



Antenna Part Specification

Customers:	Best Link Chip
Project name:	EPA713
Material category:	L- BT antenna
Antenna type:	monopole antenna
Version:	V4.0
Date:	2024.10.10

Manufacturer: Shenzhen Sixun Communication Technology Co., Ltd
Address: A505/506, Donglian Building, Chuangye 2nd Road, Dalang Community, Xin'an Street, Bao'an District, Shenzhen City, Guangdong Province, China



Catalogue

I: The report of passive data	2
II: 3D Active test report of antenna	7
III: Matching circuit.....	9
IV: Schematic diagram of antenna fixture.....	9
V: Schematic diagram of complete machine installation	10
VI: Structure file	11

Change record			
Compile / change date	Reason for change	Changed content	Version
2024.07.25	First edition	First edition	V1.0
2024.09.12	Antenna performance optimization	Antenna performance optimization	V2.0
2024.10.09	Antenna optimization, increase hand tear position	Antenna optimization, increase hand tear position	V3.0
2024.10.10	Cancel the manual tearing position	Cancel the manual tearing position	V4.0

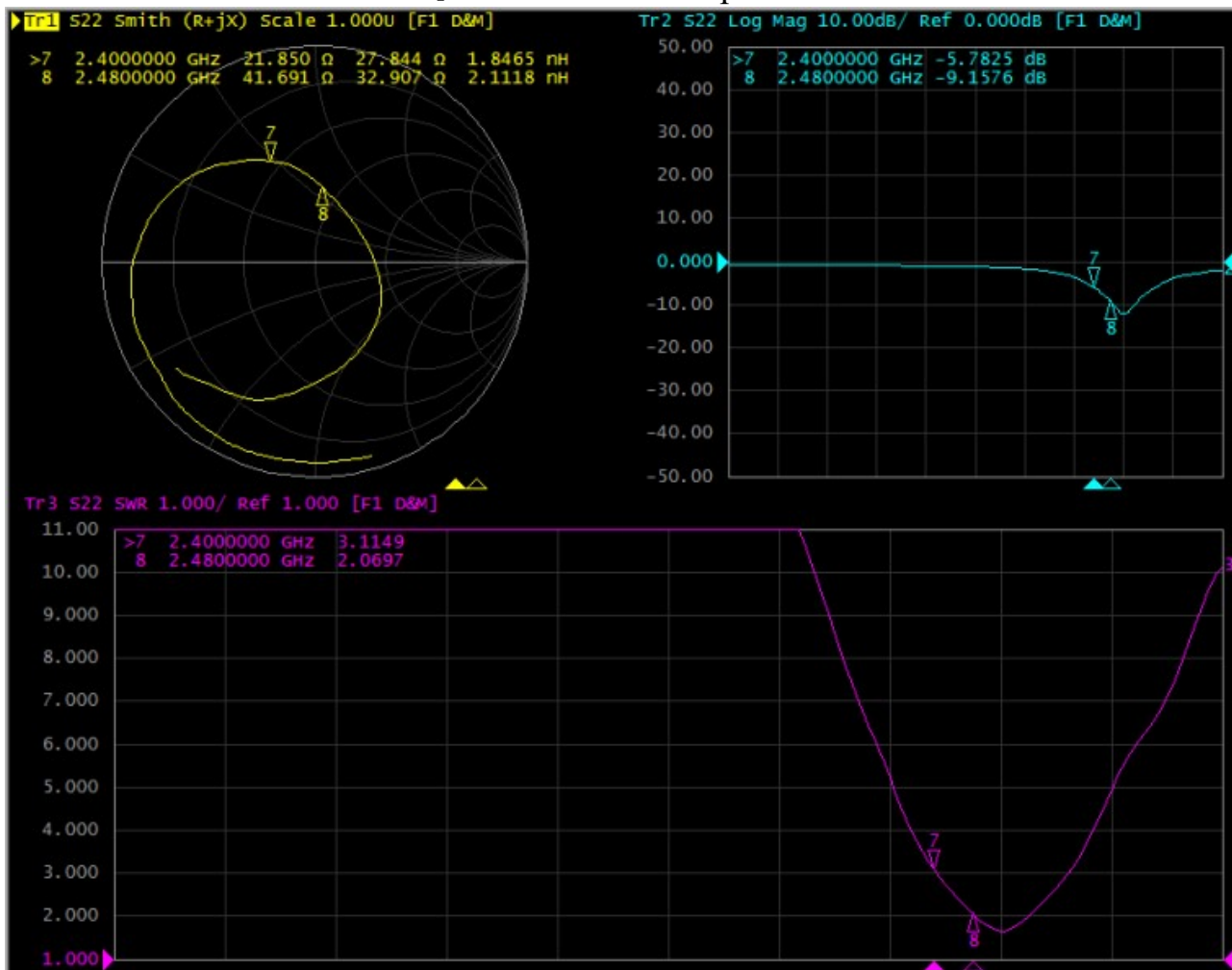


I: The report of passive data



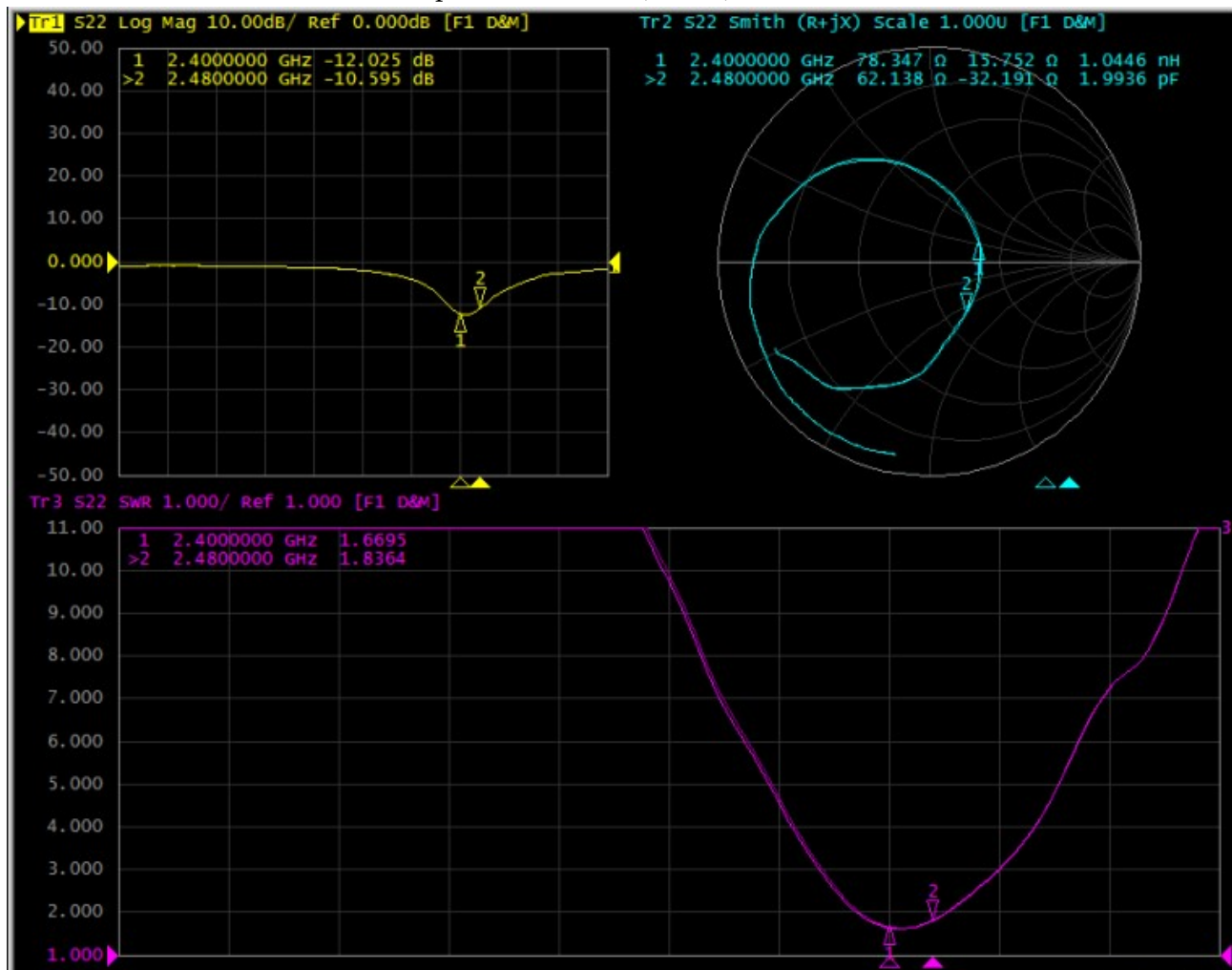
Angilent E5071C

Left ear BT antenna S11 parameter (Free space)





Left ear BT antenna S11 parameters (Head)

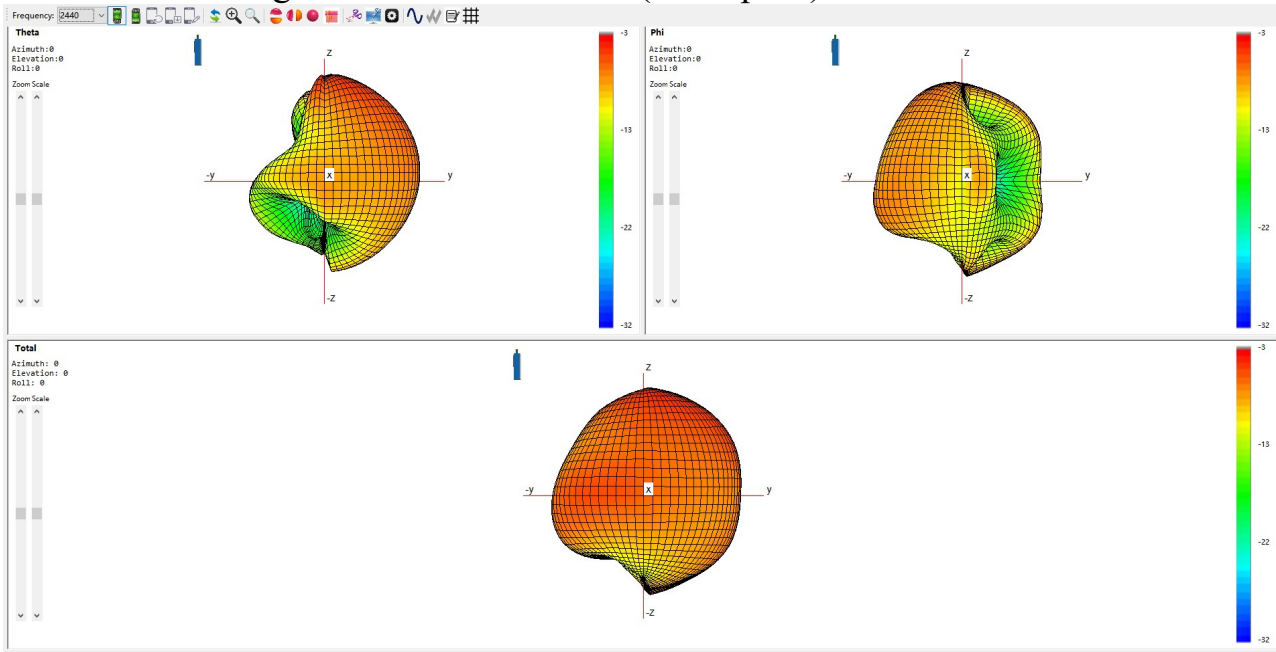


Efficiency and gain of left ear BT antenna:

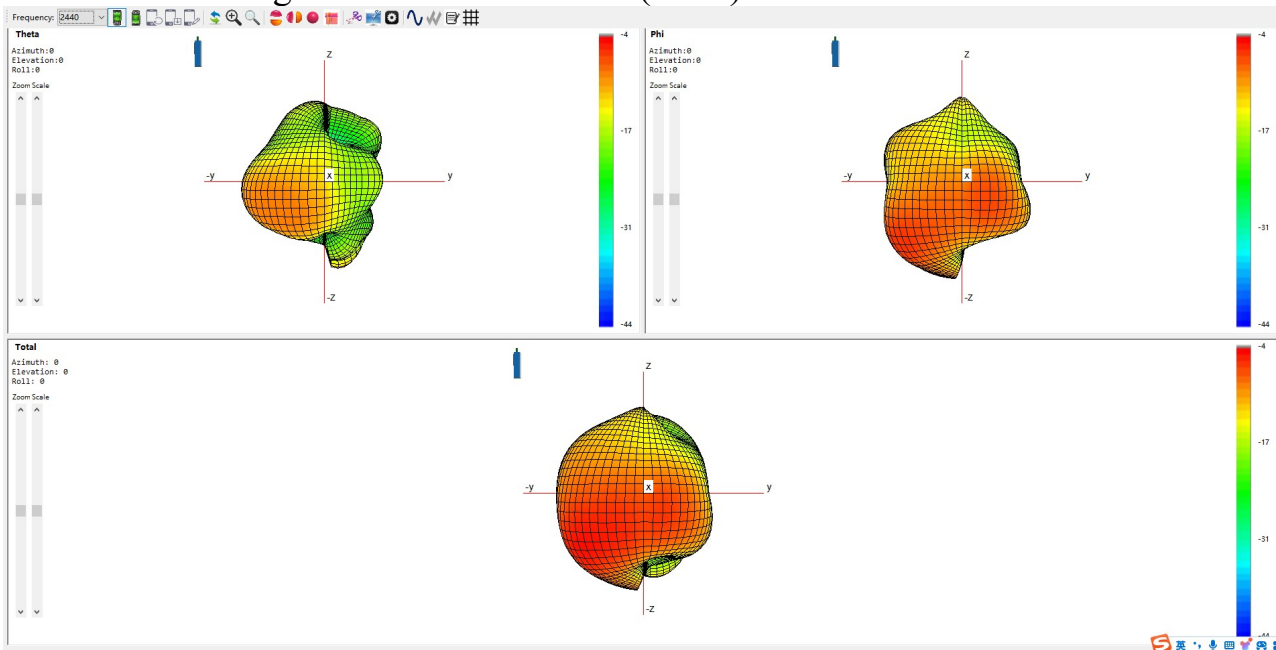
Free space				Head			
Freq (MHz)	Gain	Eff_dB	Eff (%)	Freq (MHz)	Gain	Eff_dB	Eff (%)
2400	-3.6	-7.7	16.8	2400	-4.5	-12.4	5.8
2410	-3.1	-7.4	18.3	2410	-4.4	-12.2	6.1
2420	-2.8	-7.1	19.5	2420	-4.4	-12.1	6.2
2430	-2.7	-7.0	19.9	2430	-4.5	-12.1	6.1
2440	-2.8	-7.0	19.9	2440	-4.8	-12.3	6.0
2450	-2.5	-6.7	21.2	2450	-4.9	-12.2	6.1
2460	-2.4	-6.6	21.7	2460	-5.1	-12.2	6.0
2470	-2.1	-6.2	23.9	2470	-5.0	-11.9	6.5
2480	-1.7	-5.8	26.5	2480	-4.9	-11.6	7.0
2490	-1.7	-5.7	27.2	2490	-5.3	-11.7	6.8
2500	-1.5	-5.5	28.4	2500	-5.6	-11.8	6.7
average value	-2.4	-6.6	22.1	average value	-4.9	-12.0	6.3



3D directional diagram of left ear antenna (Free space):



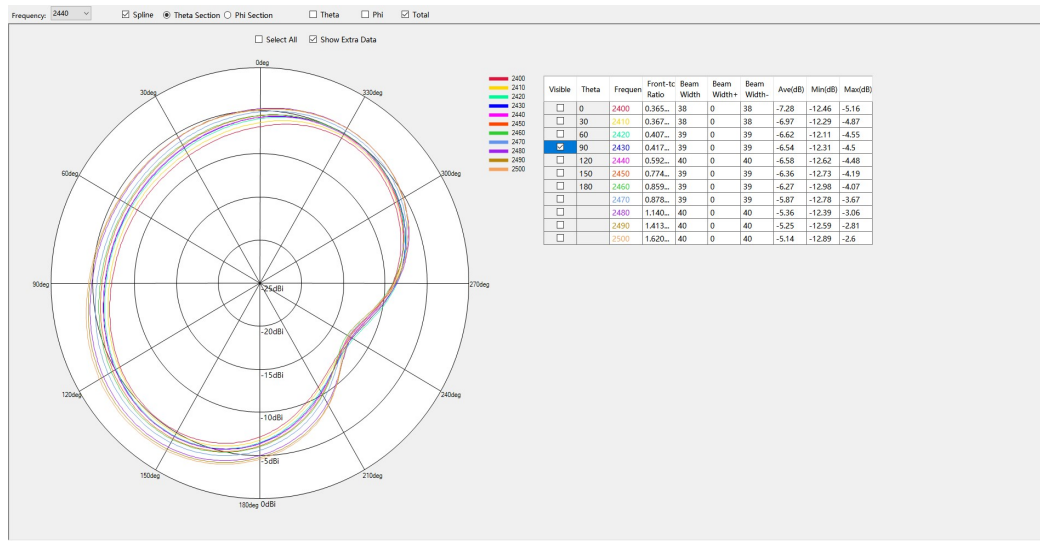
3D directional diagram of left ear antenna (Head):



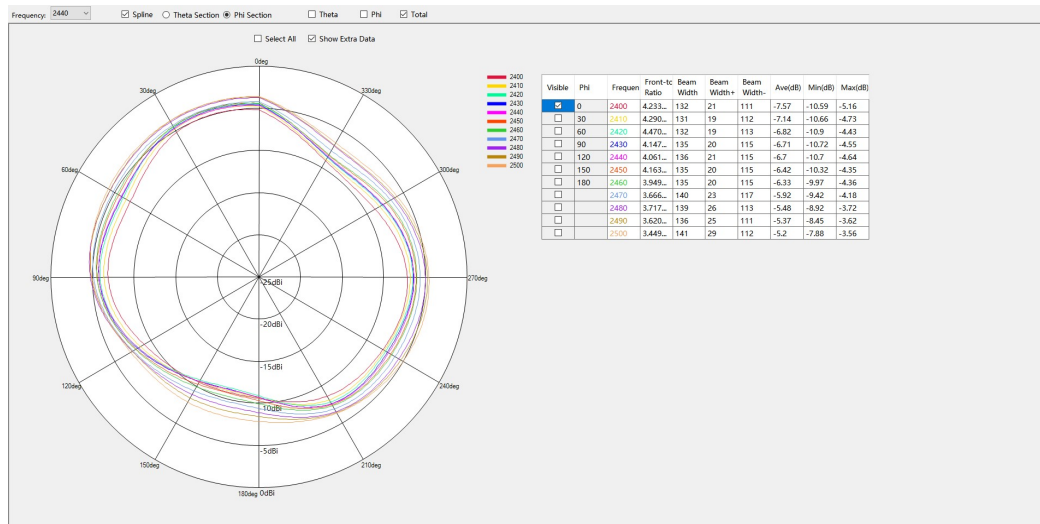


2D directional pattern of left ear antenna (Free space):

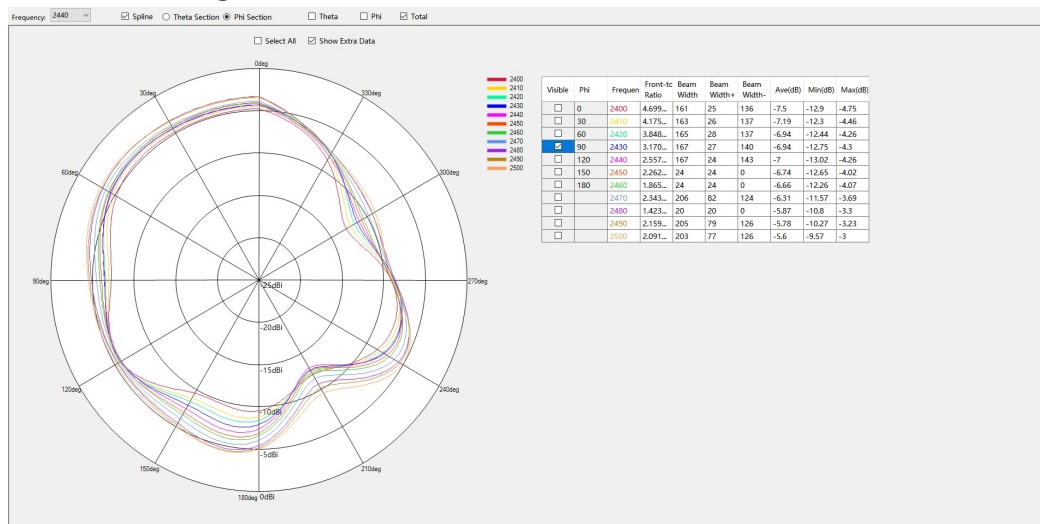
Theta=90. 00deg



Phi=0. 00deg



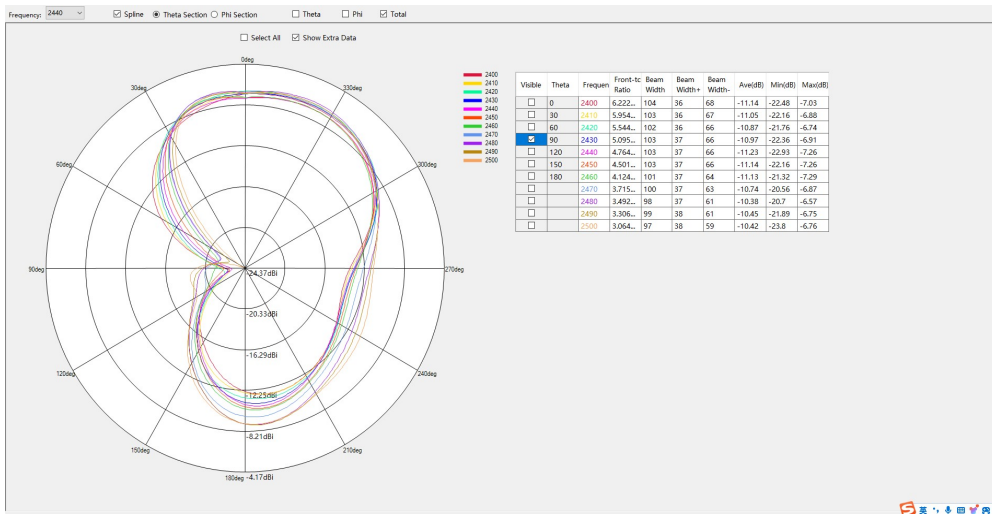
Phi=90. 00deg



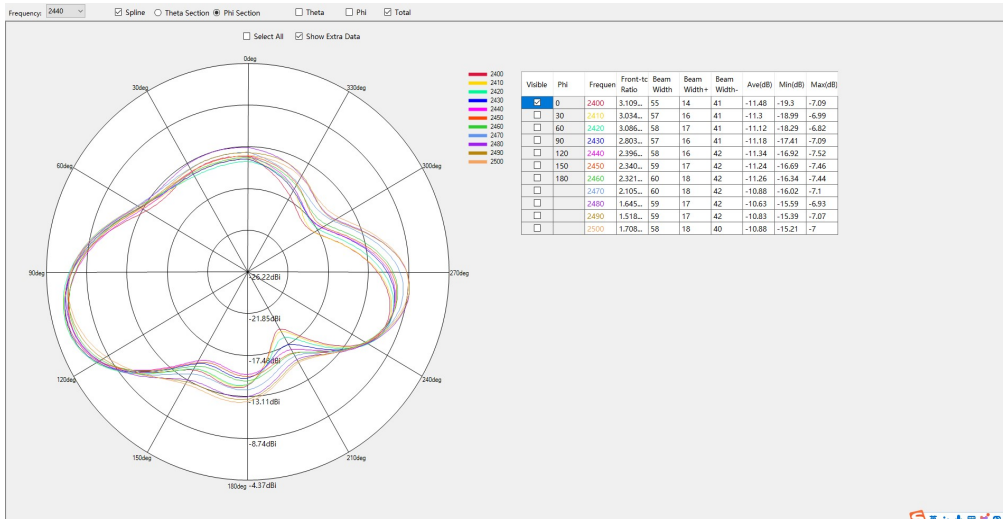


2D directional pattern of left ear antenna (Head):

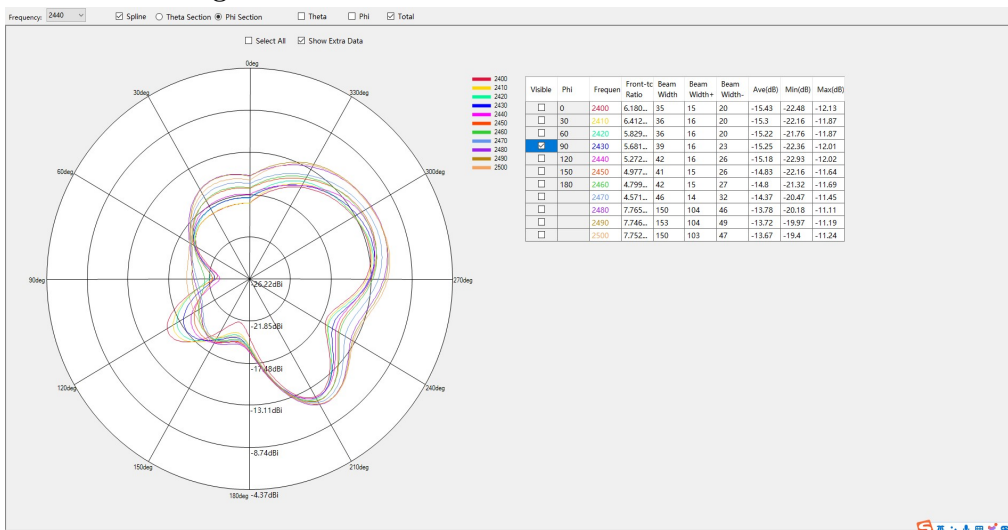
Theta=90.00deg



Phi=0.00deg



Phi=90.00deg





II: 3D Active test report of antenna

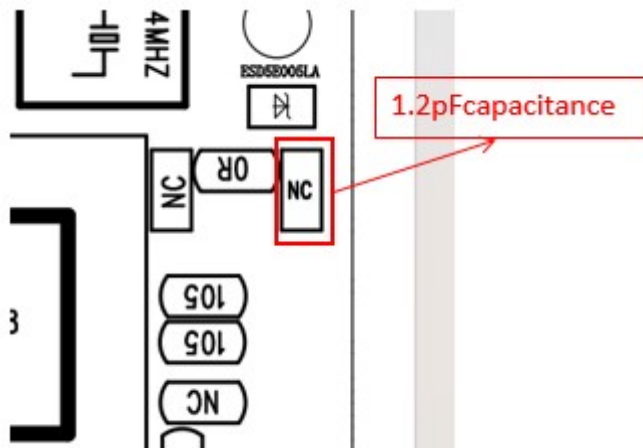
		Free space		Head	
	Channel	TRP (dBm)	TIS (dBm)	TRP (dBm)	TIS (dBm)
L	CH 0	1.7	-88.1	-6.5	-79.0
	CH 39	2.9	-89.4	-5.7	-80.1
	CH 78	3.3	-89.6	-6.2	-79.9



OTA Standard Chamber



III: Matching circuit

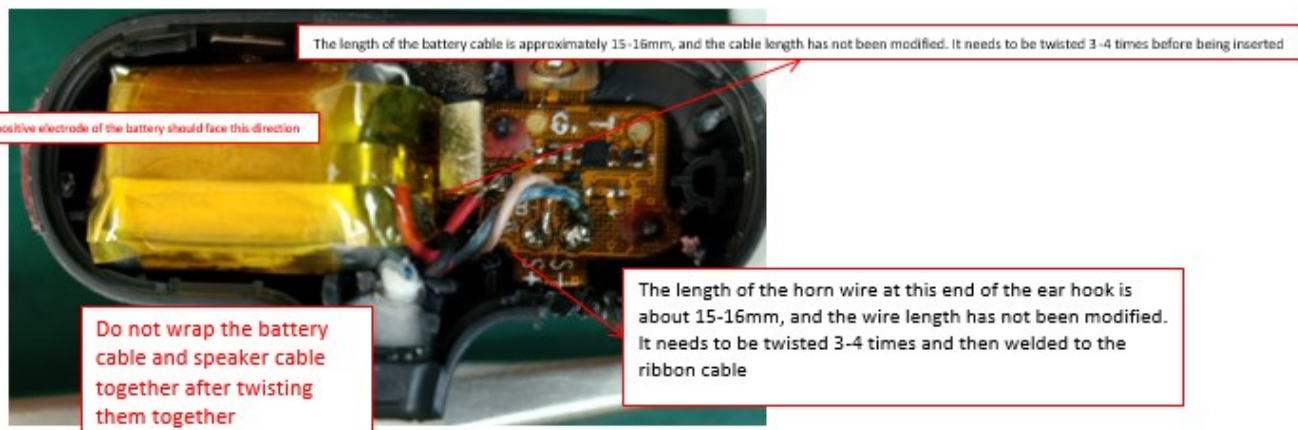


IV: Schematic diagram of antenna fixture

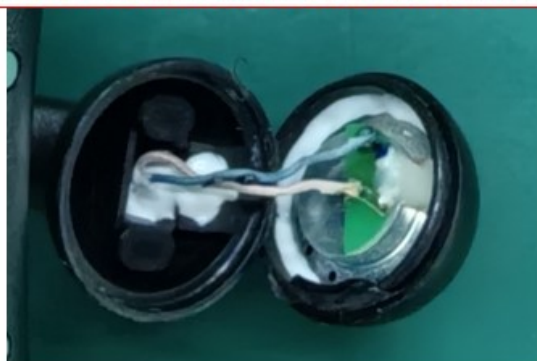




V: Schematic diagram of complete machine installation



The length of the speaker cable on this end of the L/R ear hook is 15-16mm, and no adjustments have been made during this debugging.



The horn wire needs to be twisted 3-4 times before being installed in the cavity



VI: Structure file

