

E12 Antenna Test Report

Customer	
Project	E12
Antenna Revision	A1
Product Description	onboard
Product No	
DATE	2025. 02. 25

Product Overview & Dimension

Front



Purpose

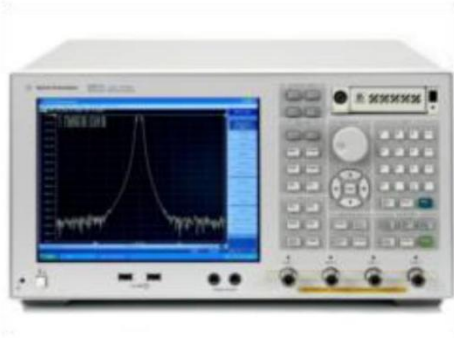
This report is to measure the performance of BT antenna for E12. The antenna operating frequency at 2.4~2.5GHz, All test data are showed as below.

Content

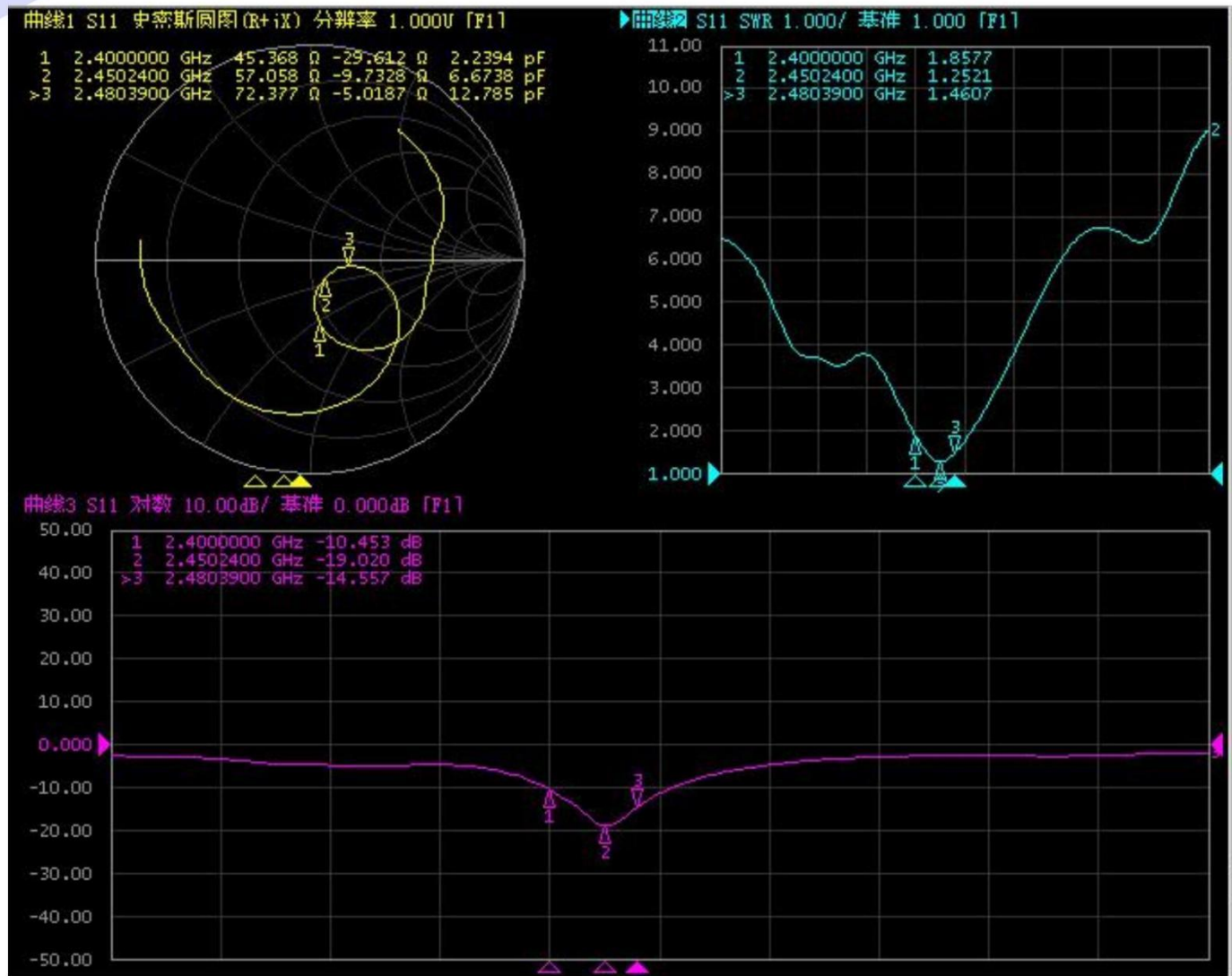
1. Product Overview & Dimension
2. Test system
3. Antenna Matching Network
4. Test Result
 - 4.1 S11 Parameter
 - 4.2 Test coordinate
 - 4.3 2D Pattern
 - 4.4 OTA Data
 - 4.5 BT Boot measured
5. Antenna Assembly & environmental processing

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



S11-(ANT)-L/R



Test Result

Gain & Efficiency—- ANT(L)

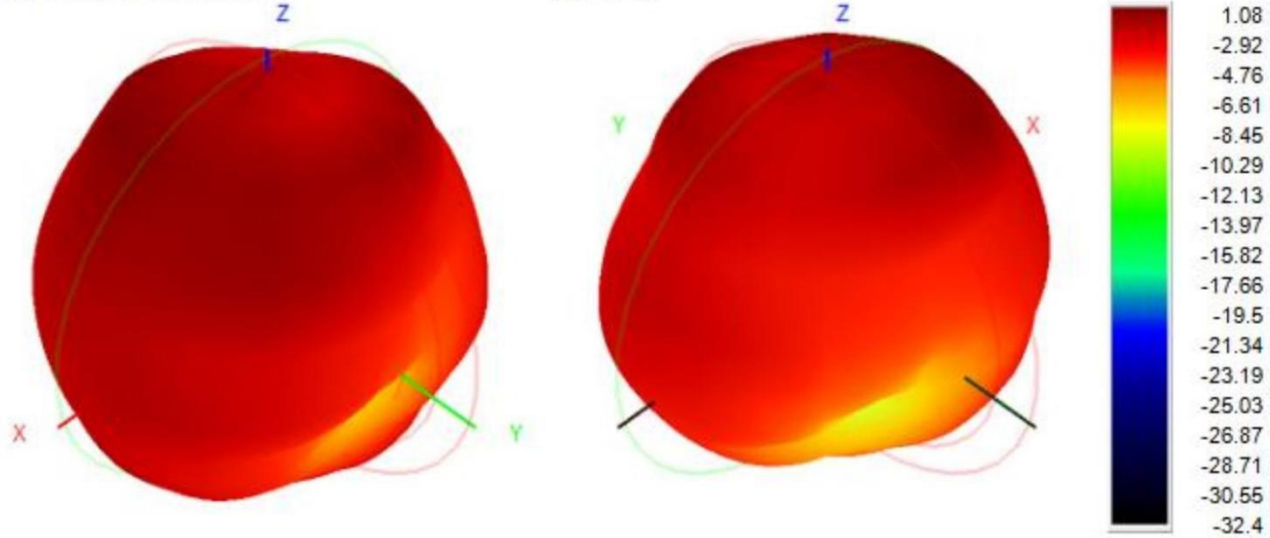
Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	25.88	1.08
2410	27.61	0.88
2420	28.32	0.59
2430	29.66	0.38
2440	31.91	0.47
2450	32.40	1.26
2460	30.92	1.42
2470	29.45	1.11
2480	28.47	1.34
2490	27.18	0.78
2500	26.45	1.38

Test Result

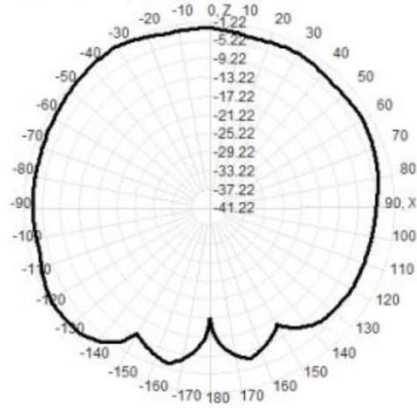
2D&3D — ANT

2400.0MHz H+V, Eff: 25.9%

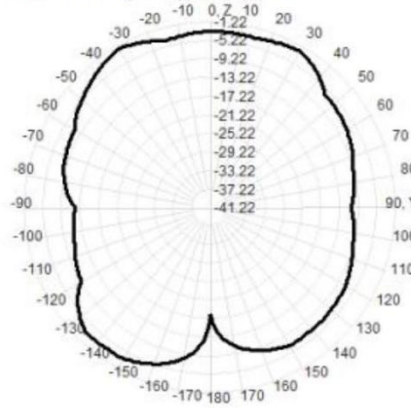
Back View



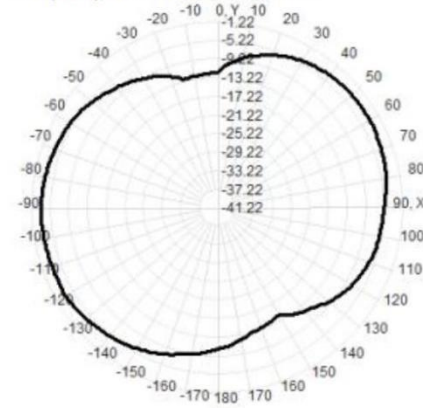
2400.0MHz Total(E1-XZ), Max= -1.22dBi



2400.0MHz Total(E2-YZ), Max= -1.83dBi



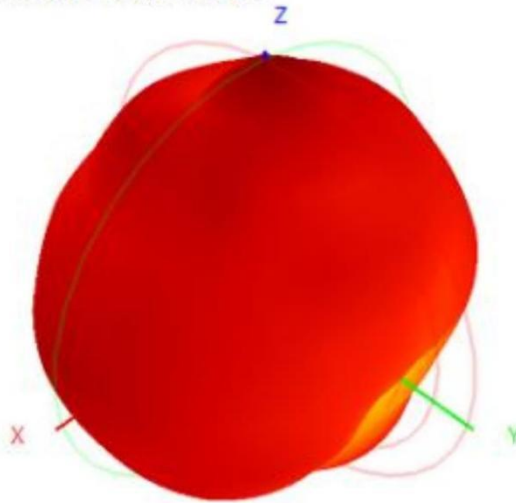
Total(H-XY), Max= -3.21dBi, CirD=11.52



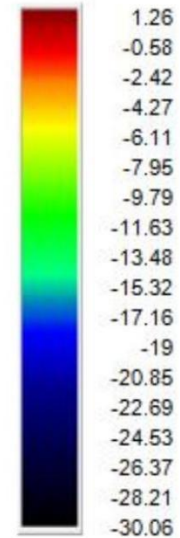
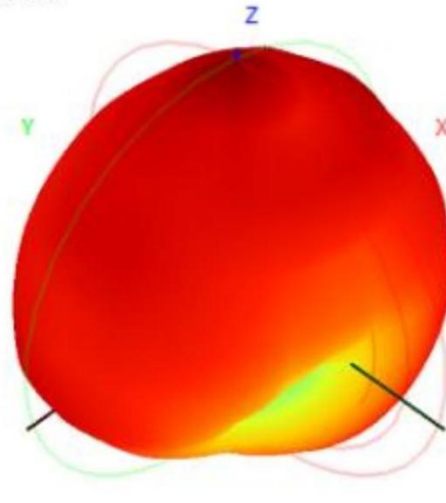
Test Result

2D&3D — ANT

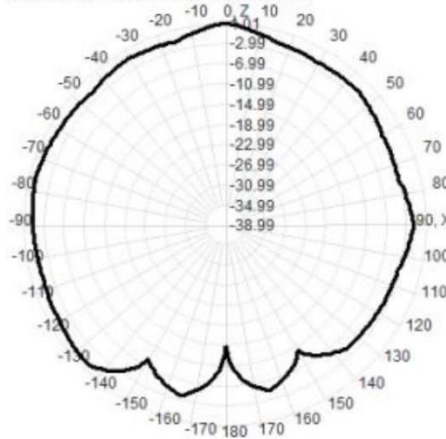
2450.0MHz H+V, Eff: 32.4%



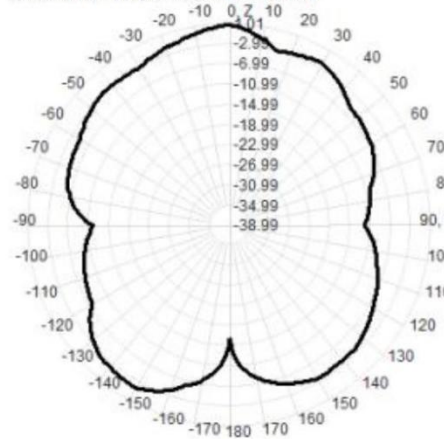
Back View



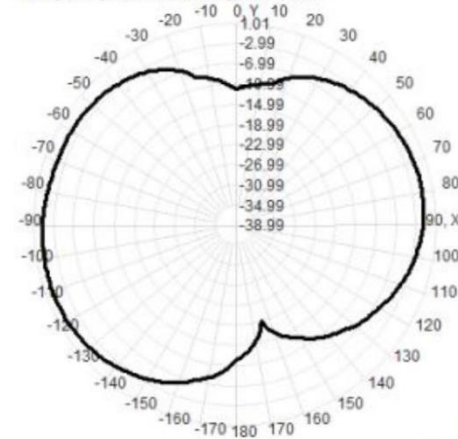
2450.0MHz Total(E1-XZ), Max= 1.01dBi



2450.0MHz Total(E2-YZ), Max= 0.76dBi



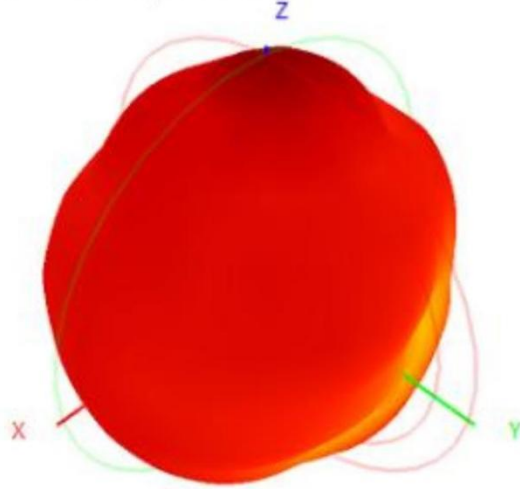
Total(H-XY), Max= -0.55dBi, CirD=18.83



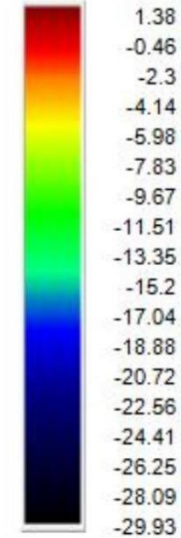
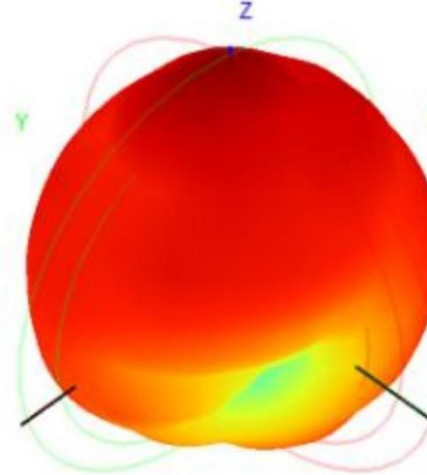
Test Result

2D&3D — ANT

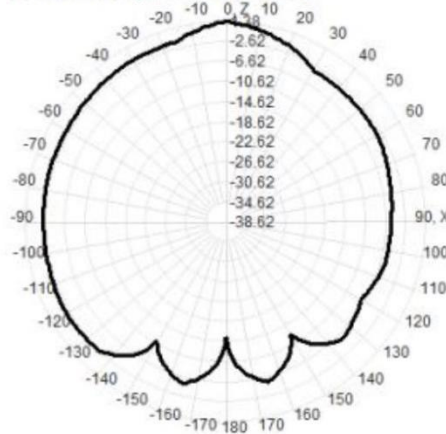
2500.0MHz H+V, Eff: 26.4%



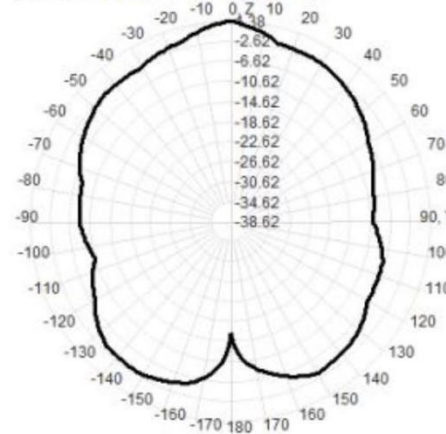
Back View



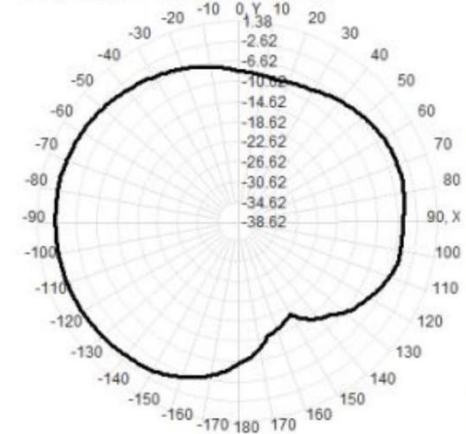
2500.0MHz Total(E1-XZ), Max= 1.31dBi



2500.0MHz Total(E2-YZ), Max= 1.38dBi



Total(H-XY), Max= -2.24dBi, CirD=15.13



Thanks for your comment!
