



Antenna Part Specification

Customers:	Tianjian
Project name:	Scala Dongle-PC
Material category:	BT Antenna
Antenna type:	PIFA Antenna
Version:	V3.0
Antenna version number:	CC Scala Dongle PC V2
Date:	2024.06.25



Catalogue

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Change record			
Compile / change date	Reason for change	Changed content	Version
2024.03.23	First edition	First edition	V1.0
2024.06.04	Change of raw materials	Antenna substrate changed to yellow/OTA update	V2.0
2024.06.25	Antenna optimization	Increase the size of the circuit	V3.0

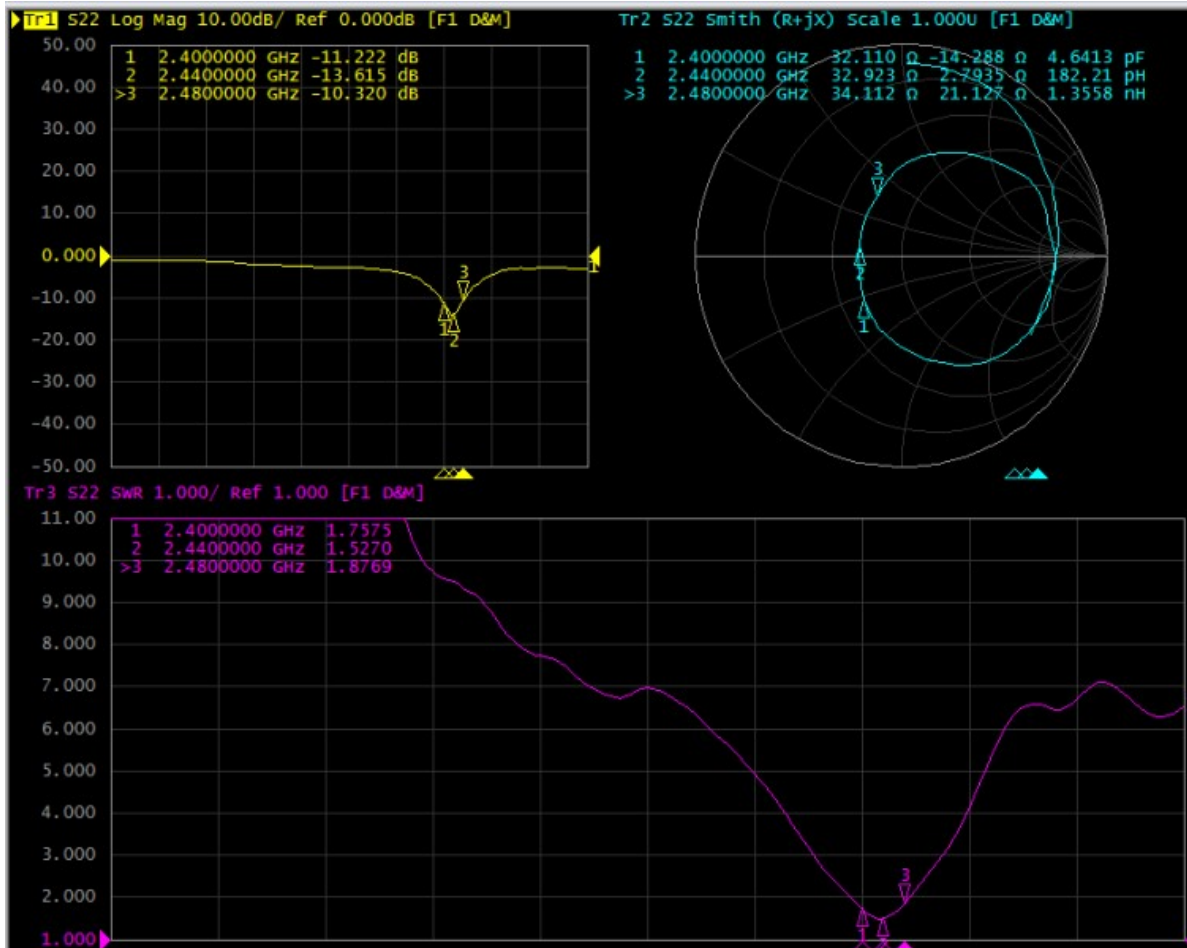


I: The report of passive data



Angilent E5071C

BT antenna S parameters (connected to laptop plastic shell computer)



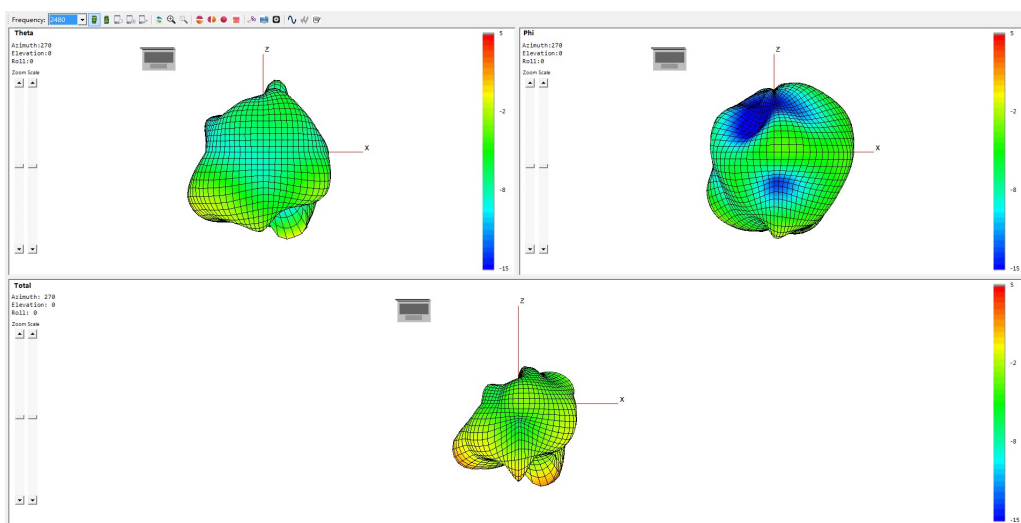
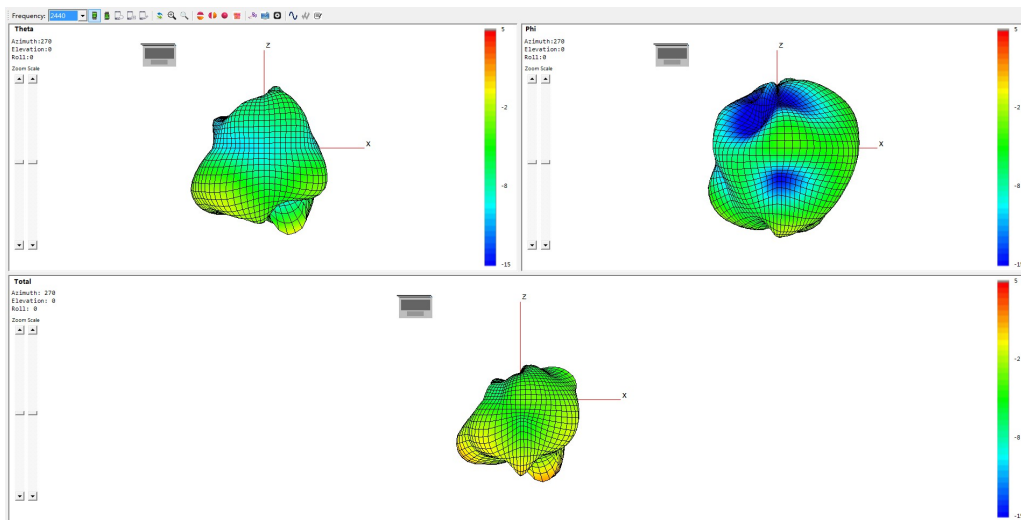
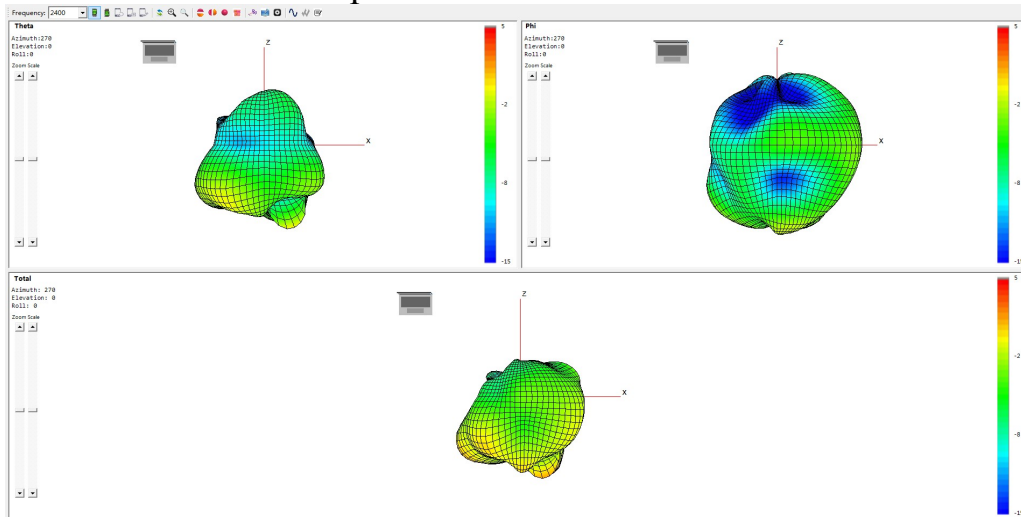


BT antenna efficiency and gain:

2400-2480MHz			
Frequency point MHz	efficiency %	efficiency (dB)	gain (dBi)
2400	41%	-3.8	2.1
2410	43%	-3.7	2.2
2420	44%	-3.6	2.2
2430	43%	-3.6	2.2
2440	42%	-3.8	2.1
2450	42%	-3.7	2.2
2460	42%	-3.8	2.1
2470	42%	-3.7	2.4
2480	43%	-3.6	2.5
average value	42.6%	-3.7	2.2



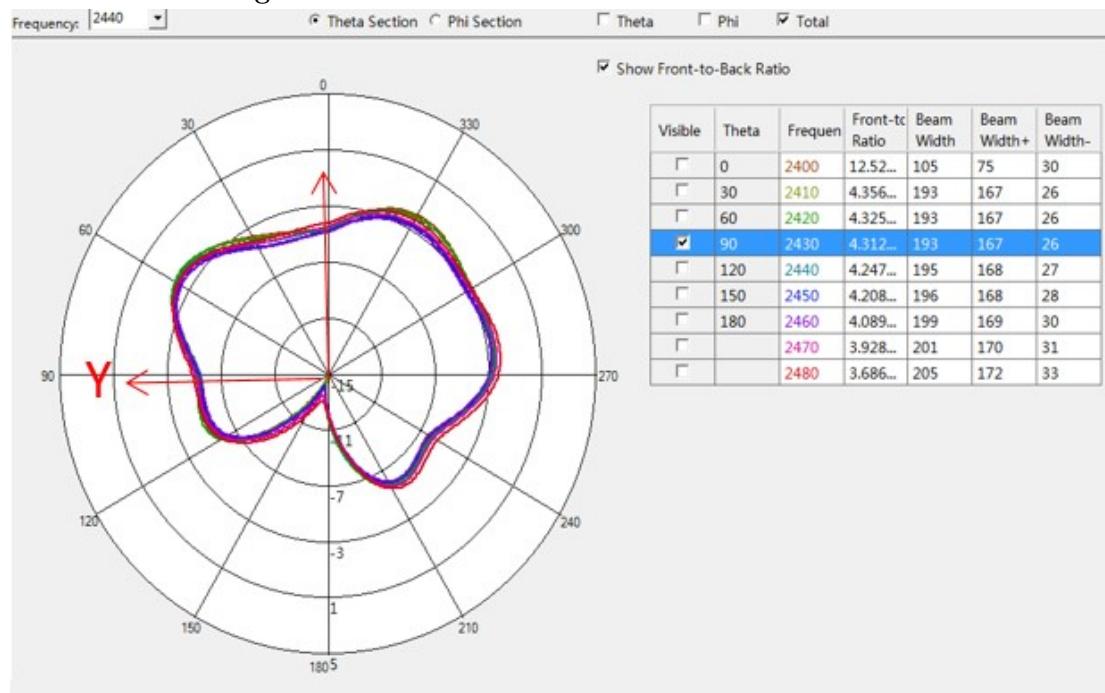
Passive 3D directional pattern of antenna:





Passive 2D directional pattern of antenna:

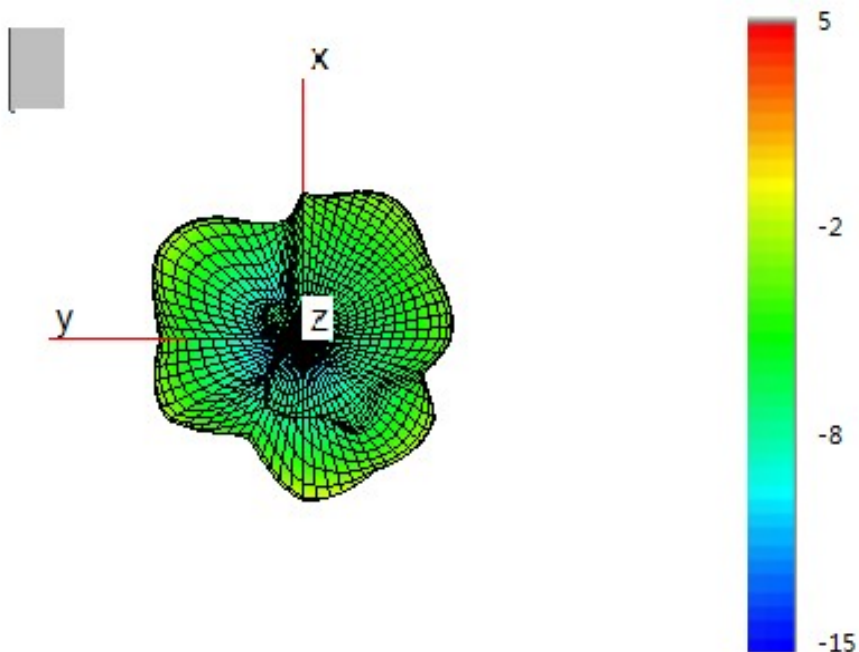
Theta=90.00deg



Total

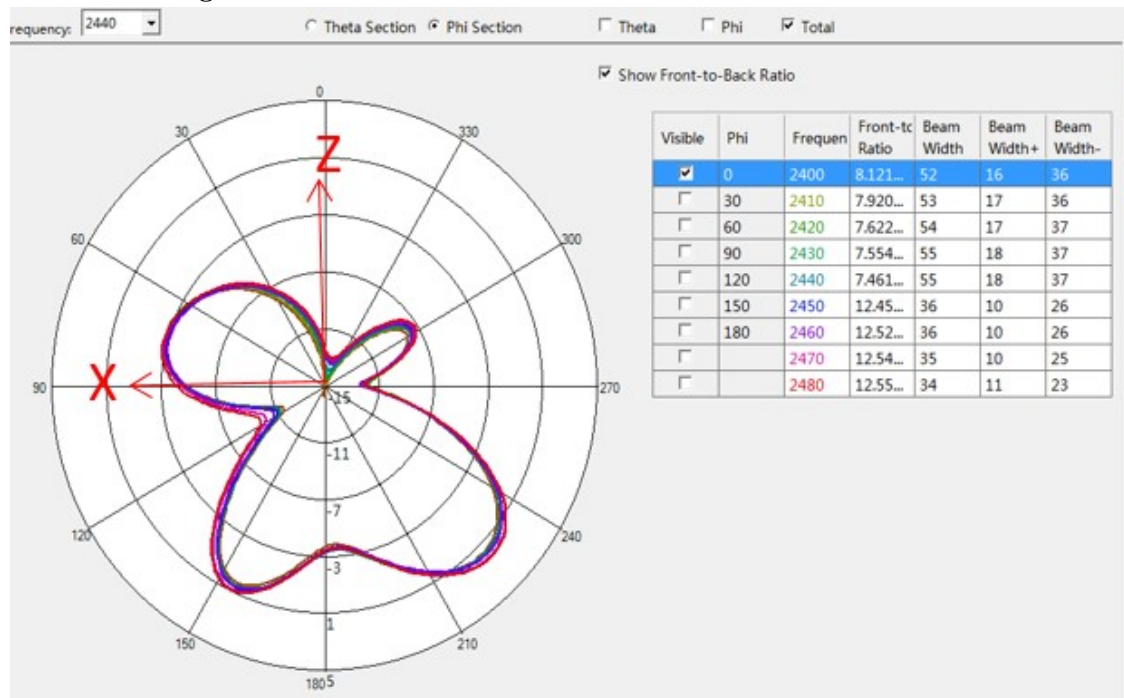
Azimuth: 180
Elevation: 90
Roll: 0

Zoom Scale





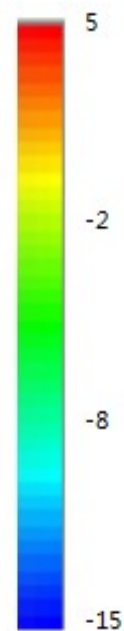
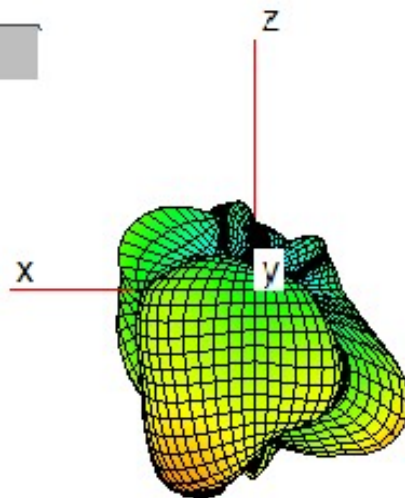
Phi=0.00deg



Total

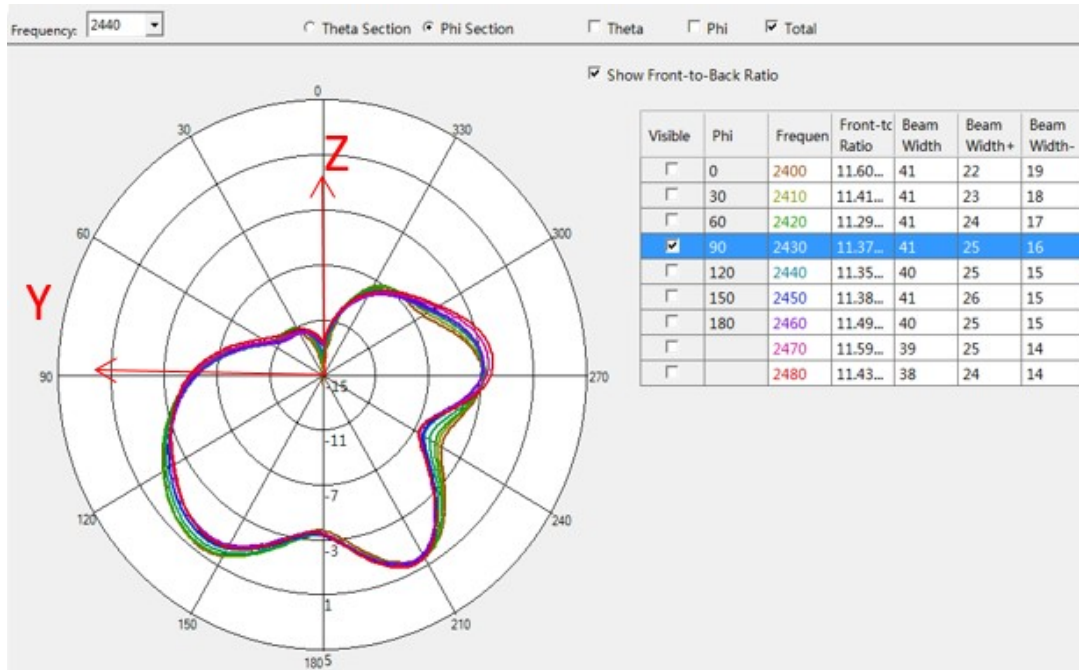
Azimuth: 90
Elevation: 0
Roll: 0

Zoom Scale





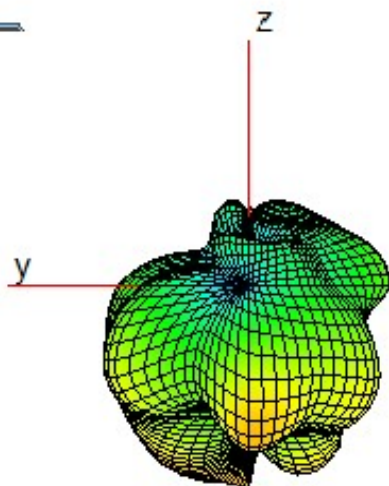
Phi=90.00deg



Total

Azimuth: 180
Elevation: 0
Roll: 0

Zoom Scale





II: 3D Active test report of antenna

	Channel	TRP (dBm)	TIS (dBm)
PC-Dongle	CH 0	3.5	-82.1
	CH 39	4.2	-85.1
	CH 78	4.6	-85.6

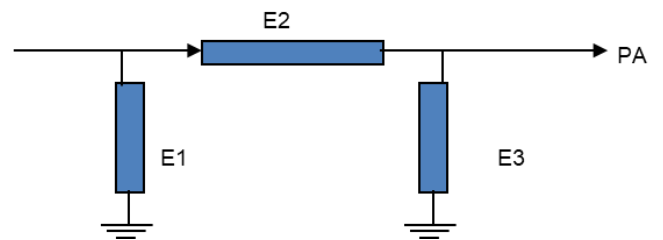


OTA Standard Chamber

III: Matching circuit

Element	Value
E1(0201)	N/A
E2(0201)	0Ω
E3(0201)	N/A

Antenna



IV: Installation precautions



Two antenna pins are required



V: Structure file

