

红点信息科技（深圳）有限公司

REDDOTINFORMATIONTECHNOIOGYSHENZHENCO, LTD

产品规格书

RODUCTSPECIFICATION

客 户 Custom er	
客户编码 Customers part number	
产品料号 ProductMaterialCode	HD. P-47-8-100-IPEX
工作频段 Working Band	2400MHz-2500MHz 5150MHz- 5850MHz
发行日期 Issue Date	2024-9- 4
发行版本 ReleaseVersion	A1

作者 Author	邹 杨 辰
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Contents

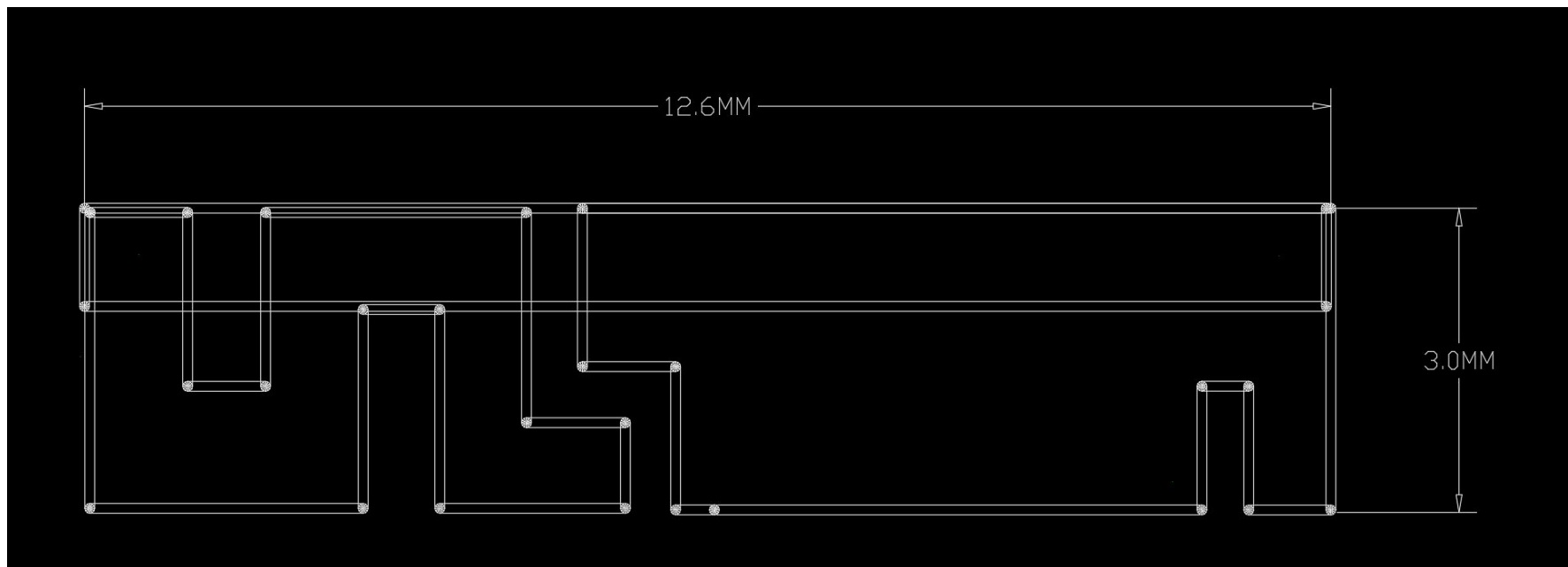
Antenna introducing.....	P3
Antenna useful area.....	P4
Antenna size.....	P5
Antenna electrical properties.....	P6
Antenna S-parameter.....	P7
Antenna chamber structure.....	P8
Antenna total gain and efficiency.....	P9
Radiation Pattern E_PLANE.....	P11
Radiation Pattern H_PLANE.....	P15

Antenna introducing

- ◆ Made by copper pipe material, work in 2.4~2.5&4.9~5.825GHz .
- ◆ Design by dipole antenna theory.
- ◆ High gain, High efficiency, Good port matching.
- ◆ Make wireless equipments better communication.

Antenna useful area

- ◆ Pads, note-book, reader and so on.
- ◆ IP camera, set top box and so on.
- ◆ DVD player, TV and consumer electronics.

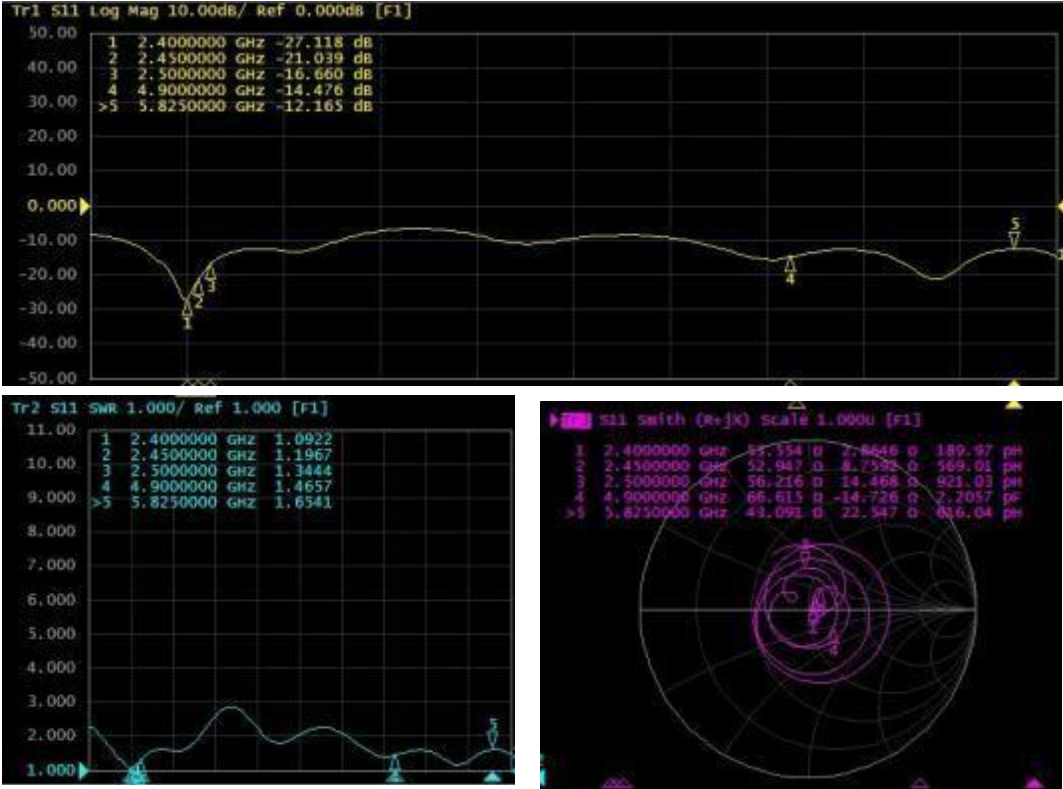


The cable is RF- Φ 1.13 cable with IPEX and length is 100mm

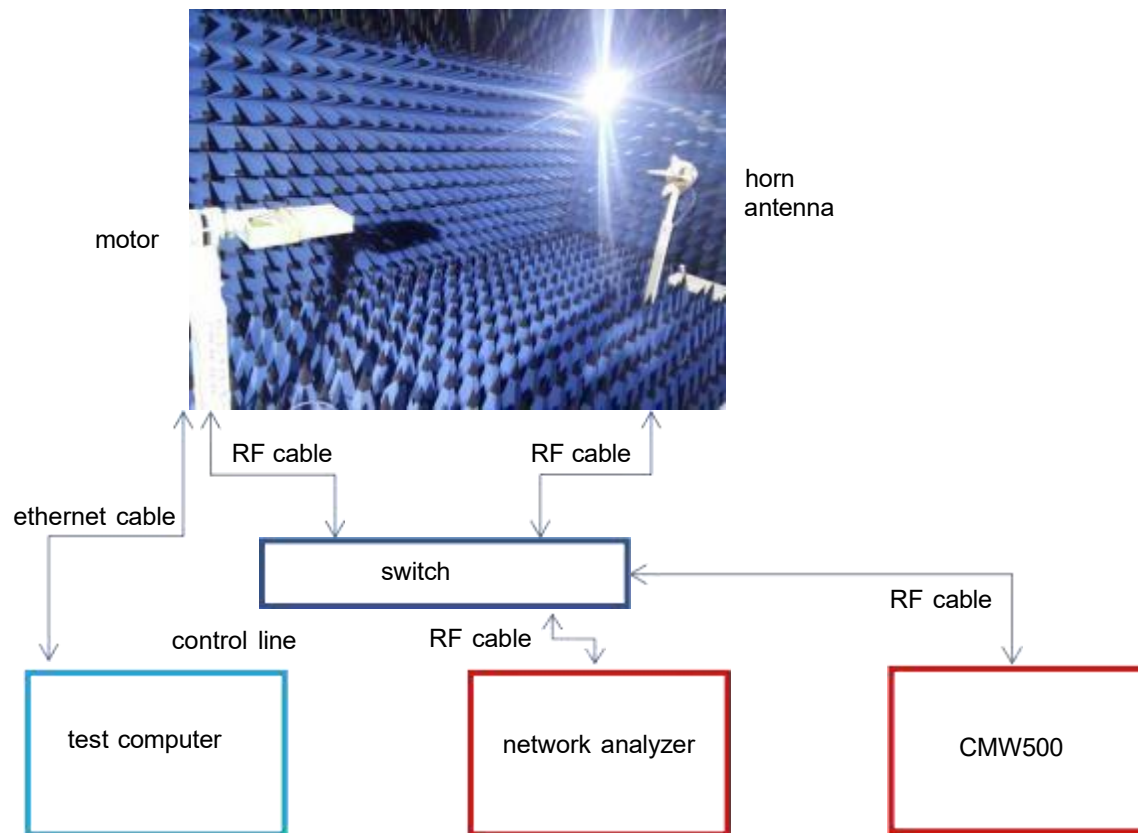
Antenna electrical properties

Frequency	2.4~2.5&4.9~5.825GHz
Impedance	50ohm nominal
V.S.W.R	≤2.0
Return loss	≤-10dB
Radiation	Omni-directional
Gain(Peak)	2.4G:2.5dBi/ 5G:3.0dBi
Polarization	Linear
Admitted Power	5W
Connector	IPEX
Efficiency	2.4G:68%/ 5G:63%
Cable	RF Φ1.13 cable and length is 100mm

Antenna S-parameter

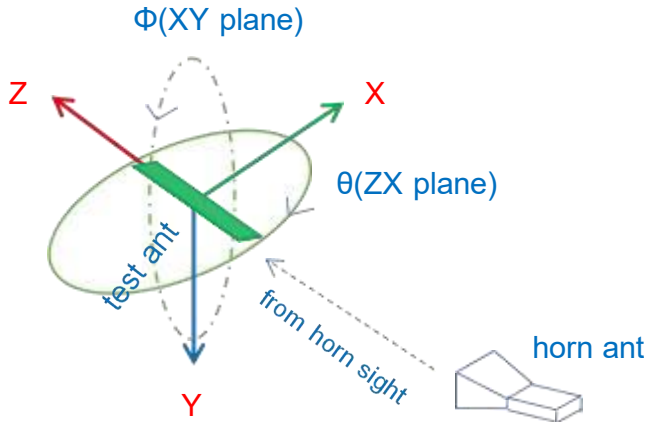
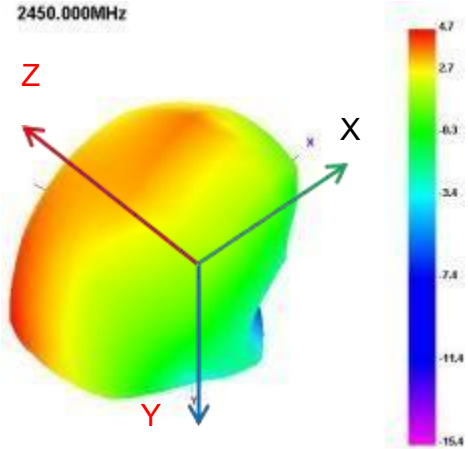


Antenna chamber structure

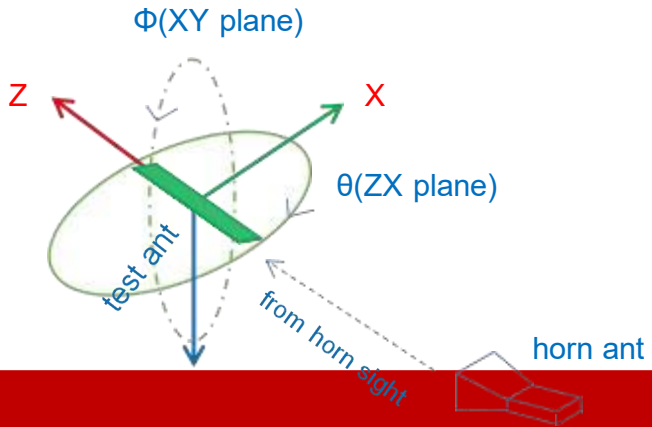
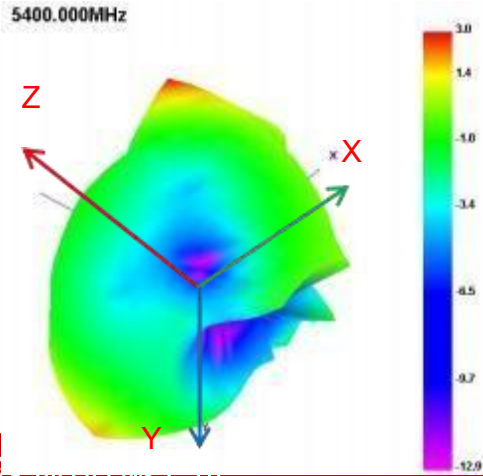


Antenna total gain and efficiency

	Freq. (MHz)	Gain (dBi)	Efficiency (%)
COPPER_PIPE_ANT	2400	3.25	65%
	2450	4.0	68%
	2500	4.2	67%



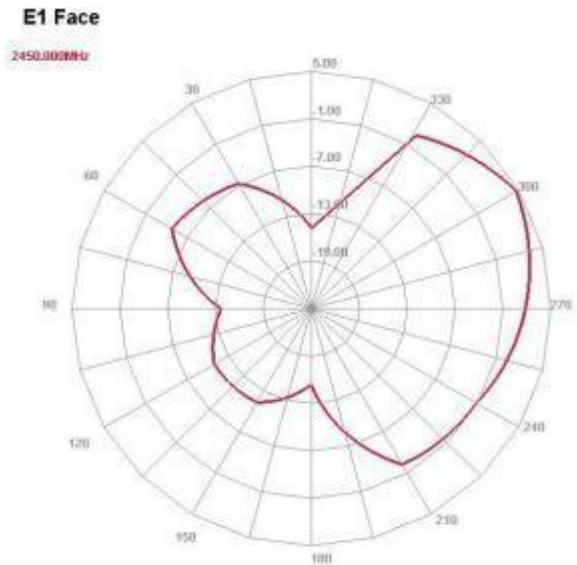
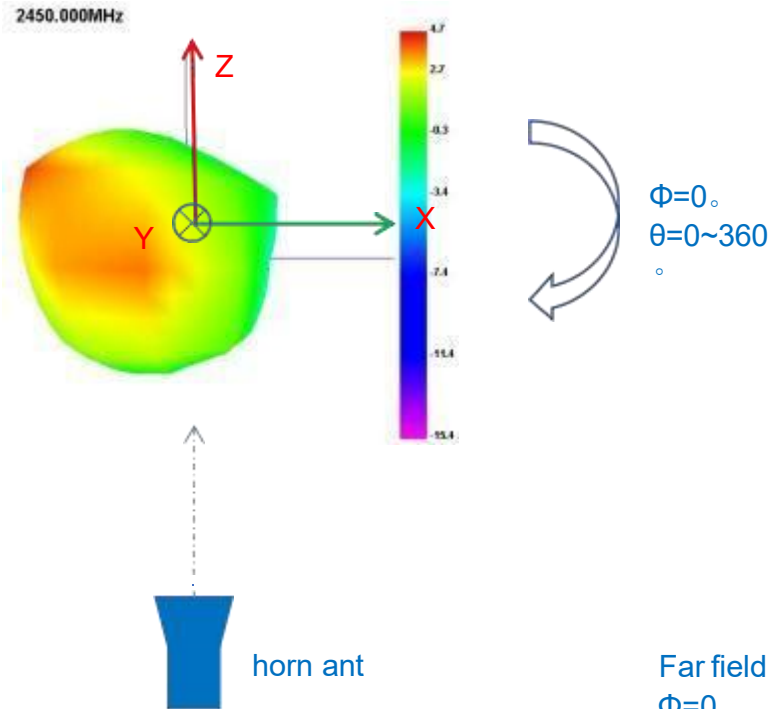
	Freq. (MHz)	Gain (dBi)	Efficiency (%)
PCB_ANT	51 00	2. 7 5	62 %
	54 00	2. 5 6	65 %
	58 20	2. 4	6 2 %



Y

Radiation Pattern E_PLANE

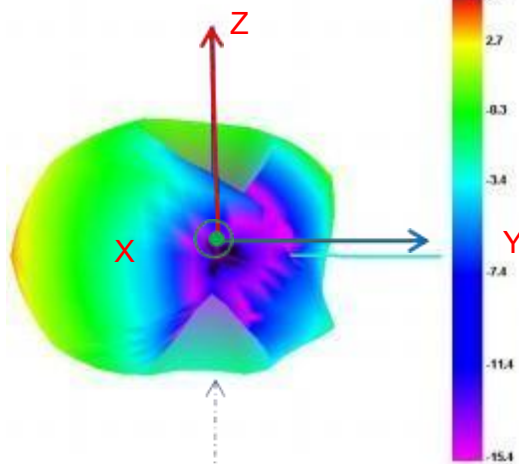
	Freq. (MHz)	Gain (dB)
PCB_ANT	2450	4.0



Far field E1_PLANE
 $\Phi=0^\circ$, ZX plane

	Freq. (MHz)	Gain (dB)
PCB_ANT	2450	4.0

2450.000MHz



$\Phi=90^\circ$
 $\theta=0\sim360^\circ$

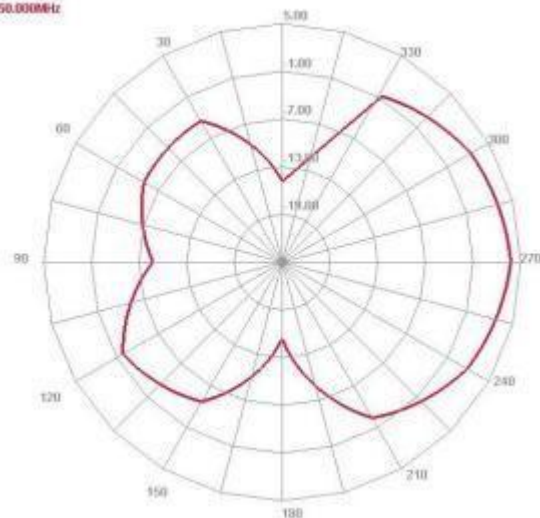


horn ant

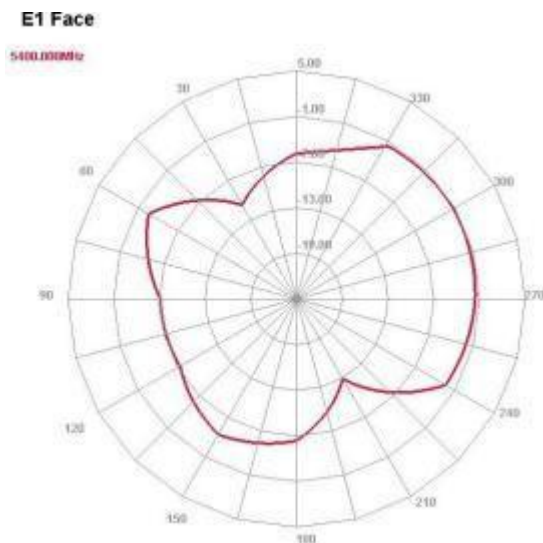
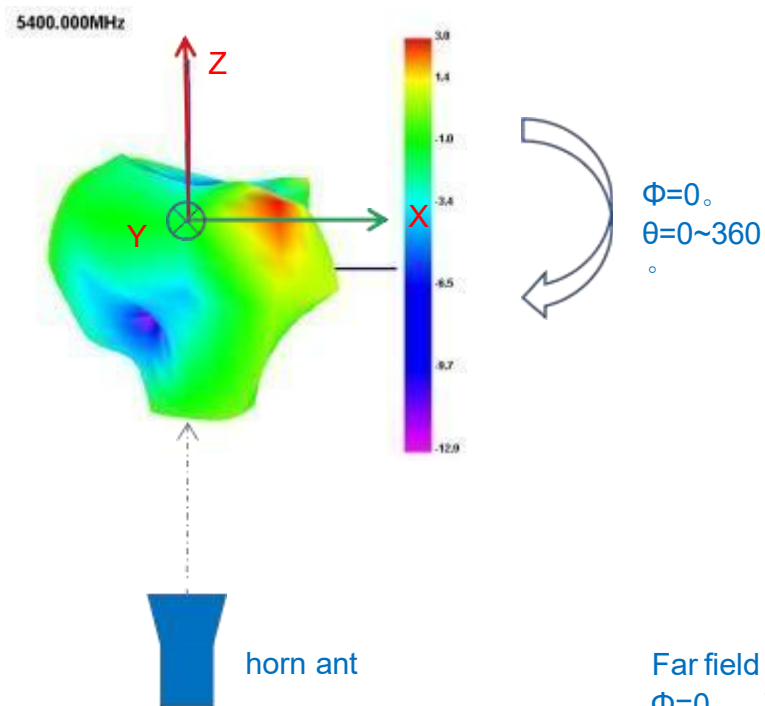
Far field E2_PLANE
 $\Phi=90^\circ$, ZY plane

E2 Face

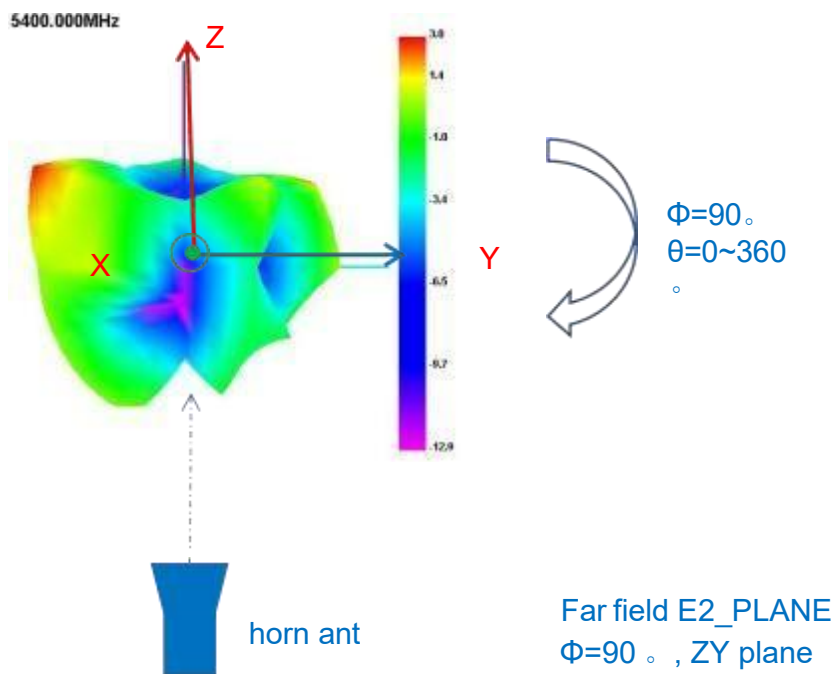
2450.000MHz



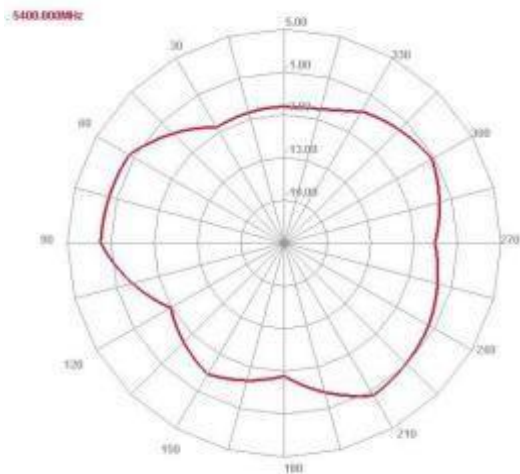
	Freq. (MHz)	Gain (dB)
PCB_ANT	5400	2.56



	Freq. (MHz)	Gain (dB)
PCB_ANT	5400	2.52

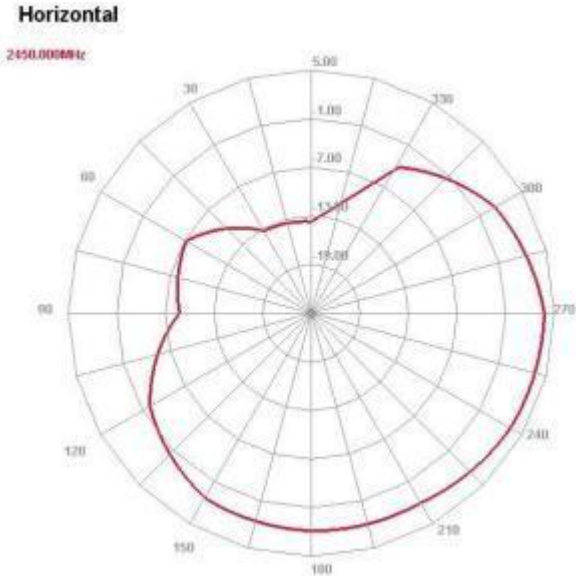
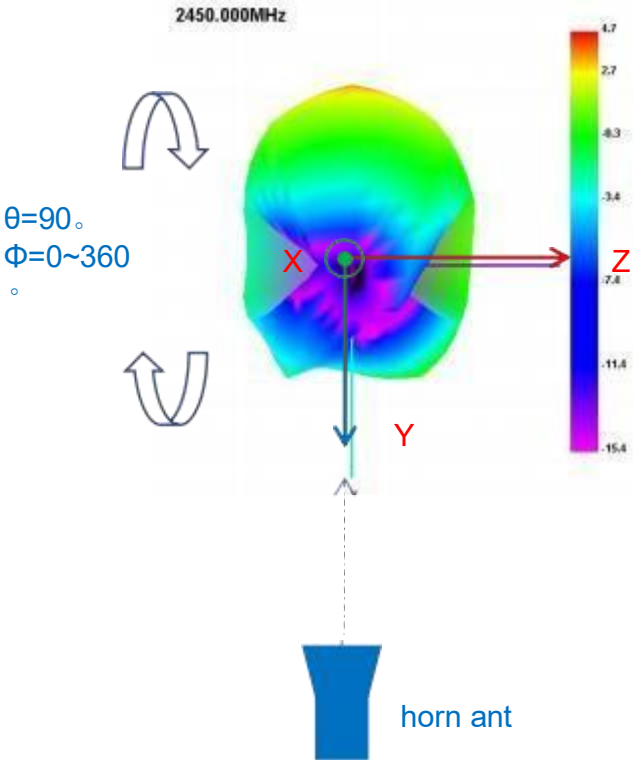


E2 Face



Radiation Pattern H_PLANE

	Freq. (MHz)	Gain (dB)
PCB_ANT	2450	4.0



	Freq. (MHz)	Gain (dB)
PCB_ANT	5400	2.53

