



Antenna Part Specification

Project name:	EPA825
Antenna name:	R-BT antenna
Version:	V1.0
Date:	2025.12.15
Manufacturer:	Shenzhen Cicent Communication Technology Co., Ltd.
Manufacturer address:	505-506 ,ABlock,Donglian Building,Chuangye 2 road,Baoan District,Shenzhen,Guangdong,P.R china



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Change record			
Compile / change date	Reason for change	Changed content	Version
2025.12.15	First edition	First edition	V1.0

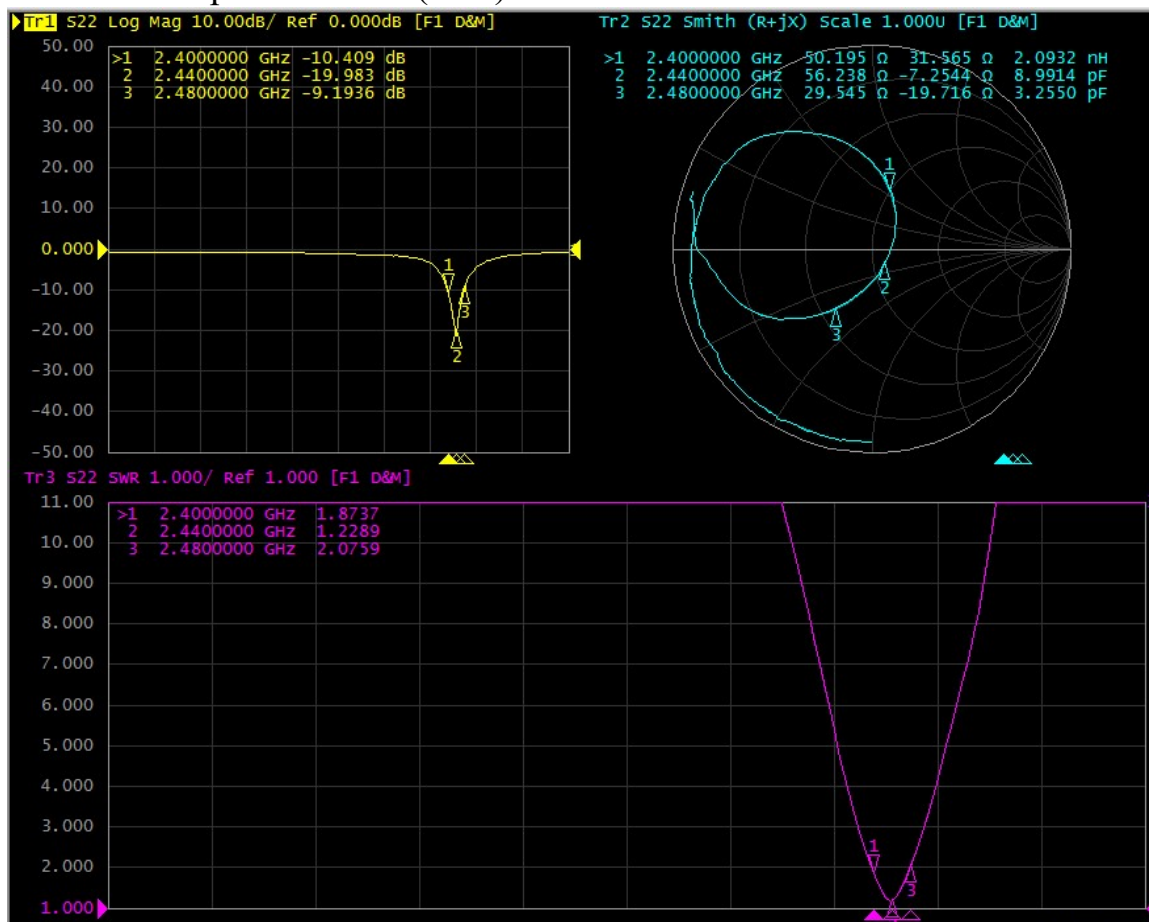


I: The report of passive data



Angilent E5071C

Antenna S11 parameter: (Free)

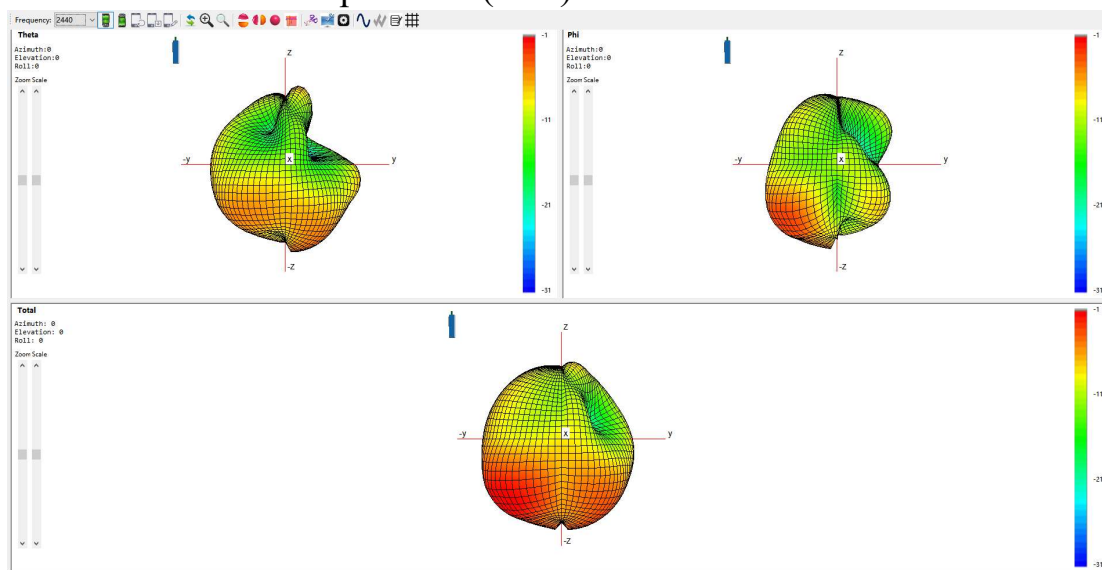




Antenna efficiency and gain: (Free)

2400-2480MHz			
Frequency (MHz)	Efficiency (%)	Efficiency (dB)	Gain (dBi)
2400	25.5%	-5.9	-1.2
2410	26.1%	-5.8	-1.1
2420	26.7%	-5.7	-1.1
2430	26.9%	-5.7	-1.2
2440	27.2%	-5.7	-1.2
2450	27.5%	-5.6	-1.2
2460	27.5%	-5.6	-1.3
2470	27.2%	-5.6	-1.4
2480	26.9%	-5.7	-1.6
average	26.8%	-5.7	-1.3

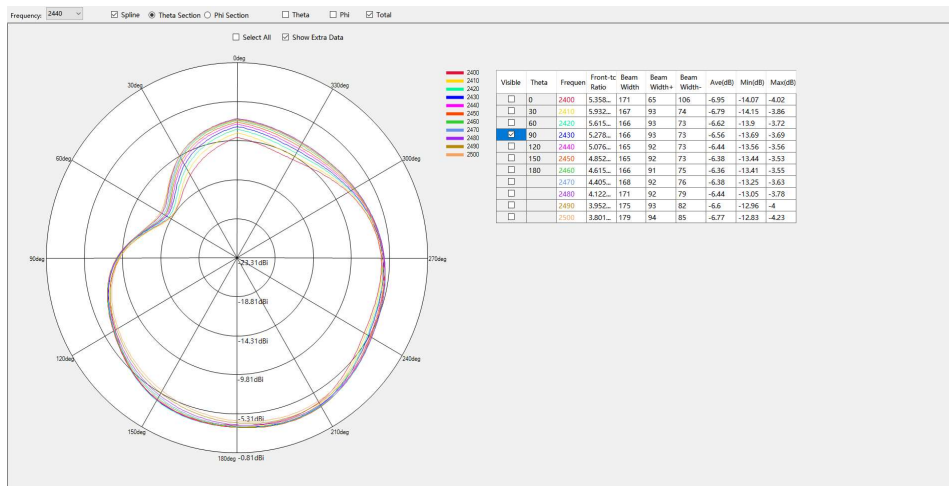
3D Antenna radiation pattern: (Free)



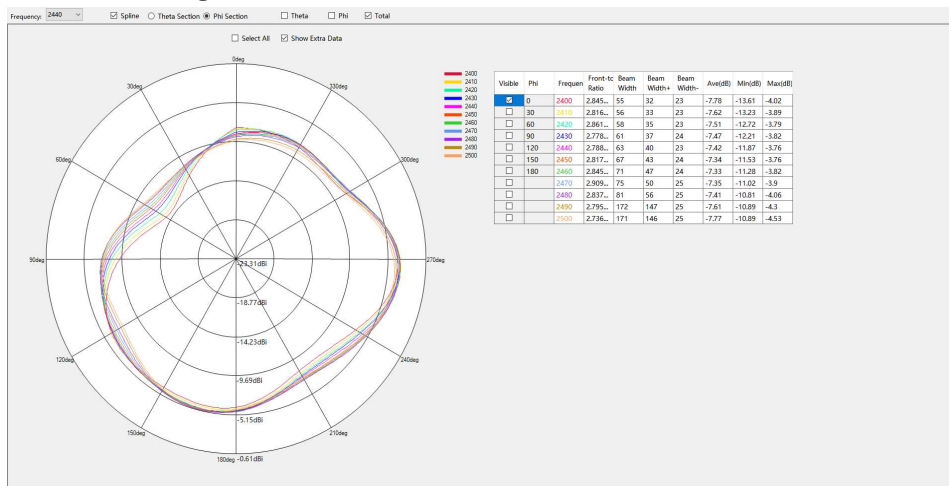


2D Antenna radiation pattern: (Free)

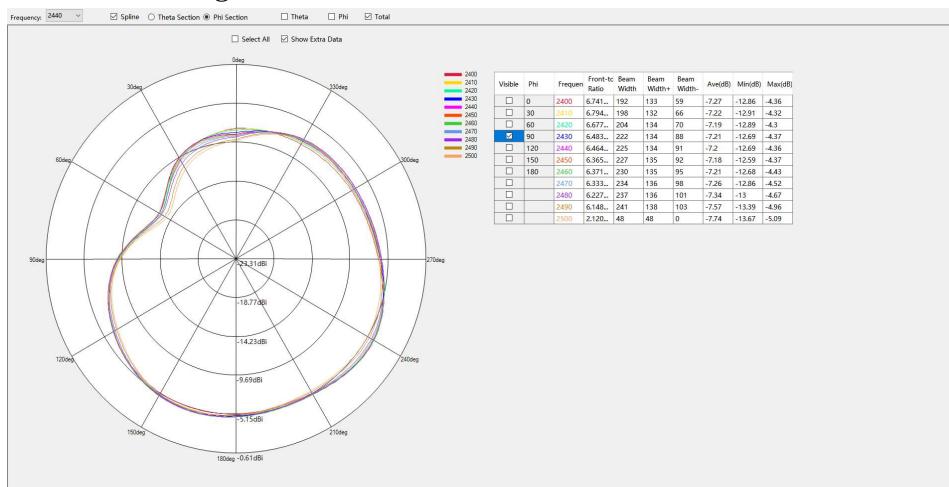
Theta=90. 00deg



Phi=0. 00deg



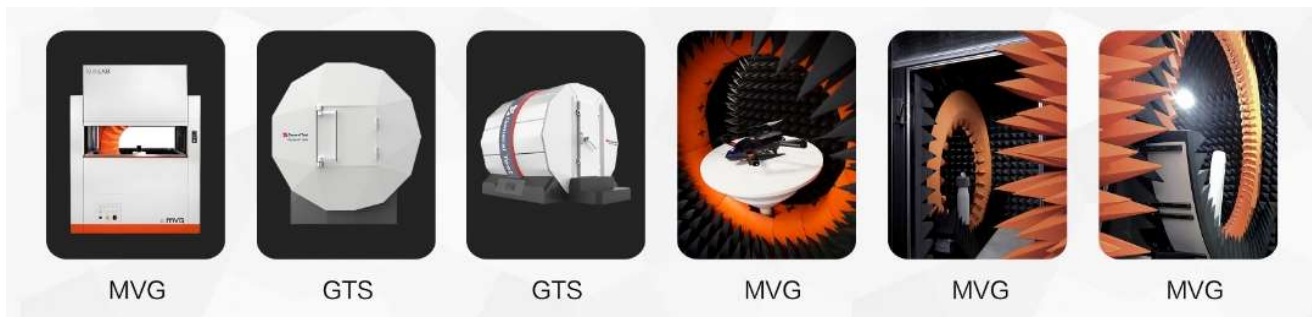
Phi=90. 00deg





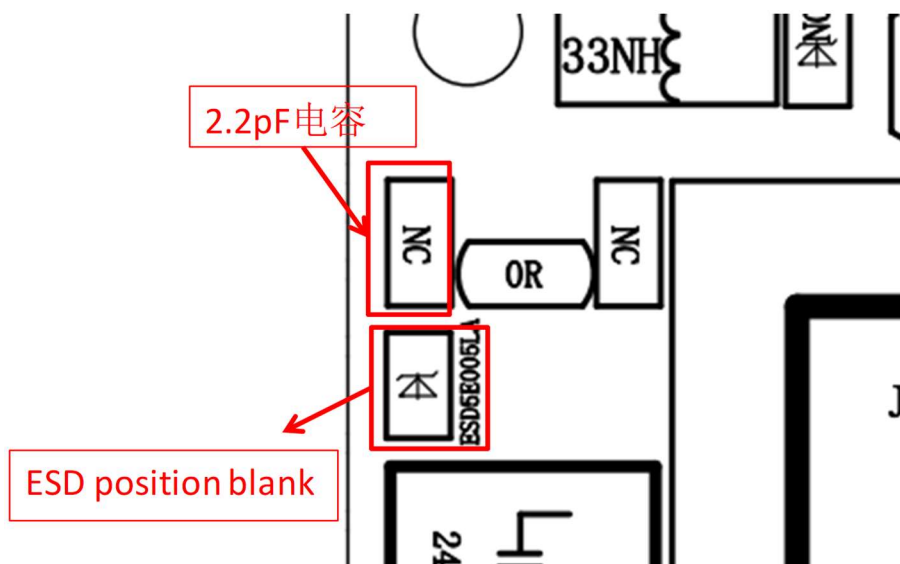
II: 3D Active test report of antenna

		Freed		Head model	
2#	Channel	TRP (dBm)	TIS (dBm)	TRP (dBm)	TIS (dBm)
R	CH 0	3.5	-88.9	-4.3	-81.4
	CH 39	4.3	-89.9	-4.9	-81.7
	CH 78	3.0	-88.9	-5.3	-80.2



OTA Standard Chamber

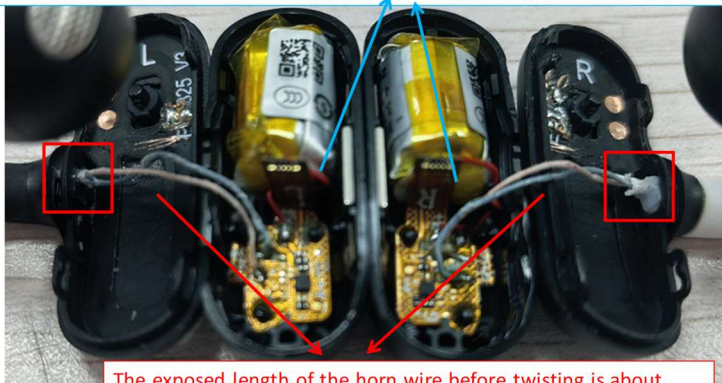
III: Antenna matching circuit



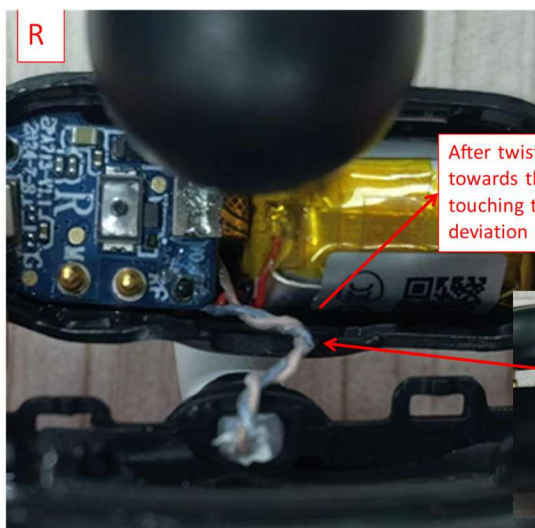


IV: Assembly diagram of the whole machine

The length of the battery cable has not been adjusted. Before twisting it, it is measured to be about 15mm. After twisting it 3-4 times, the red positive electrode should be placed upside down in the lower shell.



The exposed length of the horn wire before twisting is about 20mm. Please note that the outer material of the C-bridge wire at the red box needs to be cut off completely, otherwise it will affect the subsequent placement of the wire.



After twisting the horn wire 3-4 times, it is necessary to pull and shape the wire towards the battery direction in front of the box cover to avoid the horn wire touching the antenna area behind the box cover, which may cause data deviation and result in data consistency issues in mass production.

Battery area



V: Antenna structure diagram file

