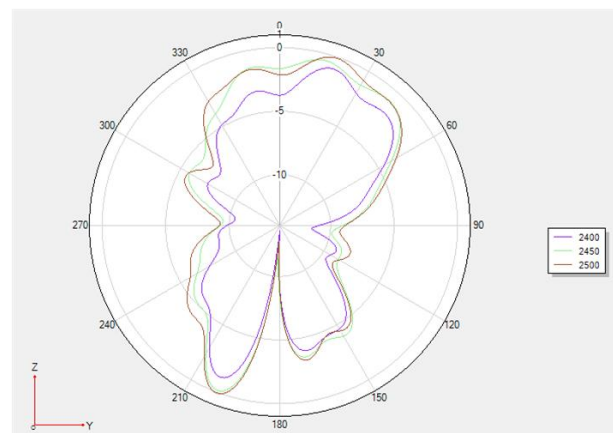


Radiation Pattern For BT Antenna (*free space*)

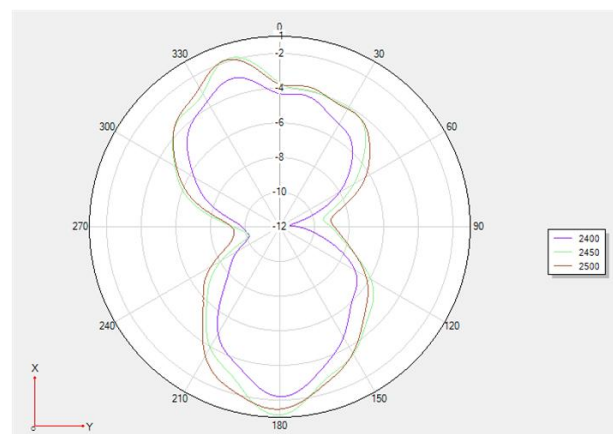
Phi 0°



Phi 90°

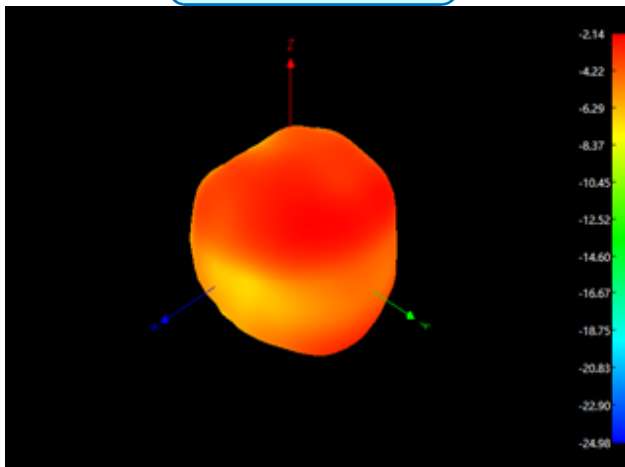


Theta 90°

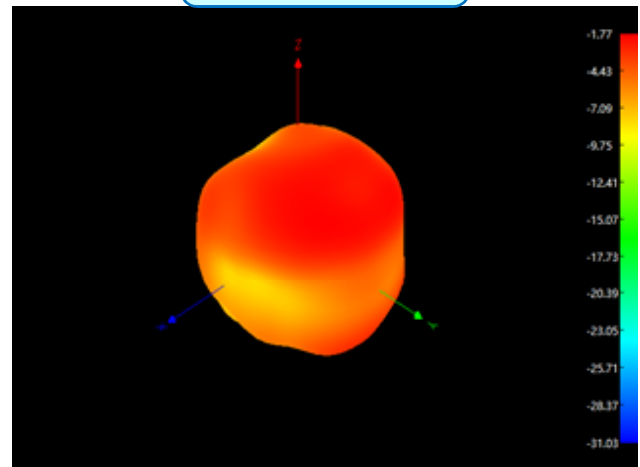


Radiation Pattern For BT Antenna (*Wear it on the arm*)

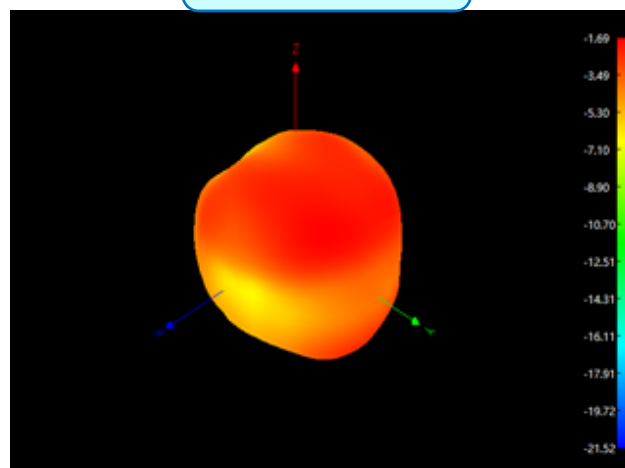
2400MHz



2450MHz

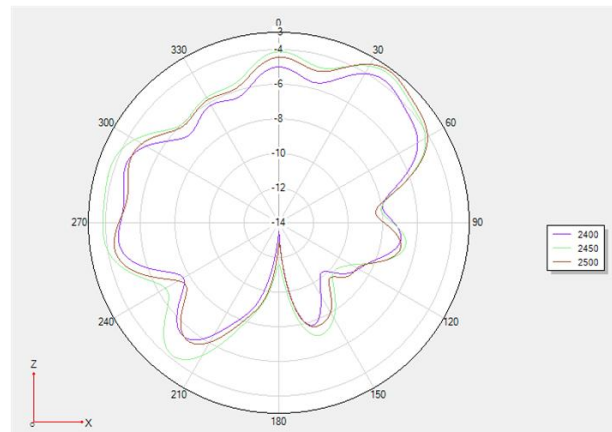


2500MHz

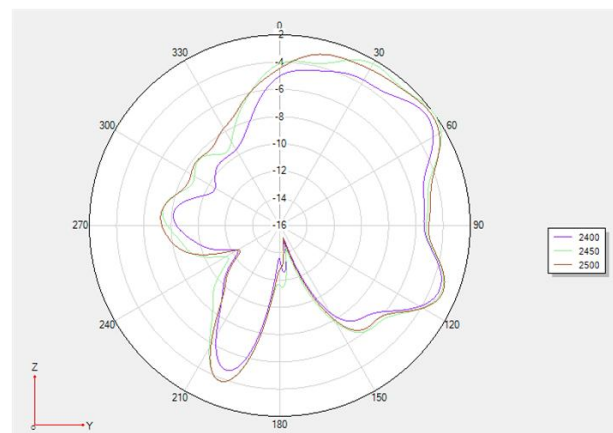


Radiation Pattern For BT Antenna (*Wear it on the arm*)

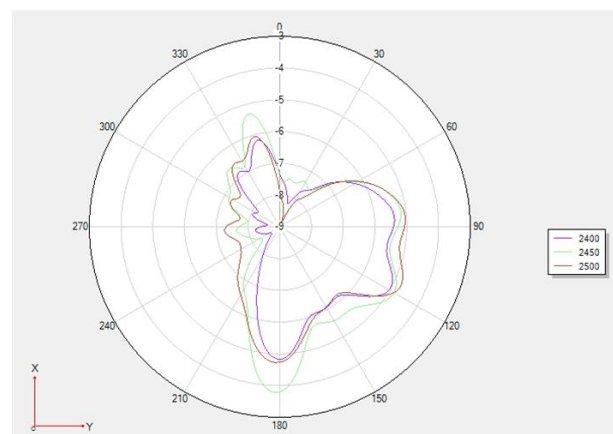
Phi 0°



Phi 90°

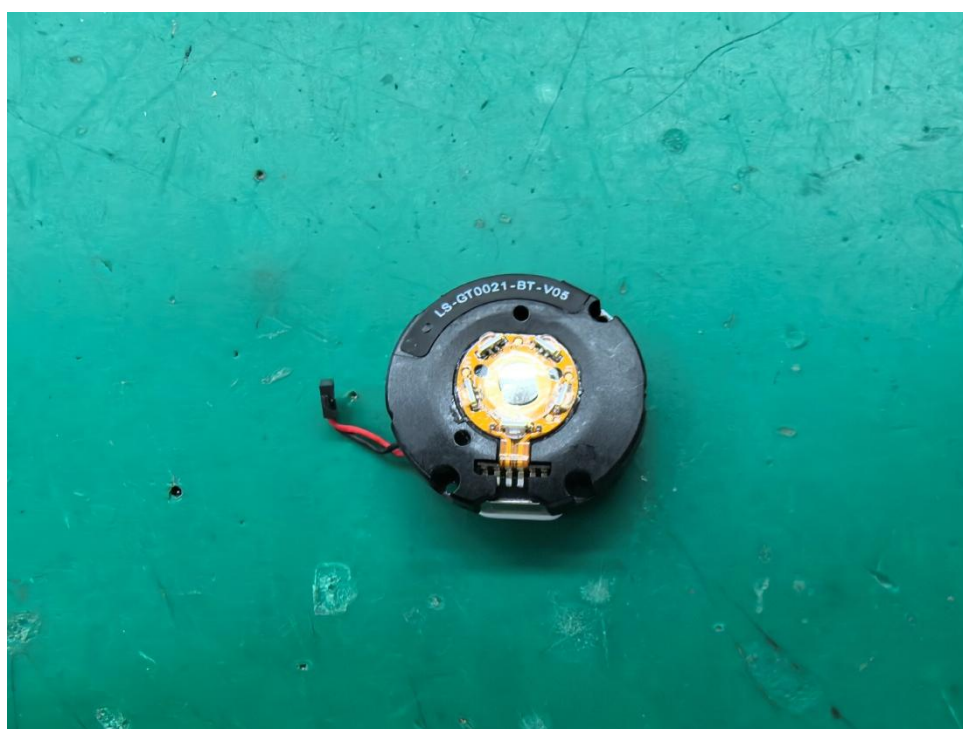


Theta 90°



Device







Shield the wiring here

**The battery lead should be placed
away from the antenna direction**

