



**South
star**

Shenzhen South Star Technology Co. Ltd.
Shanghai South Star Technology Co. Ltd.

SPECIFICATION FOR APPROVAL

CUSTOMER :	小蚁科技有限公司
CS P/N :	
PART NAME :	D11
PART NO. :	2.4G RF CON
NDX NO. :	
REV. :	

	MANUFACTURERR SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY:		
DATE:		

Shenzhen southstar technology.co.,LTD

深圳市南斗星科技有限公司

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PCB Antenna Assembly

Specification(With housing)

1.Electrical Properties

1.1 Frequency range.....2.412G~2.482G

1.2 Impedance.....50Ω Norminal

1.3 VSWR.....<2

1.4 Radiation.....Omni

1.5 Gain(Peak).....3dBi

1.6 Polarization.....Linear

1.7 Admitted Power.....1W

1.8 Cable.....Φ1.13 cable

1.9 Connector.....MHF

2.Physical Properties

2.1 Working Temperature.....-20°C~+65°C

2.2 Storage Temperature.....-30°C~+75°C



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Antenna Design for D11

Document Number	NDX-170828
1st Released Date	28/08/2017
Author	Huiping Feng
Review By	Zhongyi Zhao

Specification

Rough description	2.4G ANT
Item	Initial Specification
Dimensions	44mm*6.1mm*0.8mm
Impedance	50Ω Norminal
Test environment	With housing
Spectrum	None
Frequecy range	2.412G-2.482G
Antenna Type	Dipole
VSWR	<2
Gain(Peak)	3dBi
Radiation	Omni
Polarization	Linear
Rad. efficiency	≥50%
Power	1W
Connector Type	I-PEX
Cable Type	Φ1.13 coaxial cable
Cable Length	36mm;
Isolation	None

1. Antennas' setup and environment With housing

Ant 2.4G





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Ant 2.4G

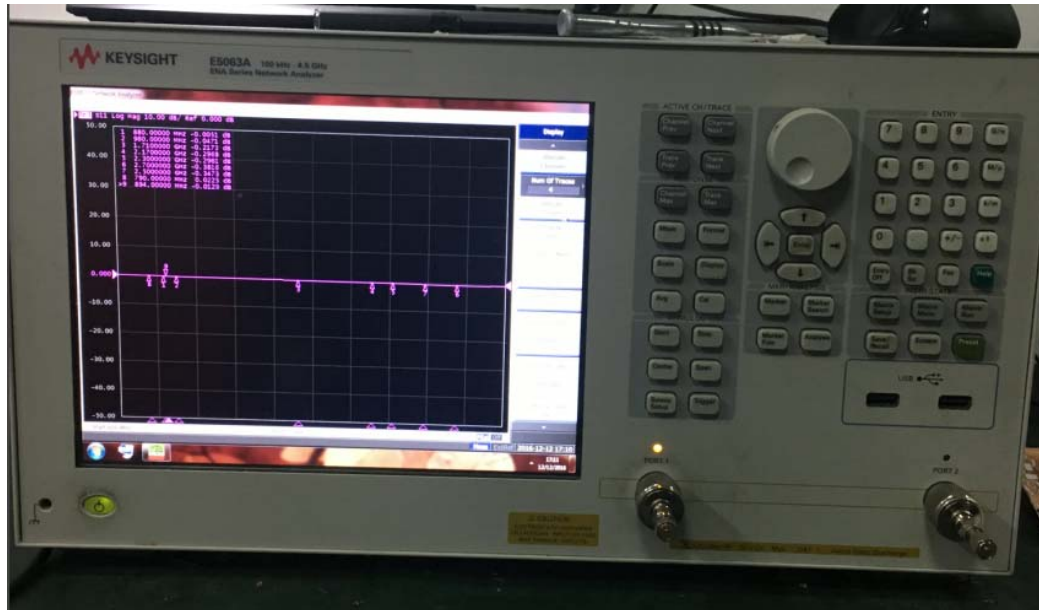




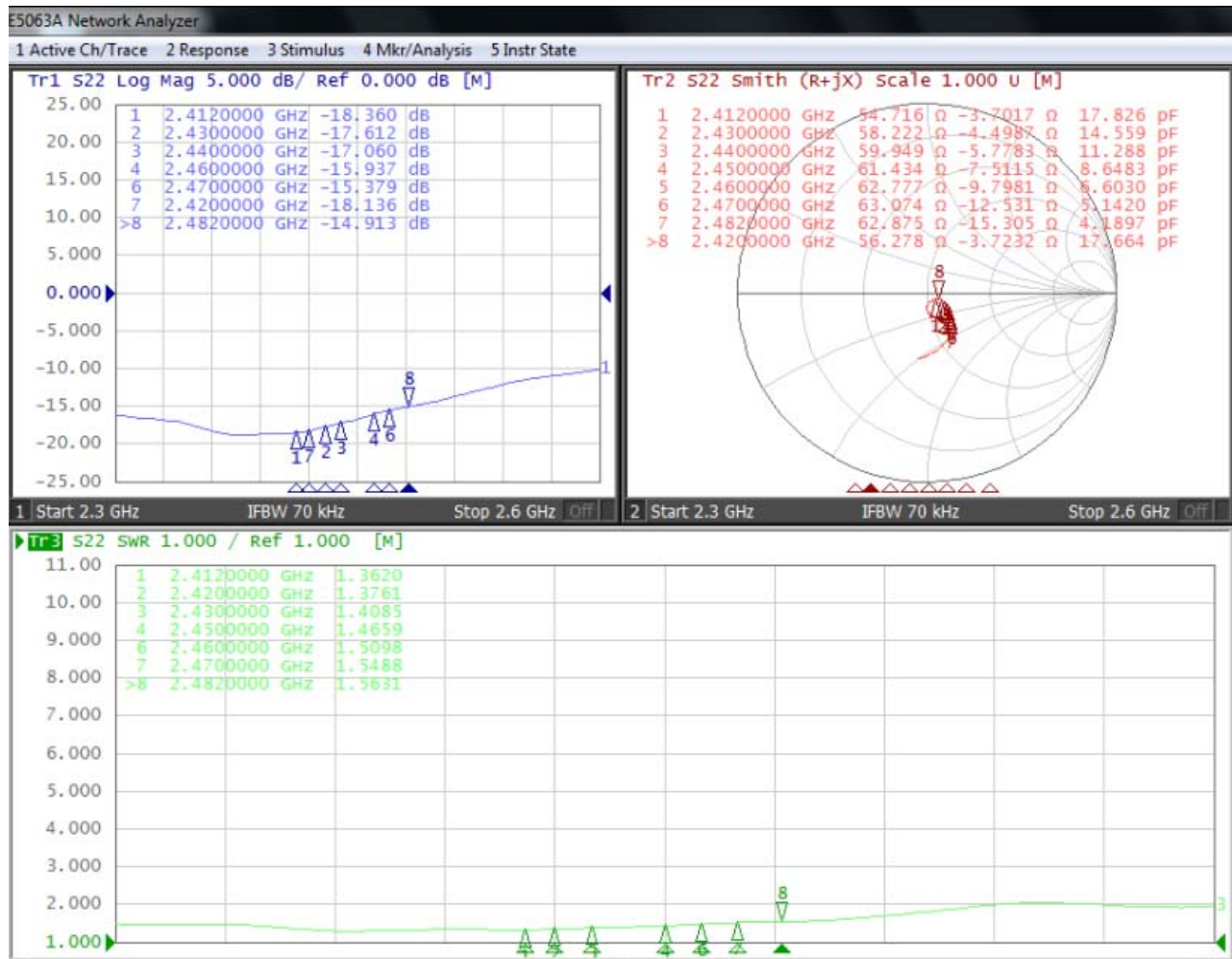
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2. Analyzer Measurement

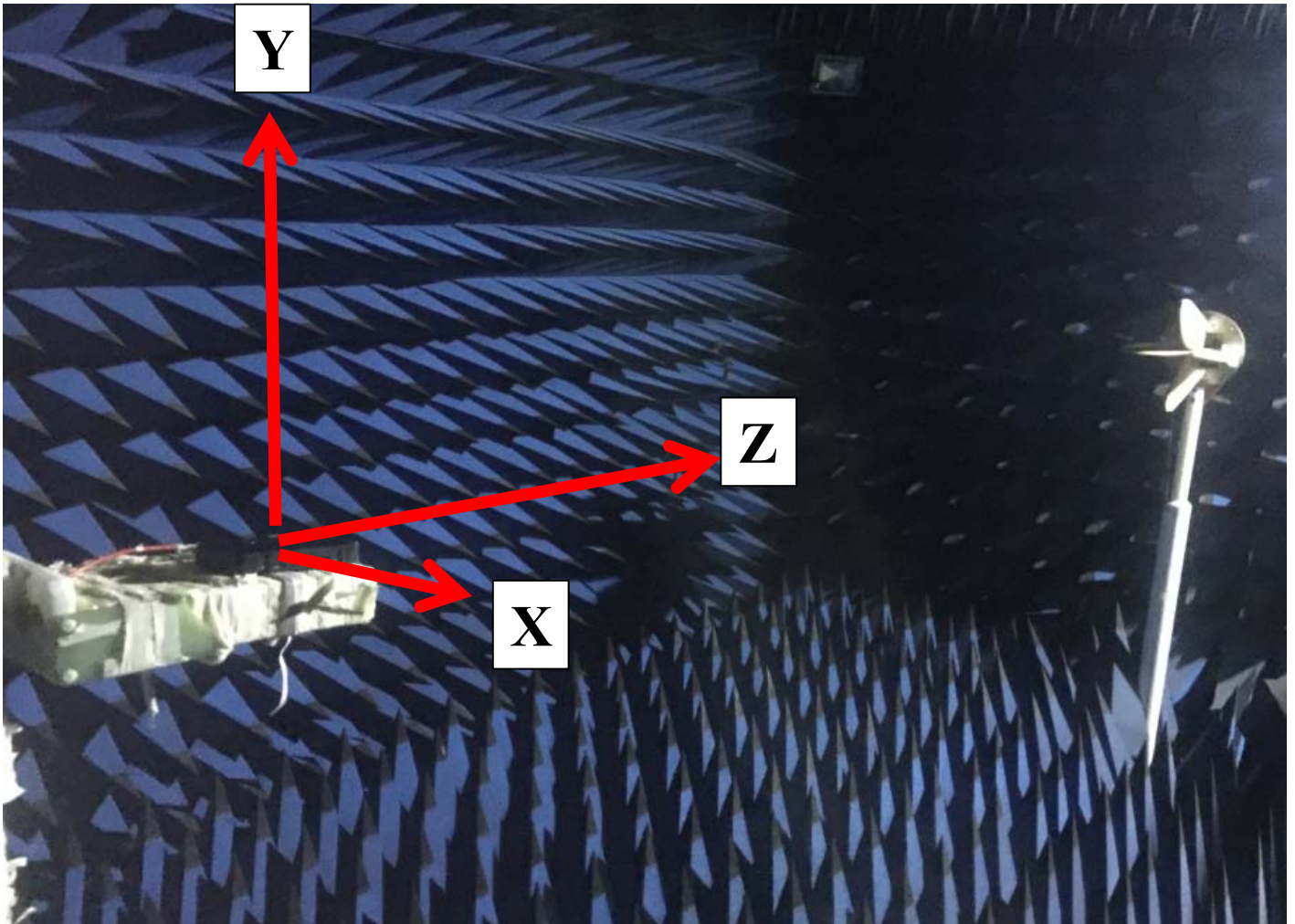


2.1 S11 test results



3. Gain & Patterns test results

3.1 Measurement setting

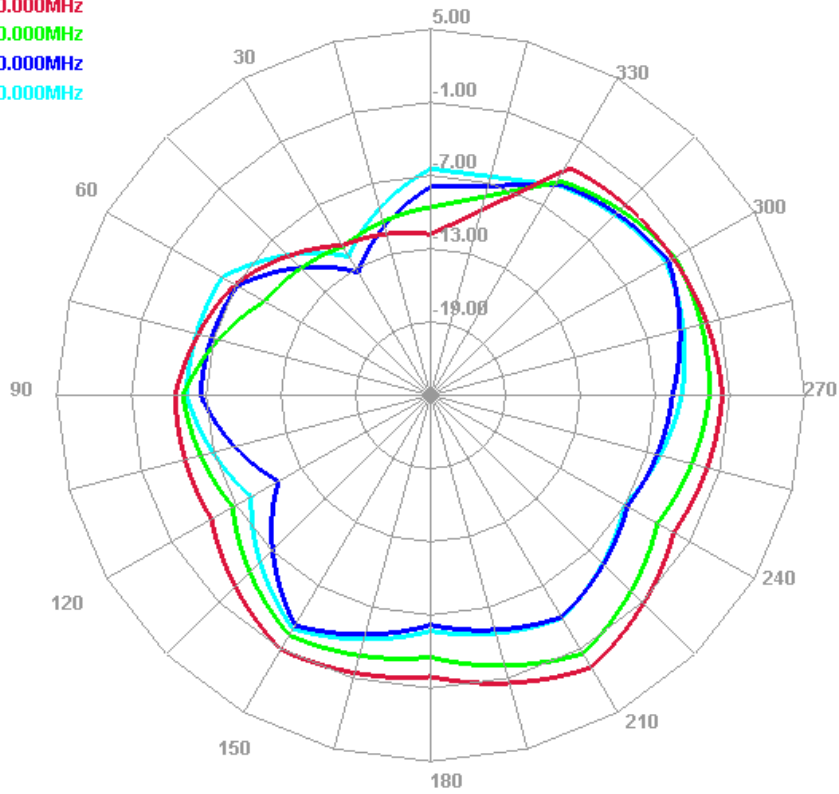




3.2 2D Patterns

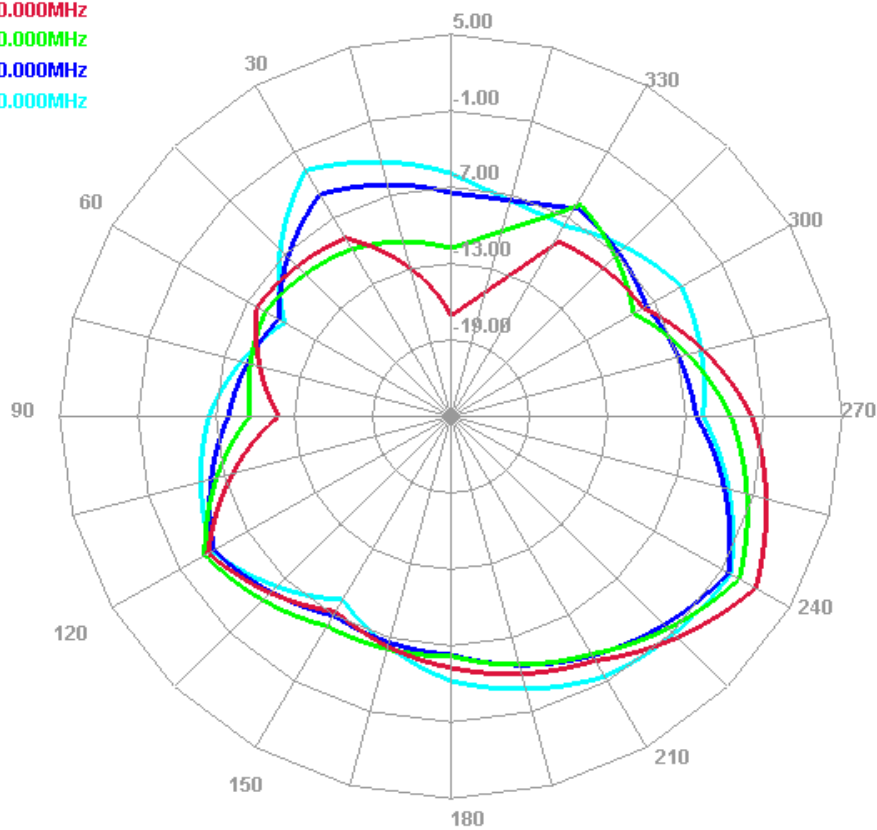
Horizontal

2410.000MHz
2440.000MHz
2470.000MHz
2490.000MHz



E1 Face

2410.000MHz
2440.000MHz
2470.000MHz
2490.000MHz



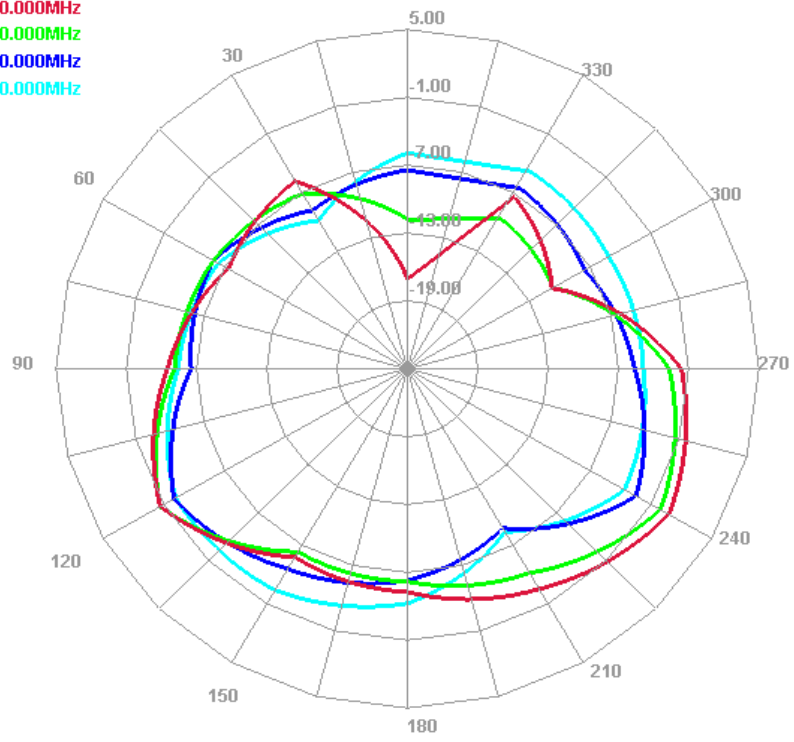


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E2 Face

- 2410.000MHz
- 2440.000MHz
- 2470.000MHz
- 2490.000MHz





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4. Summary

4.1 Impedance, VSWR and LOGMAG

2.4G-1_380.5mm_3dBi antenna					(unit in GHz)
Item \ Frequency	2.412	2.437	2.462	2.472	criteria
Impedance	58.2	58.6	37.7	33.1	50+/-20 ohm
VSWR	1.52	1.27	1.44	1.72	<2
LOGMAG	-13.7	-19.6	-14.9	-11.6	<-10



4.2 3D Peak Gain & Efficiency

Frequency (GHz)	Peak Gain (dBi)	Efficiency (%)
2.412	3.11	62.58
2.437	3.06	60.32
2.462	3.05	57.65
2.472	3.16	56.94