



Customer	
Project	TA1139
Antenna Revision	A0
Prepared by	18814303605
Checked by	
Date :	2024. 11. 12

2.TestSystem

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5071C
OTA Test	TRP&TIS	Agilent 8960 & CMW500
Gain & Efficiency	Gain & Efficiency	Agilent 5071C



Purpose

This report is to measure the performance of antenna for **TA1139** The antenna operating frequency at 2400MHz-2500MHz 。 All test data are showed as below.

Content

1. Product Overview & Dimension
2. Test system
3. Test Result
4. Test Result

4.1 S11 Parameter-VSWR

4.2 Gain & Efficiency

4.3 Test coordinate

4.4 2D Pattern

4.5 OTA

4. Test Result

4.1 S11 Parameter-VSWR

L



Frequency (MHz)	2400	2450	2480	2500
VSWR	1.49	1.13	1.36	1.52

4. Test Result

L

4.1 S11 Parameter-Log Mag

Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F1]

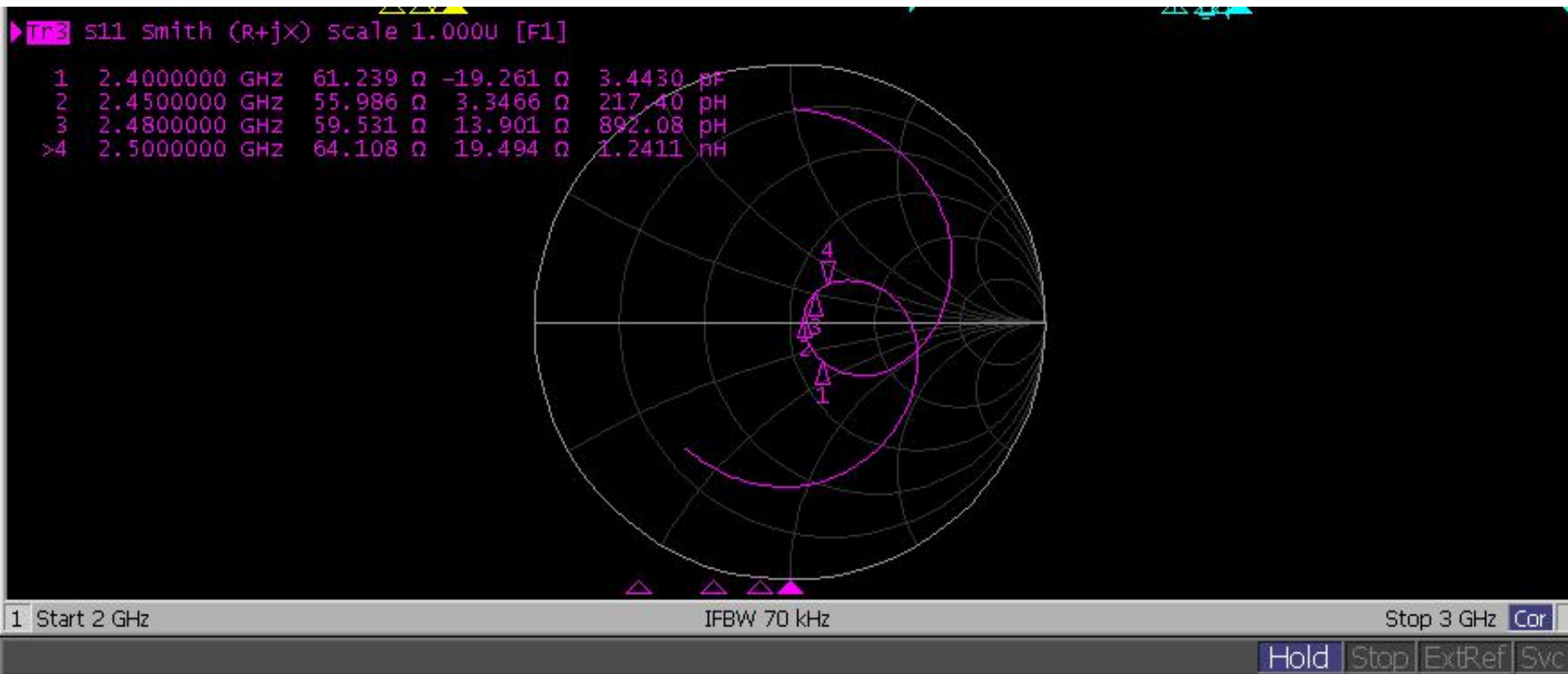


Frequency (MHz)	2400	2450	2480	2500
Log Mag	-14.08	-23.76	-16.32	-13.64

4. Test Result

4.1 S11 Parameter-VSWR

L



Frequency (MHz)	2400	2450	2480	2500
Smi th(Ω)	61.23	55.98	59.53	64.10

4. Test Result

4.2 Gain & Efficiency—**ANT**

L

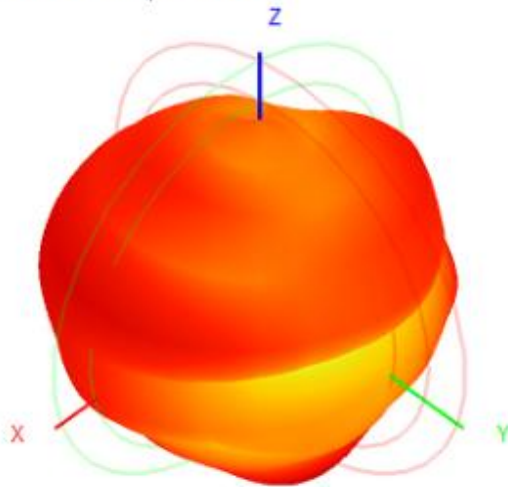
Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	30.39 %	0.85
2410	30.79 %	1.02
2420	31.15 %	1.24
2430	31.87 %	1.28
2440	32.38 %	1.31
2450	32.95 %	1.41
2460	33.65 %	1.42
2470	34.03 %	1.61
2480	34.46 %	1.78

4. Test Result

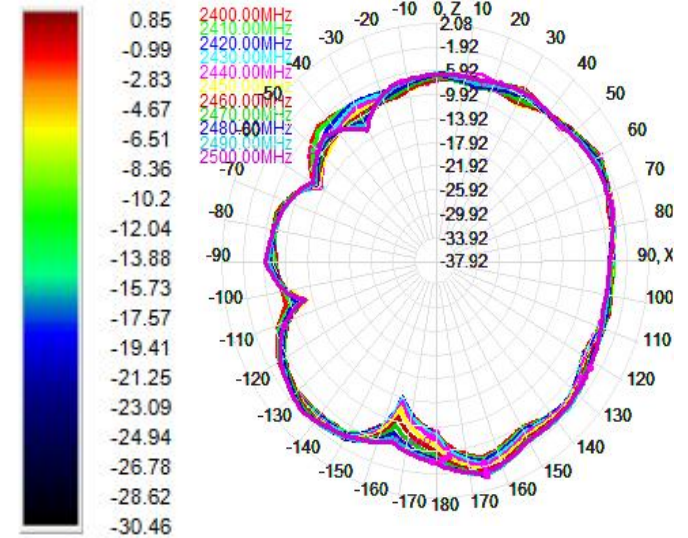
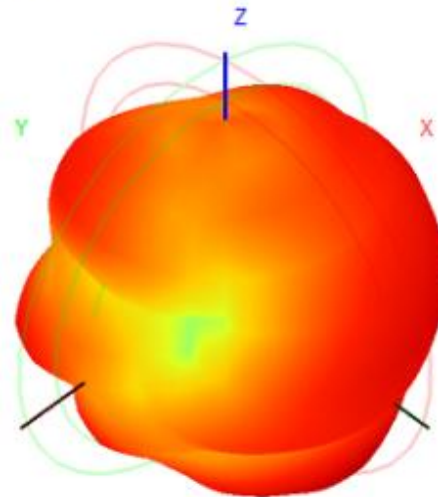
4.3 2D Pattern—BTANT

L

2400.0MHz Total, Eff: 30.4%



Back View

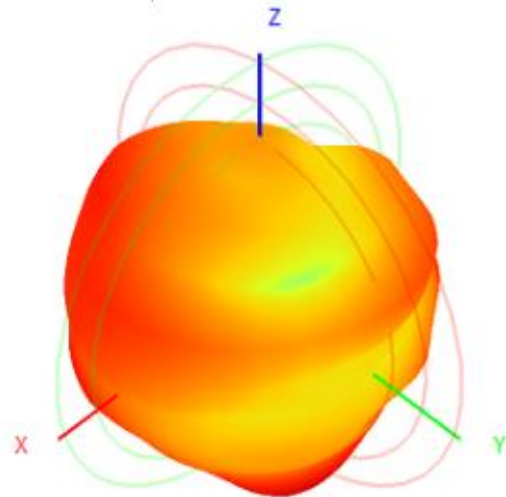


4. Test Result

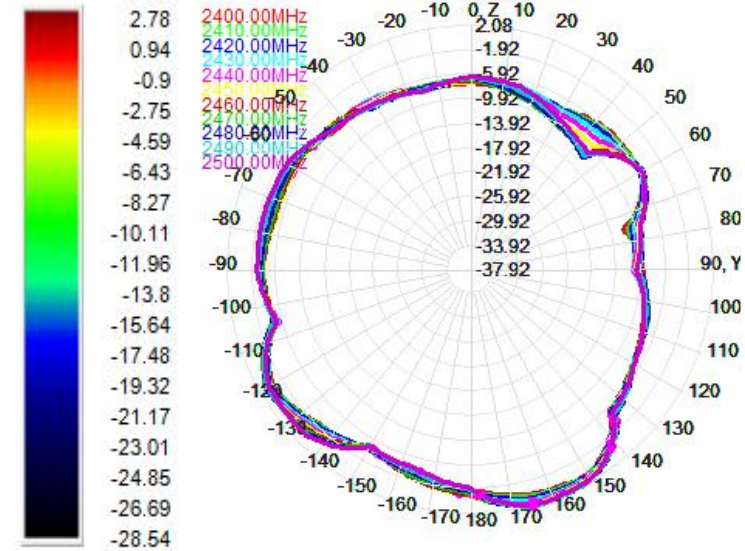
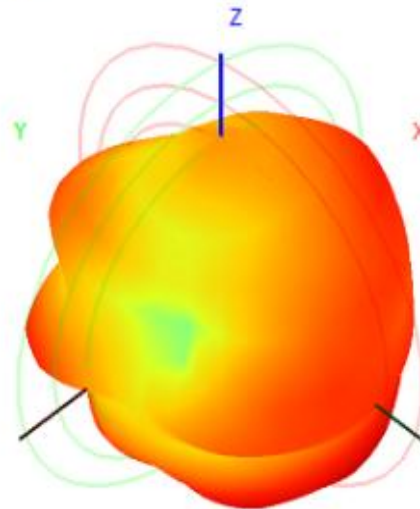
4.3 2D Pattern—BTANT

L

2480.0MHz Total, Eff: 34.5%



Back View



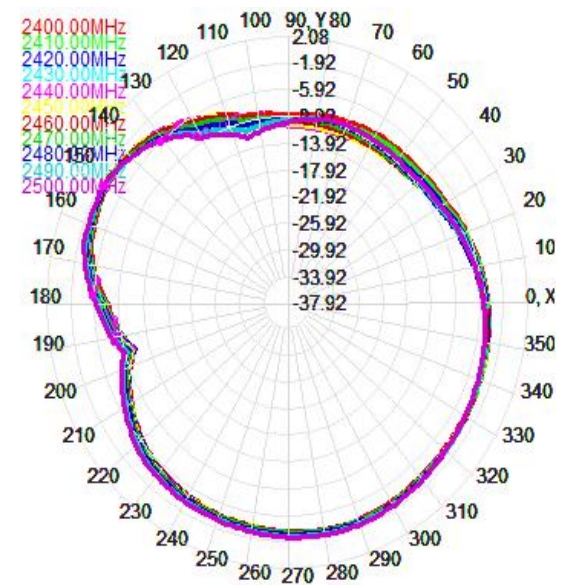
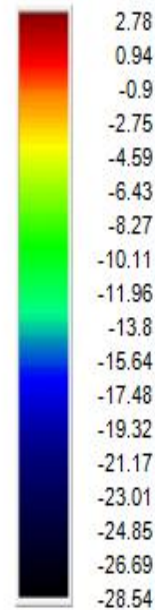
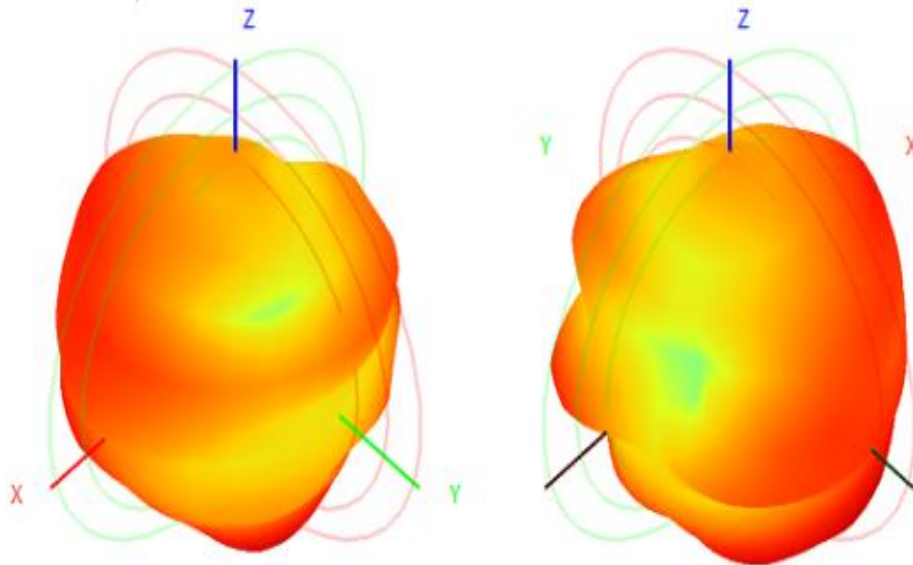
4. Test Result

4.3 2D Pattern—BTANT

L

2480.0MHz Total, Eff: 34.5%

Back View



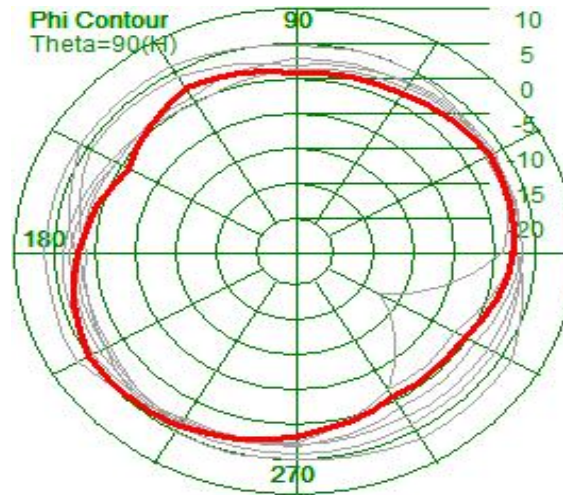
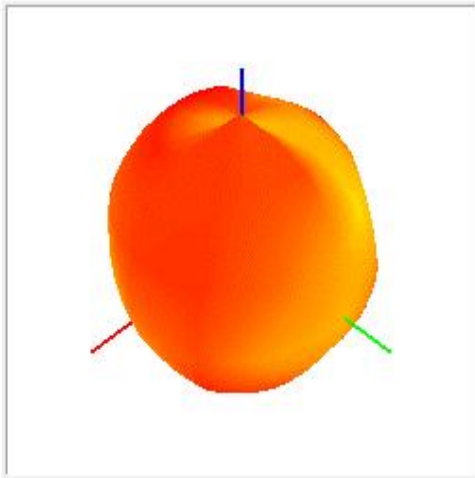
4.5 OTA Data

Test Equipment:	R&S CMW500		
Test Condition:	2 D chamber		
Band	Channel	TRP(dBm)	TIS(dBm)
BT-L	0	1.61	-86.55
	39	2.50	-87.76
	78	2.89	-87.85

4. Test Result

4.4 2D Pattern_____ **BTANT**

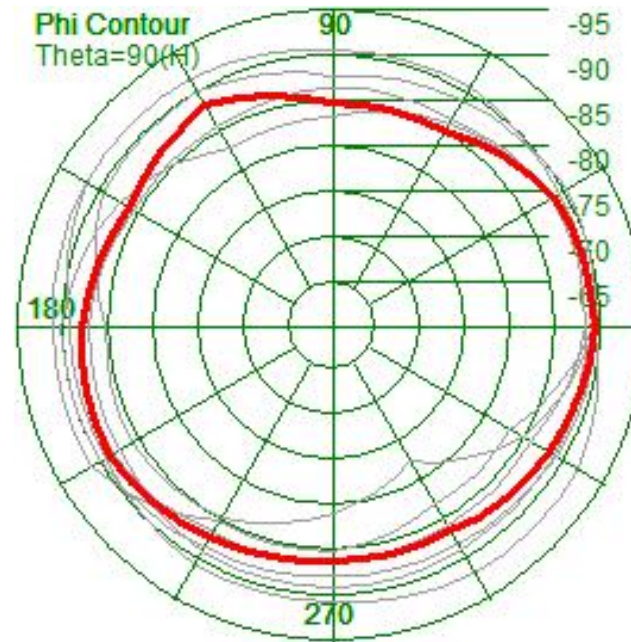
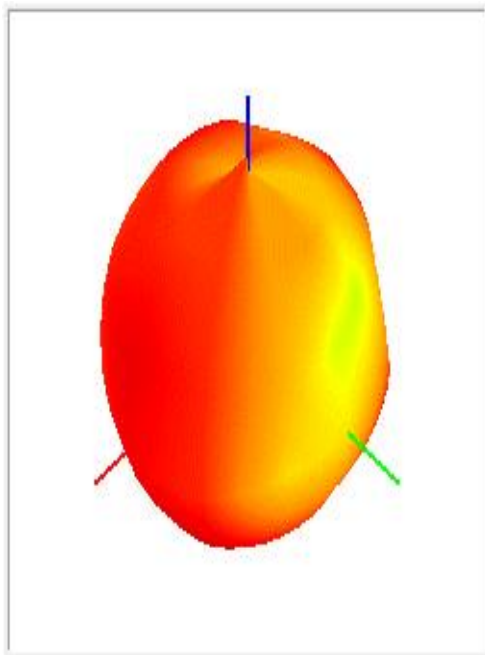
TRP



4. Test Result

4.4 2D Pattern_____ **BTANT**

TIS



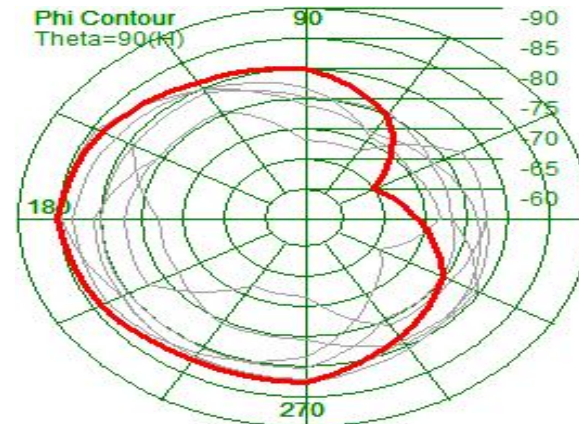
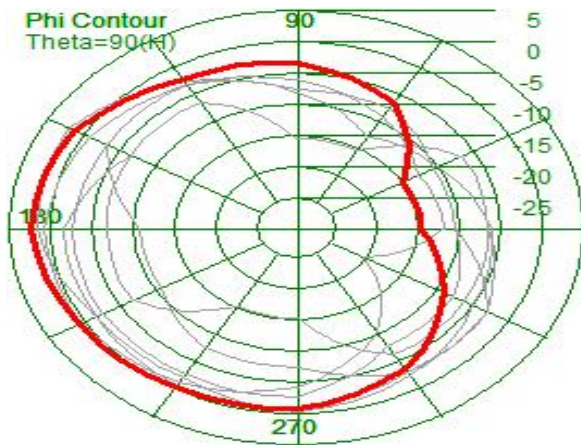
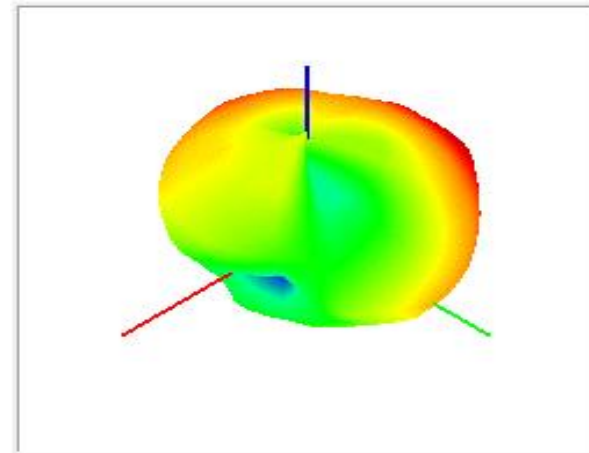
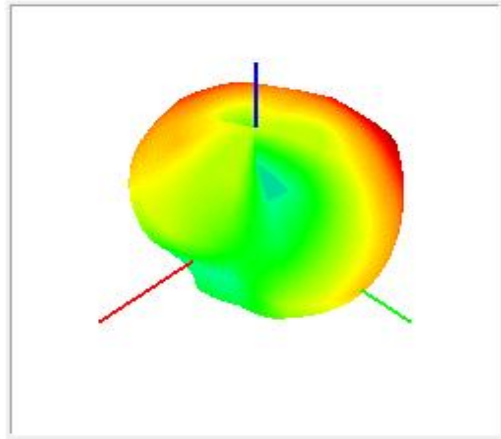
4.5 OTA Data

Simulated head data

Test Equipment:	R&S CMW500		
Test Condition:	2 D chamber		
Band	Channel	TRP(dBm)	TIS(dBm)
BT-L	0	-3.96	-80.72
	39	-4.07	-81.05
	78	-4.69	-80.94

4. Test Result

4.4 2D Pattern BTANT



4. Test Result

R

4.1 S11 Parameter-VSWR

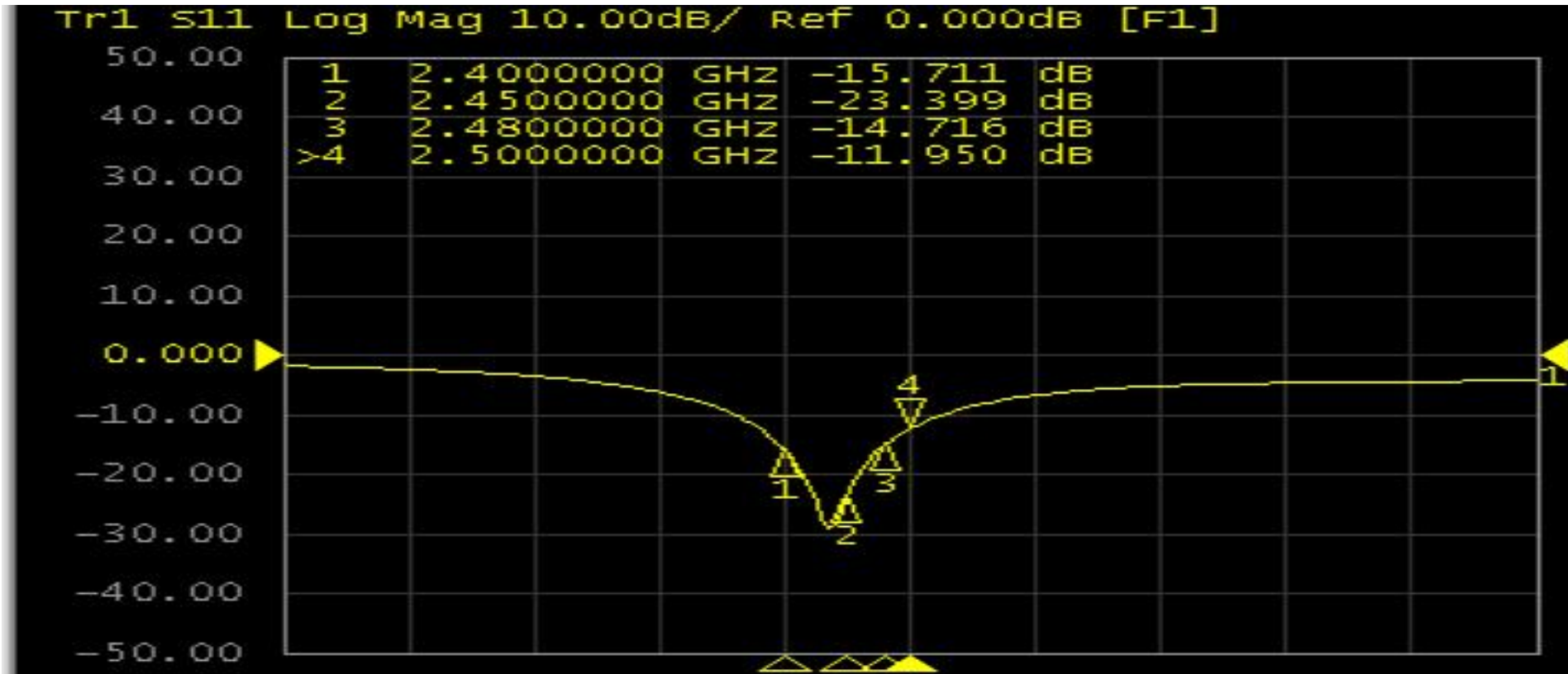


Frequency (MHz)	2400	2450	2480	2500
VSWR	1.39	1.14	1.45	1.67

4. Test Result

R

4.1 S11 Parameter-Log Mag

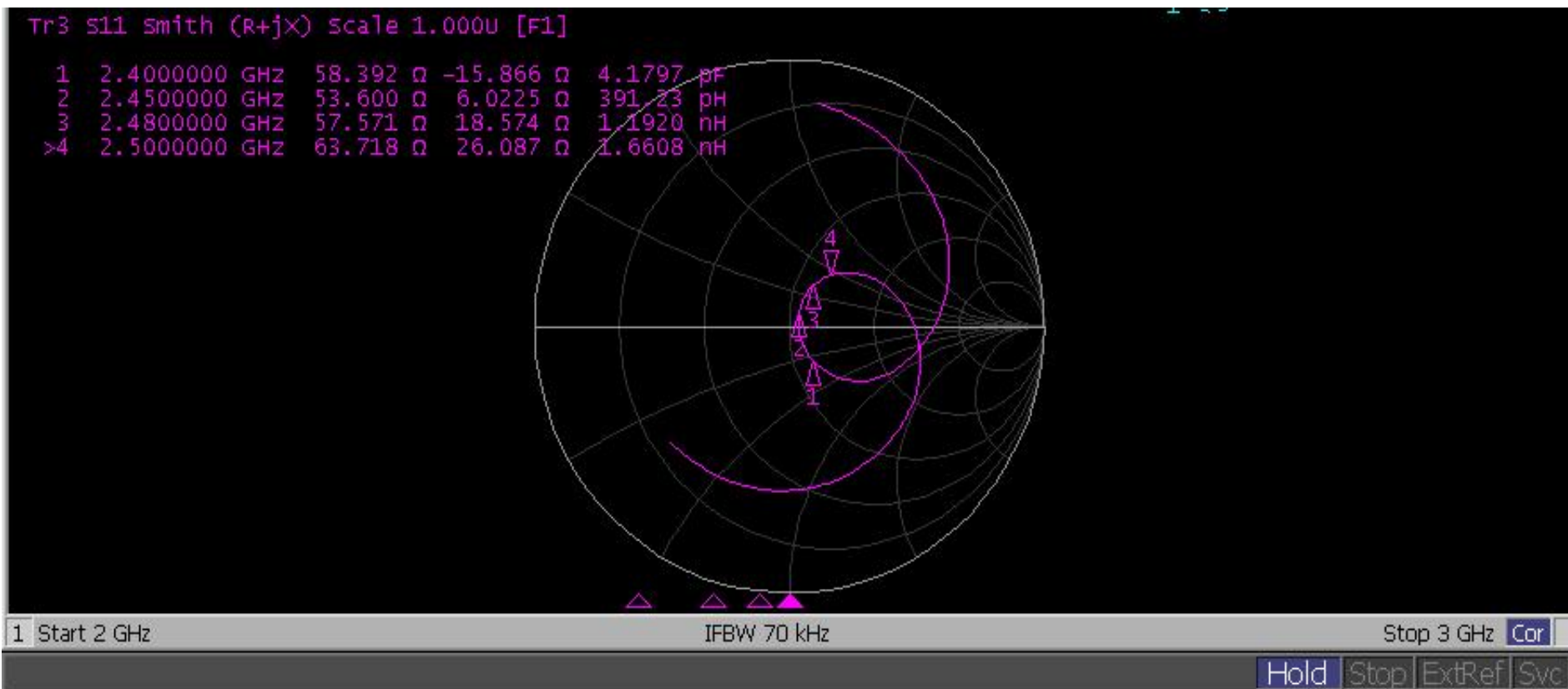


Frequency (MHz)	2400	2450	2480	2500
Log Mag	-15.71	-23.39	-14.71	-11.95

4. Test Result

R

4.1 S11 Parameter-VSWR



Frequency (MHz)	2400	2450	2480	2500
Smi th(Ω)	58.39	53.60	57.57	63.71

4. Test Result

4.2 Gain & Efficiency—**ANT**

R

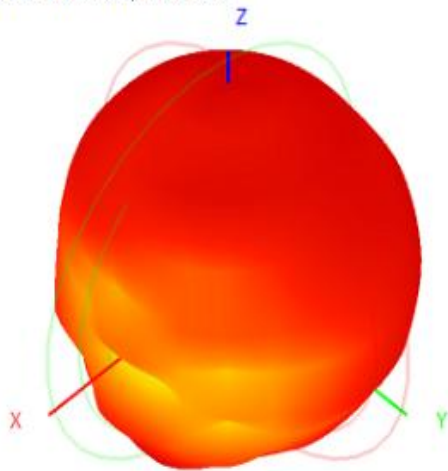
Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	28.23 %	0.35
2410	29.59 %	0.89
2420	29.88 %	0.90
2430	30.08 %	0.91
2440	30.19 %	1.37
2450	31.14 %	1.35
2460	32.11 %	1.51
2470	33.03 %	1.68
2480	32.10 %	1.46

4. Test Result

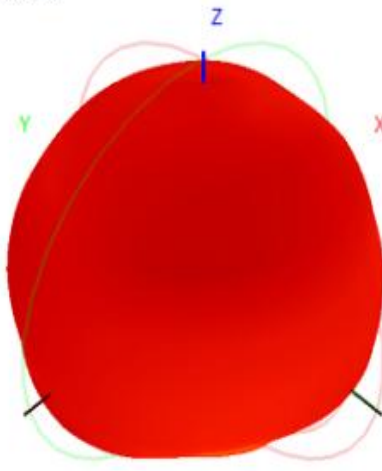
4.3 2D Pattern—**BTANT**

R

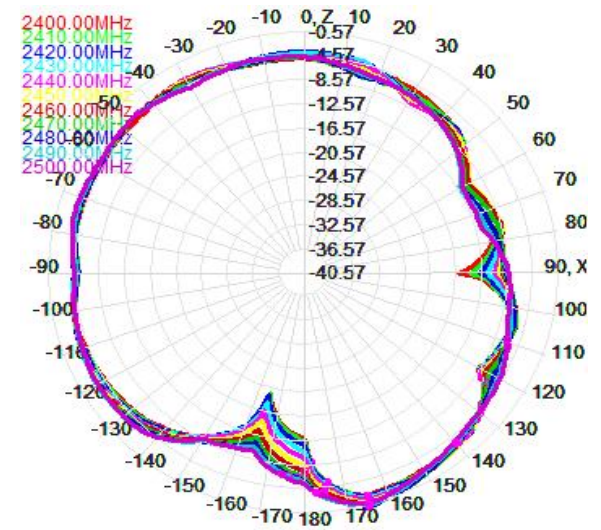
2400.0MHz Total, Eff: 28.2%



Back View



0.35
-2.94
-4.79
-6.63
-8.47
-10.31
-12.15
-14
-15.84
-17.68
-19.52
-21.36
-23.21
-25.05
-26.89
-28.73
-30.57
-32.42

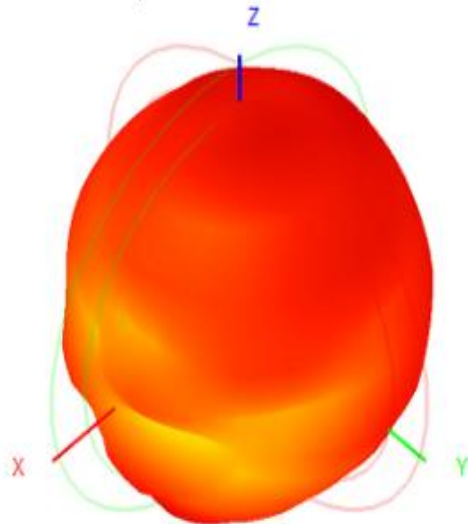


4. Test Result

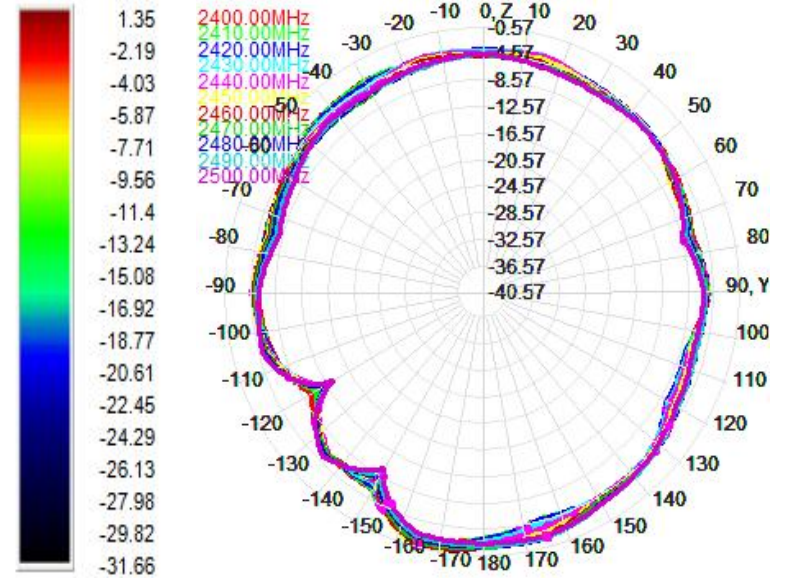
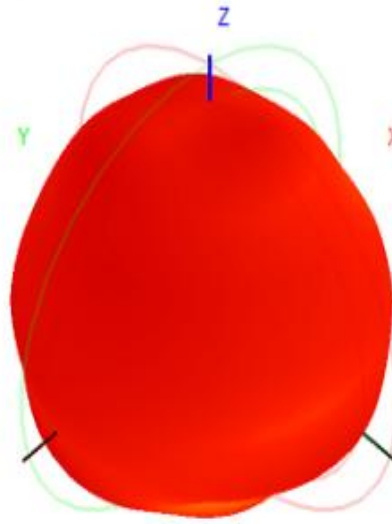
4.3 2D Pattern—BTANT

R

2450.0MHz Total, Eff: 31.1%



Back View



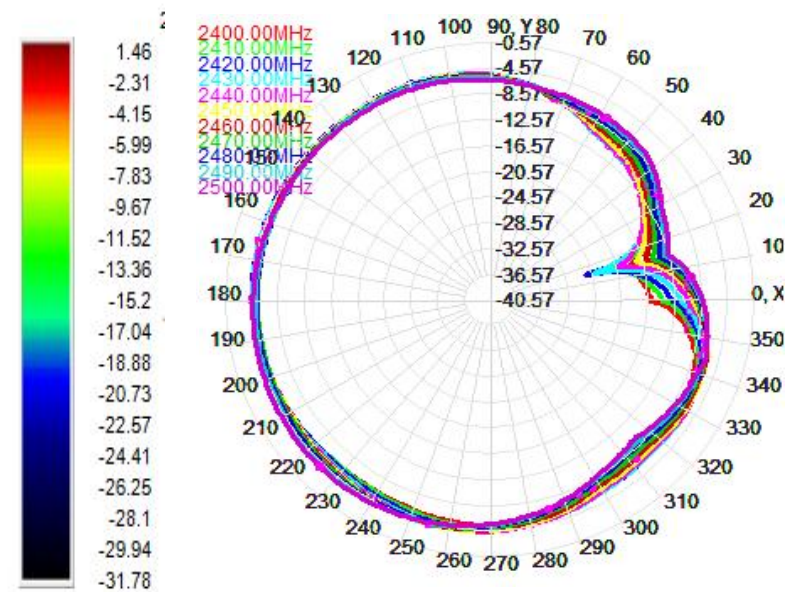
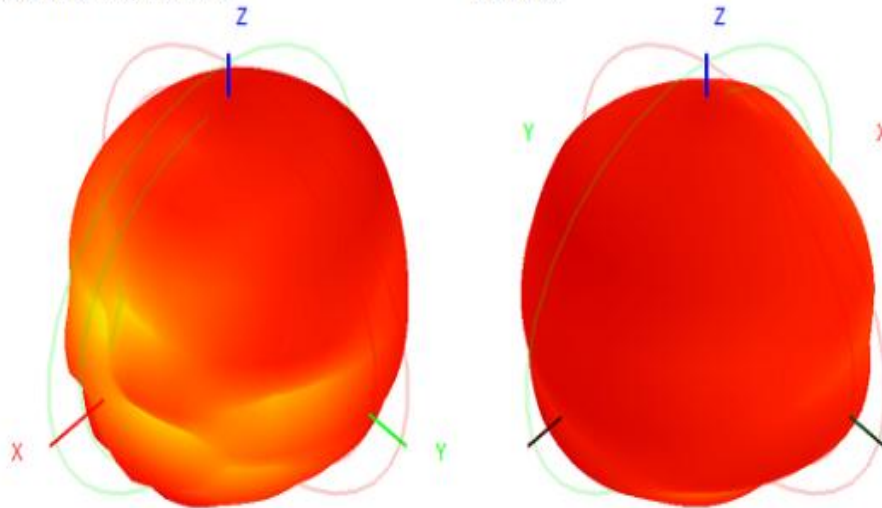
4. Test Result

4.3 2D Pattern——BTANT

R

2480.0MHz Total, Eff: 30.1%

Back View



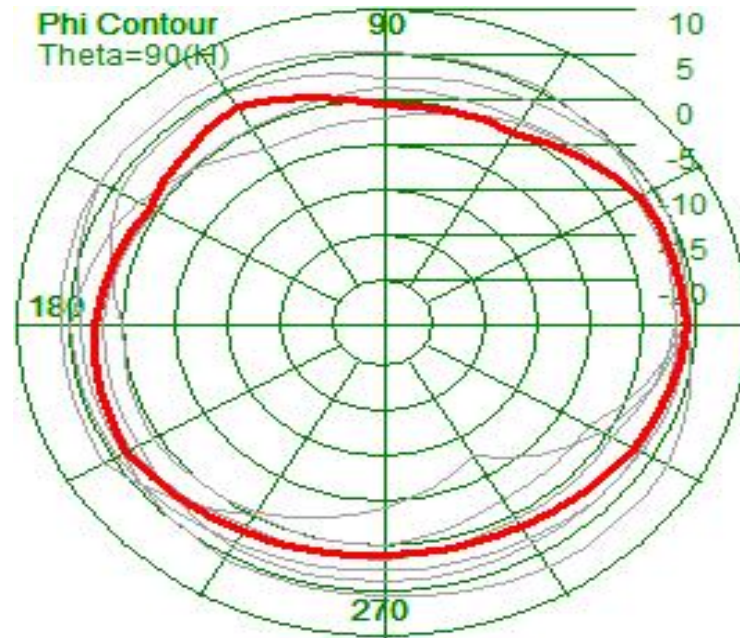
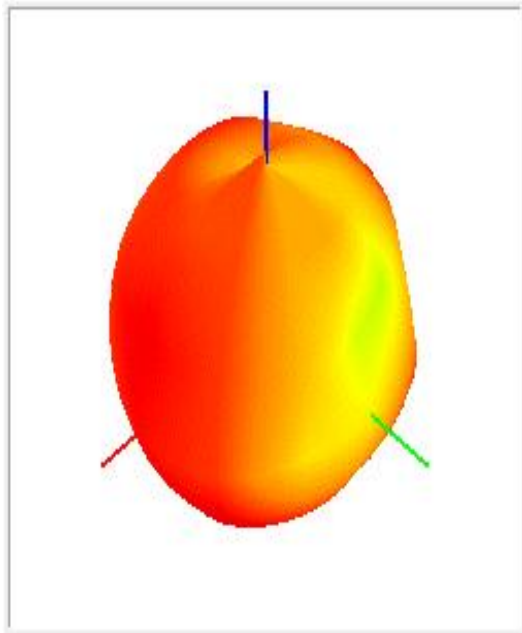
4.5 OTA Data

Test Equipment:	R&S CMW500		
Test Condition:	2 D chamber		
Band	Channel	TRP(dBm)	TIS(dBm)
BT-R	0	2.17	-86.83
	39	2.51	-87.92
	78	1.48	-86.47

4. Test Result

4.4 2D Pattern_____ **BTANT**

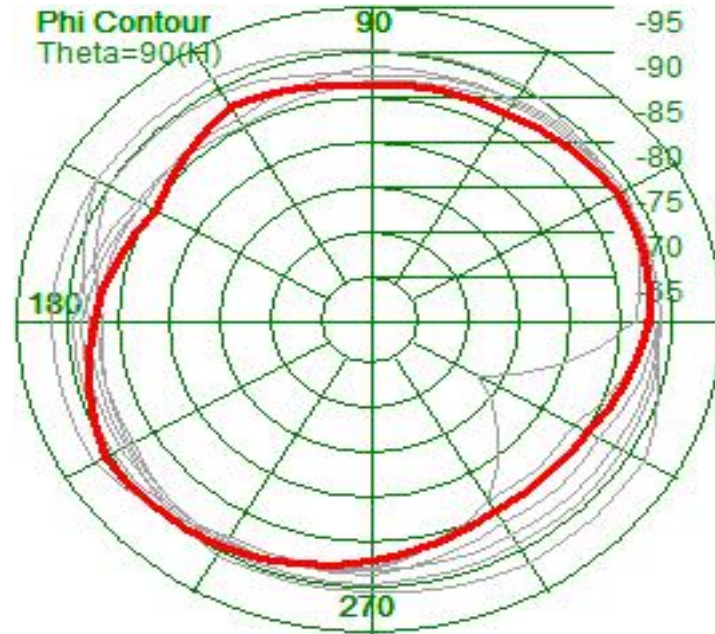
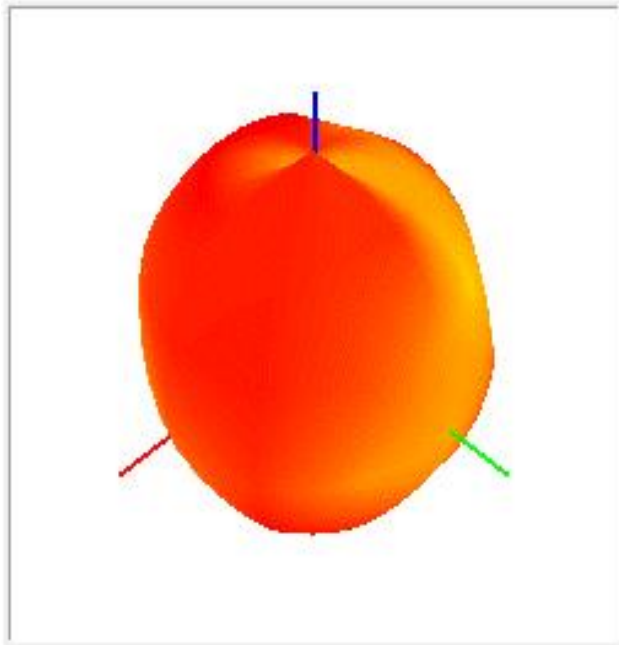
TRP



4. Test Result

4.4 2D Pattern_____ **BTANT**

TIS



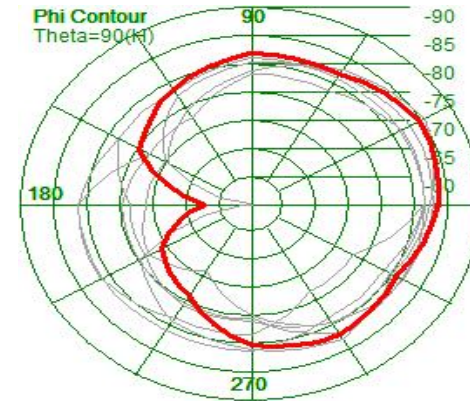
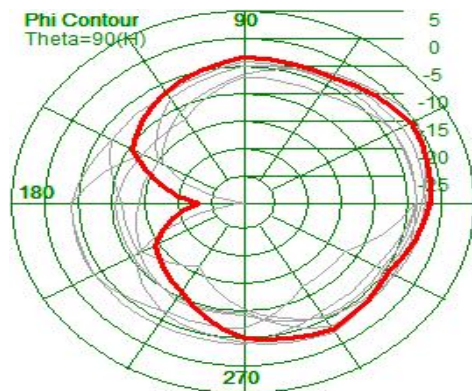
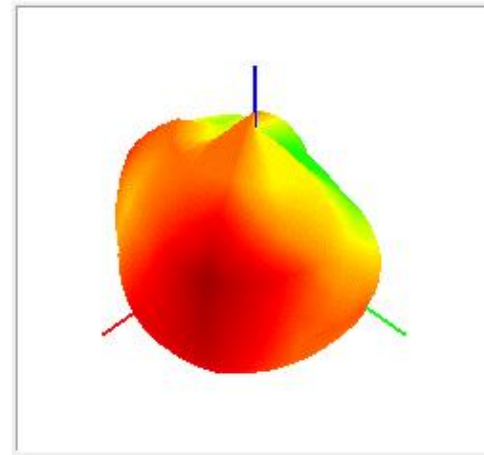
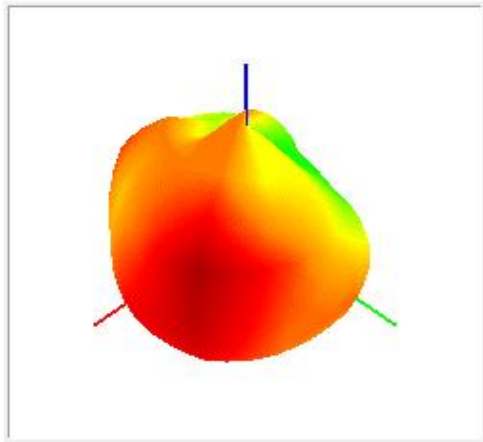
4.5 OTA Data

Simulated head data

Test Equipment:	R&S CMW500		
Test Condition:	2 D chamber		
Band	Channel	TRP(dBm)	TIS(dBm)
BT-R	0	-4.33	-79.95
	39	-4.70	-79.55
	78	-5.67	-79.37

4. Test Result

4.4 2D Pattern_____BTANT



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Test Equipment:	R&S CMW500		
Test Condition:	2 D chamber		
Band	Channel	TRP(dBm)	TIS(dBm)
BT-L	0	8.63	-89
	39	9.11	-89
	78	9.14	-90
BT-R	0	8.7	-90
	39	9.16	-89
	78	9.24	-89

Thank you!