

N248 Antenna Test Report

Customer	优程
Project	SW-W5
Antenna Revision	A1
Product Description	Board antennas
Product No	V1.0
DATE	2025. 08. 25

Purpose

This report is to measure the performance of BT antenna for N248
.The antenna operating frequency at 2.4~2.5GHz, All test data are showed as below.

Content

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2. Test system
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2.Test System

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5062A
OTA Test	TRP&TIS	CMW500 & CMW270 ETS&SATIMO
Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C

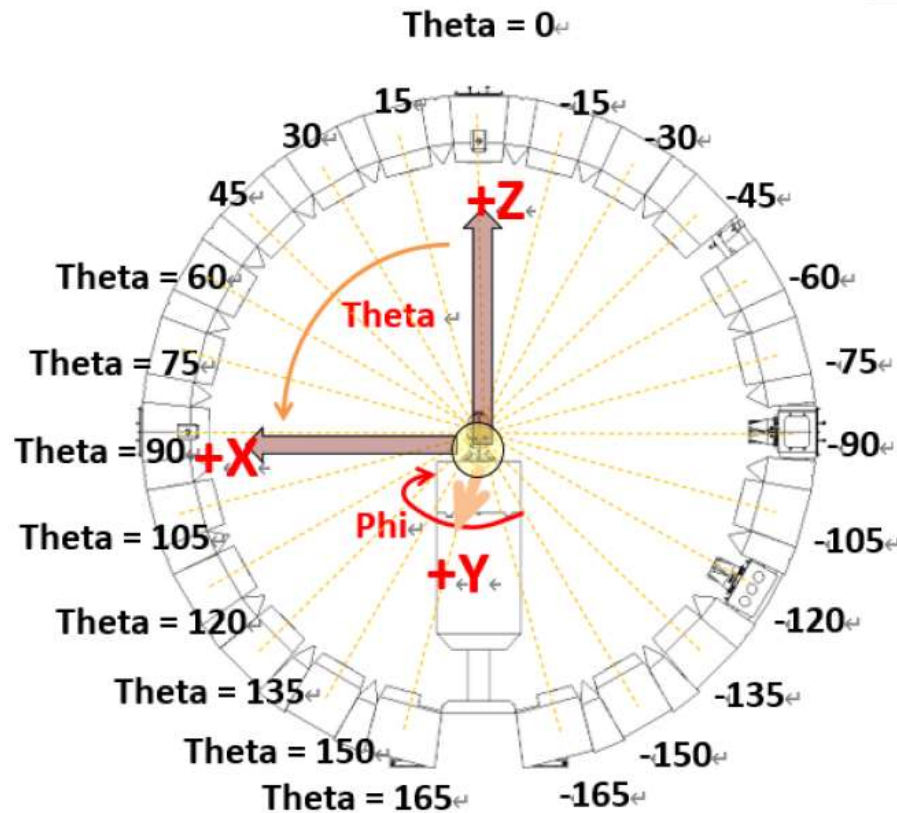


Product picture

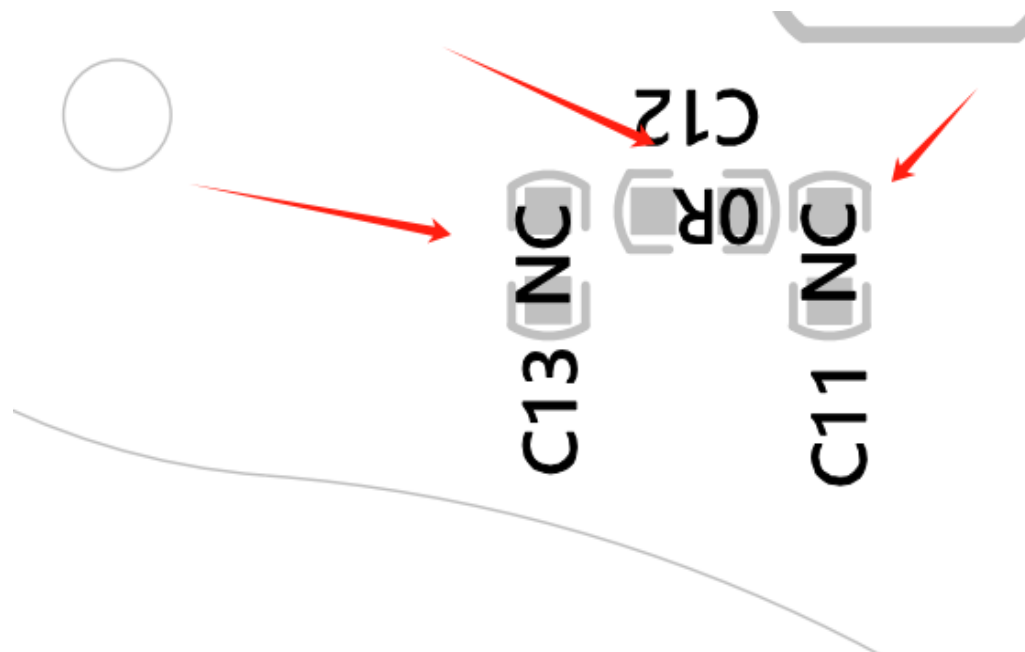


Test Result

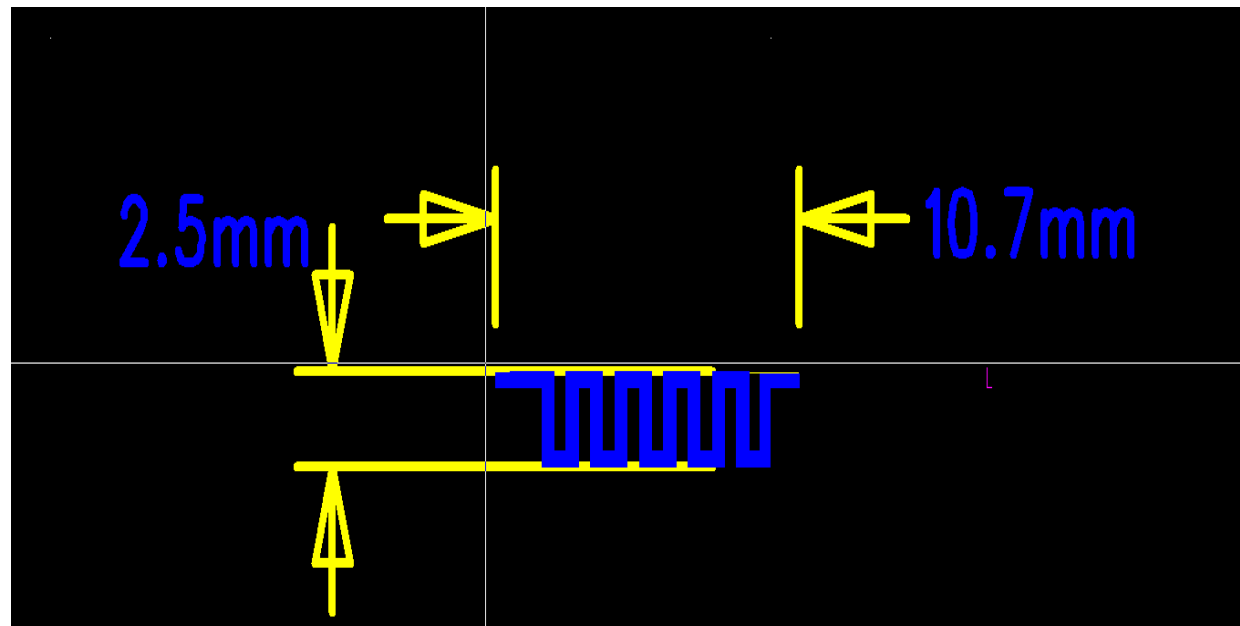
Sample status & coordinates



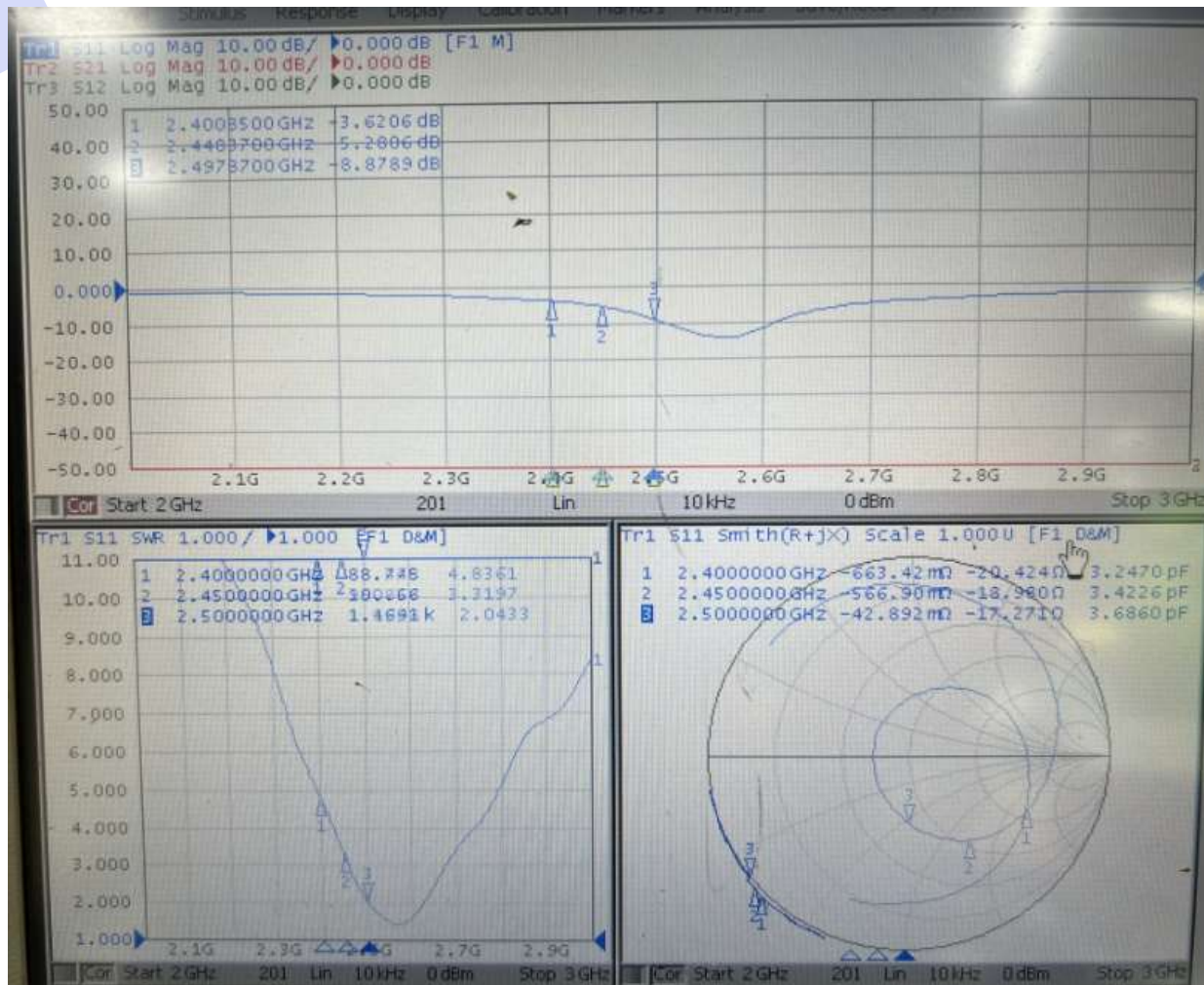
Matching parameters



Antenna size



Passive S11—(BT ANT)



Test Result

Gain & Efficiency — **BT- ANT**

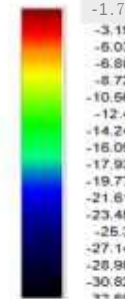
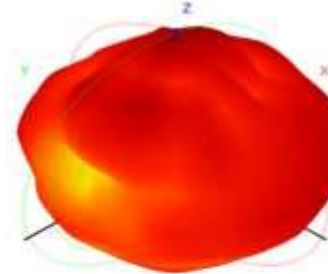
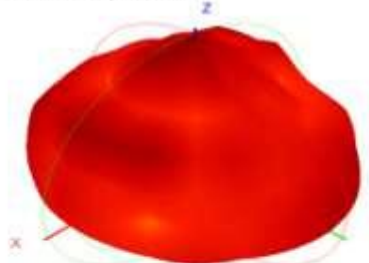


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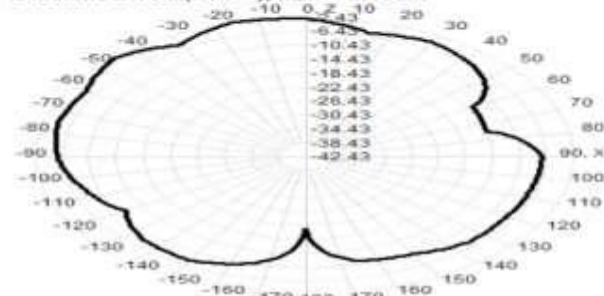
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-9.37	-9.00	-8.34	-7.59	-7.23	-7.08	-6.96	-7.21	-7.46	-7.79	-7.97
Gain (dBi)	-4.15	-4.42	-3.23	-2.14	-2.52	-1.73	-1.63	-1.86	-1.84	-2.47	-2.93
Efficiency (%)	11.57	12.59	14.65	17.42	18.94	19.59	20.12	18.99	17.93	16.65	15.95
Directivity (dB)	5.22	4.58	5.11	5.45	4.70	5.35	5.33	5.36	5.63	5.31	5.04
Peak Gain Position (Theta)	30.00	90.00	75.00	90.00	0.00	0.00	0.00	0.00	15.00	15.00	75.00
Peak Gain Position (Phi)	120.00	105.00	120.00	105.00	165.00	15.00	120.00	135.00	120.00	120.00	135.00
Efficiency ThetaPol (%)	4.34	4.60	5.39	6.53	7.70	8.73	9.32	8.31	7.87	7.06	6.23
Efficiency PhiPol (%)	7.23	7.99	9.26	10.89	11.23	10.86	10.81	10.68	10.06	9.58	9.72
Upper Hem. Efficiency (%)	7.05	7.66	9.08	11.09	12.14	12.55	12.90	11.85	11.18	10.19	9.65
Lower Hem. Efficiency (%)	4.52	4.94	5.56	6.33	6.80	7.05	7.22	7.15	6.74	6.46	6.30

2450.0MHz H+V, Eff: 22.8%

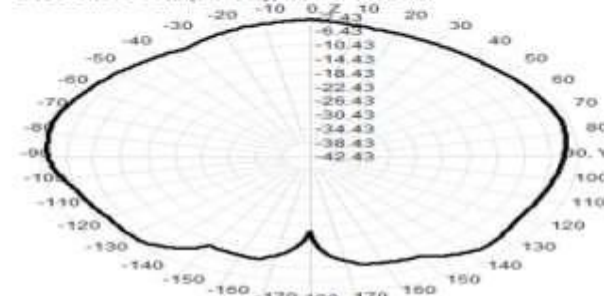
Back View



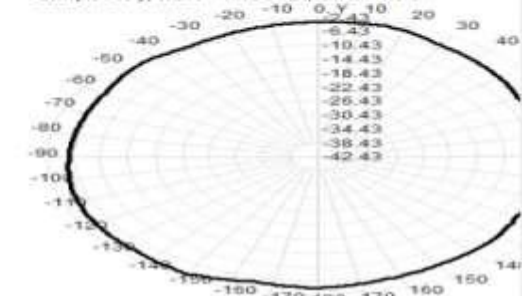
2450.0MHz Total(E1-XZ), Max=-2.43dBi



2450.0MHz Total(E2-YZ), Max=-3.08dBi



Total(H+XY), Max=-3.50dBi, CirD=4.74



OTA DATA

FS free space		
BT Test		
CH	TRP	TIS
0	1.22	-84.56
39	0.85	-83.77
78	1.37	-83.98

Thanks for your comment!

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