红点信息科技（深圳）有限公司

REDDOTINFORMATIONTECHNOIOGYSHENZHENCO,LTD

产品规格书

RODUCTSPECIFICATION

客户 Customer	
客户编码 Customers part number	
产品料号 ProductMaterialCode	HD.P-47-8-150-IPEX
工作频段 Working Band	2400MHz-2500MHz 5150MHz- 5850MHz
发行日期 Issue Date	2022-6- 8
发行版本 ReleaseVersion	A1
作者 Author	邹杨辰

Contents

Antenna introducing

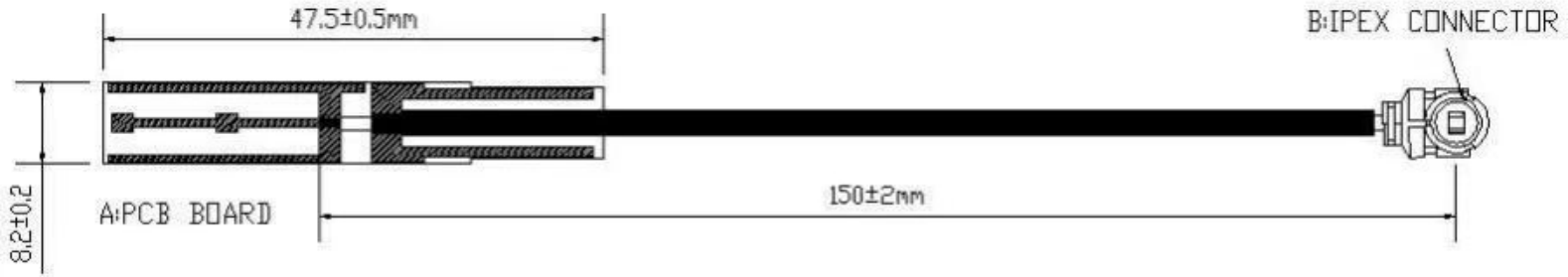
- Made by copper pipe material, work in 2.4~2.5&5.15~5.85GHz .
- Design by dipole antenna theory.
- High gain, High efficiency, Good port matching.
- Make wireless equipments better communication.

Antenna useful area

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

Antenna size

120.5mm*8.2mm*0.75mm

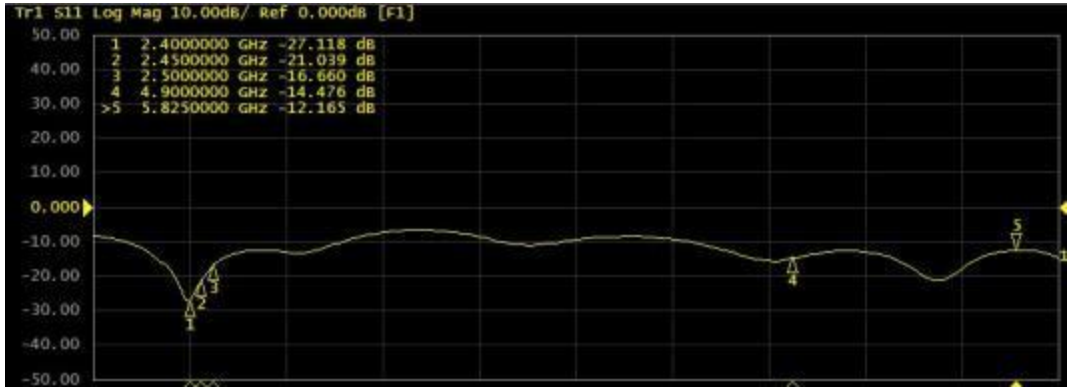


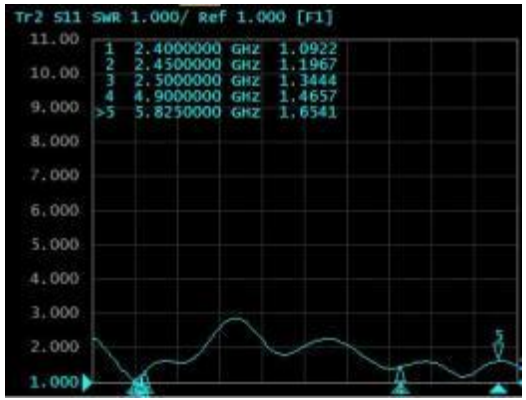
The cable is RF-Φ0.81cable with 3 IPEX and length is 150mm

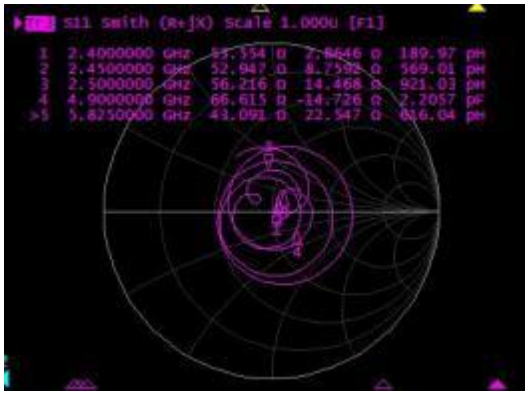
Antenna electrical properties

Frequency	2.4~2.5&5.15~5.85GHz
Impedance	50ohm nominal
V.S.W.R	≤2.0
Return loss	≤-10dB
Radiation	Omni-directional
Gain(Peak)	2.4G:4.2dBi/ 5G:2.75dBi
Polarization	Linear
Admitted Power	5W
Connector	IPEX
Efficiency	2.4G:68%/ 5G:65%
Cable	RF Φ0.81cable and length is 150mm

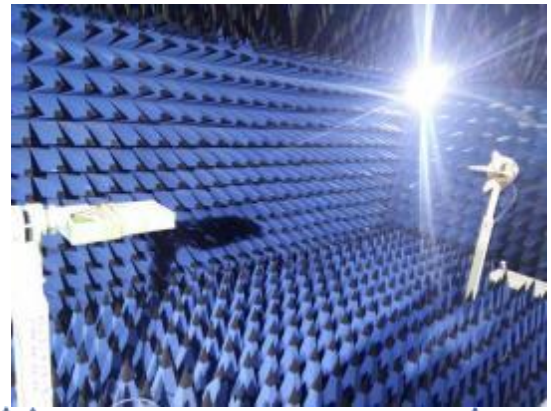
Antenna S-parameter





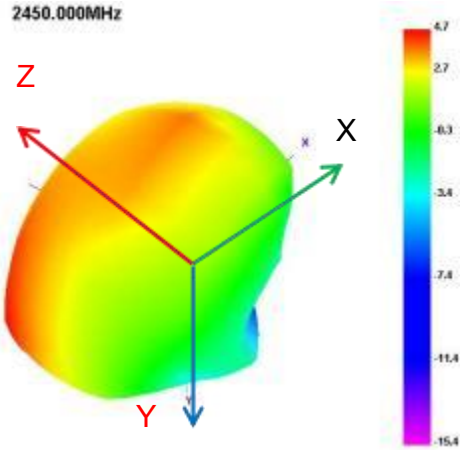


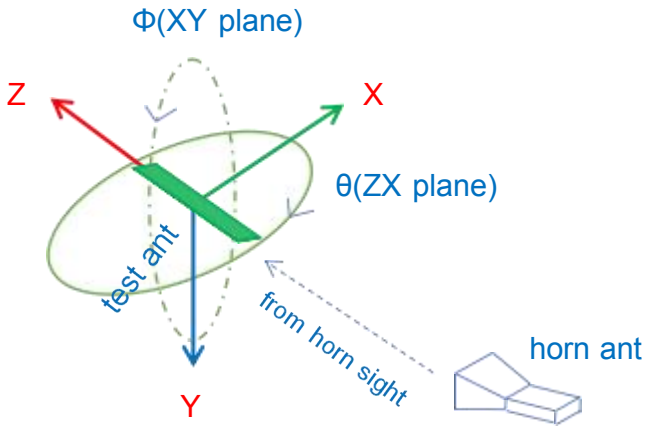
Antenna chamber structure



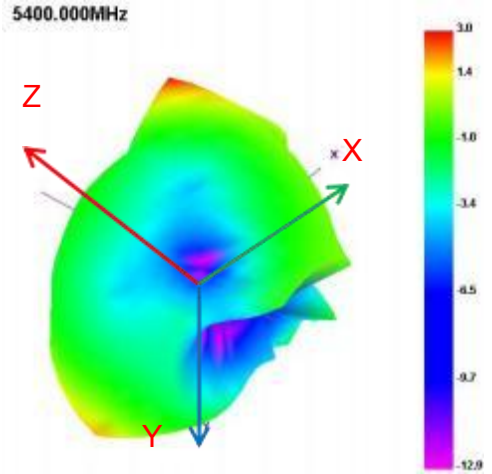
Antenna total gain and efficiency

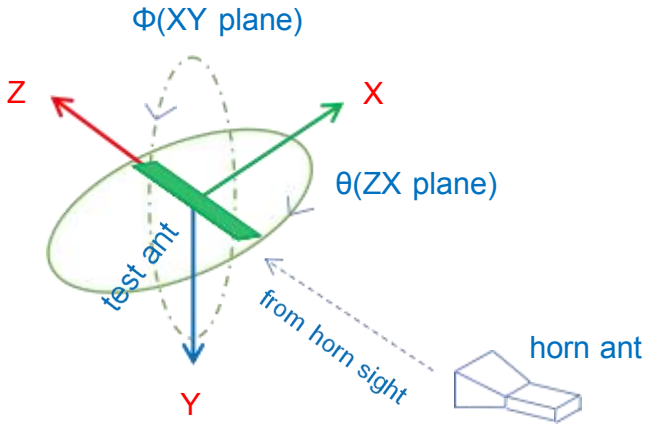
	Freq. (MHz)	Gain (dBi)	Efficiency (%)
PCB_ANT	2400	3.25	65%
	2450	4.0	68%
	2500	4.2	67%





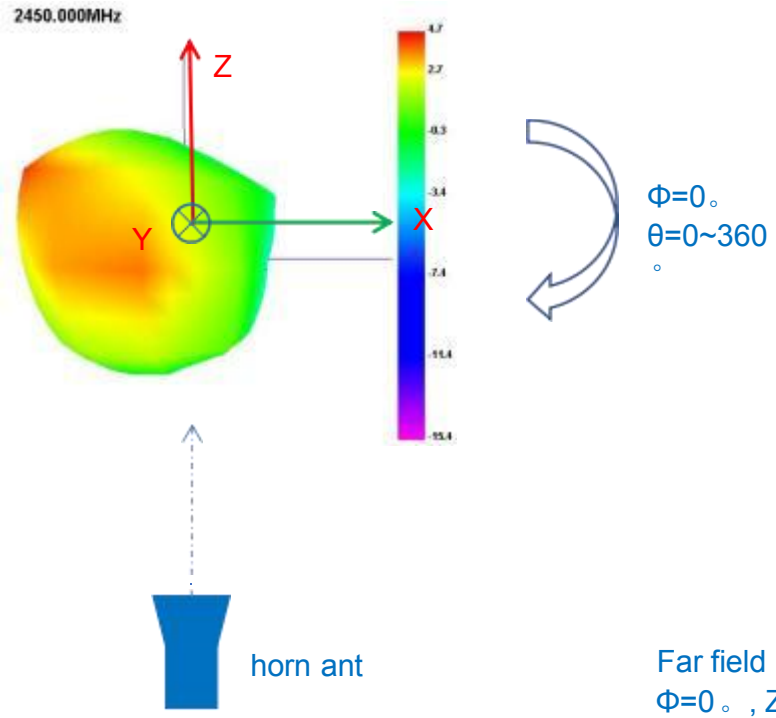
	Freq. (MHz)	Gain (dBi)	Efficiency (%)
PCB_ANT	5100	2.75	62%
	5400	2.56	65%
	5820	2.4	62%

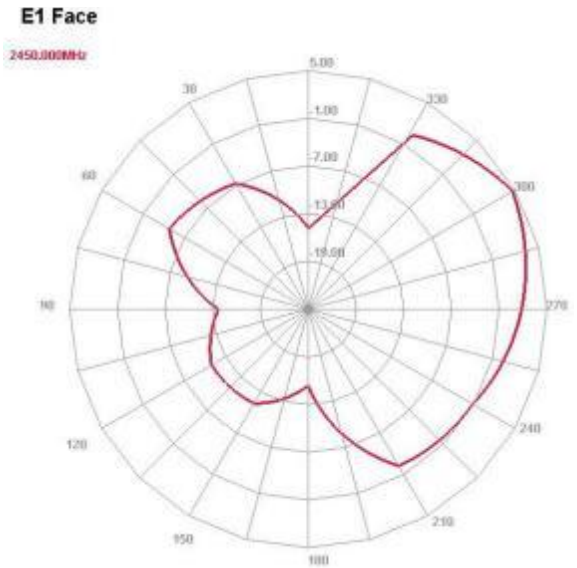




Radiation Pattern E_PLANE

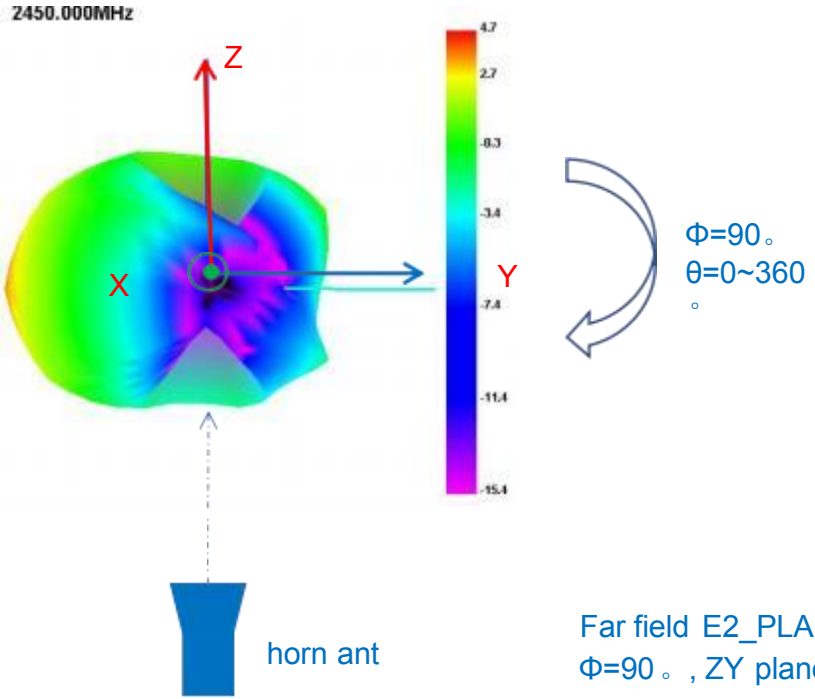
	Freq. (MHz)	Gain (dB)
PCB_ANT	2450	4.0



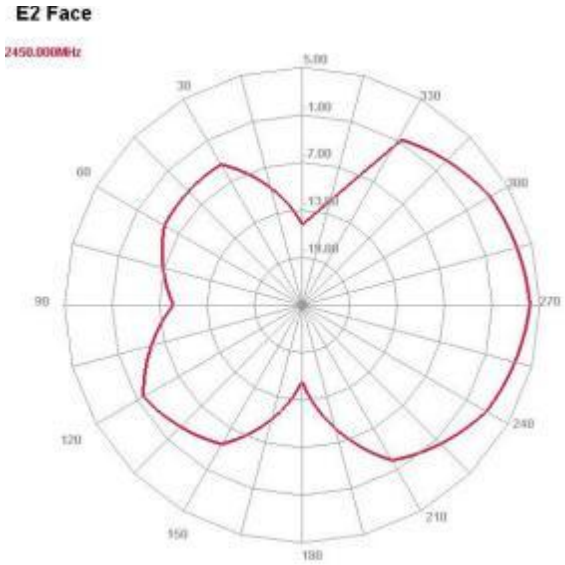


Far field E1_PLANE
Φ=0。, ZX plane

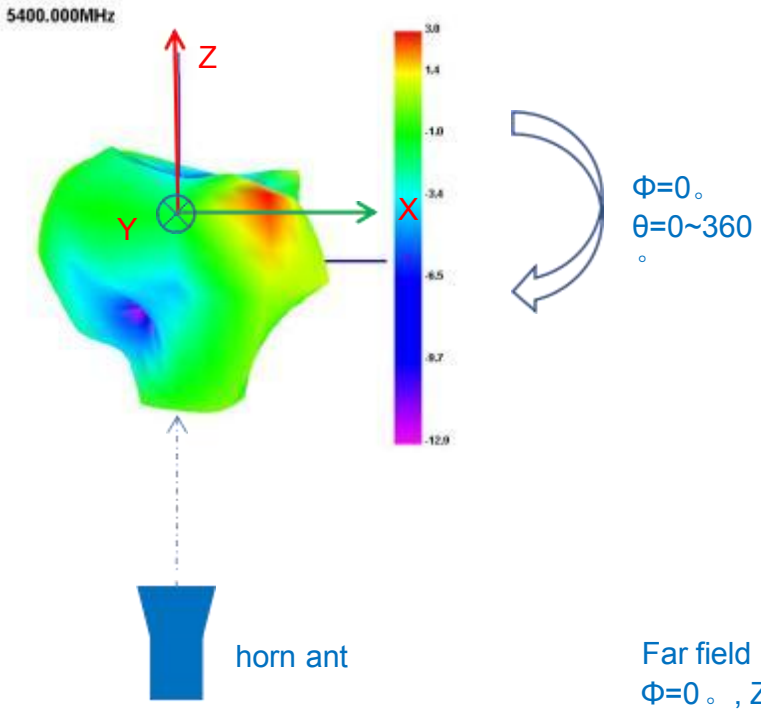
	Freq. (MHz)	Gain (dB)
PCB_ANT	2450	4.0

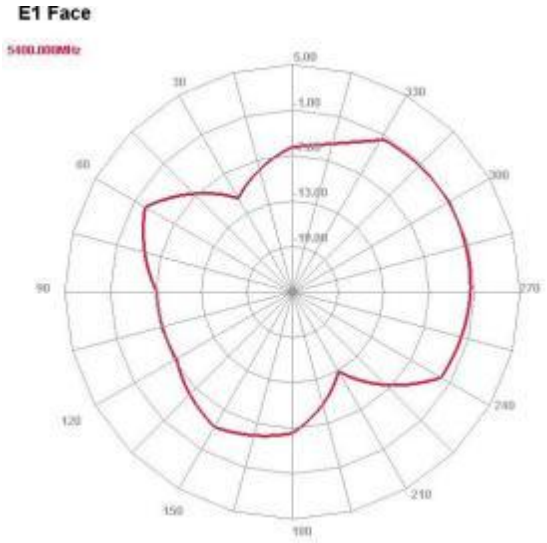


Far field E2_PLANE
Φ=90。, ZY plane



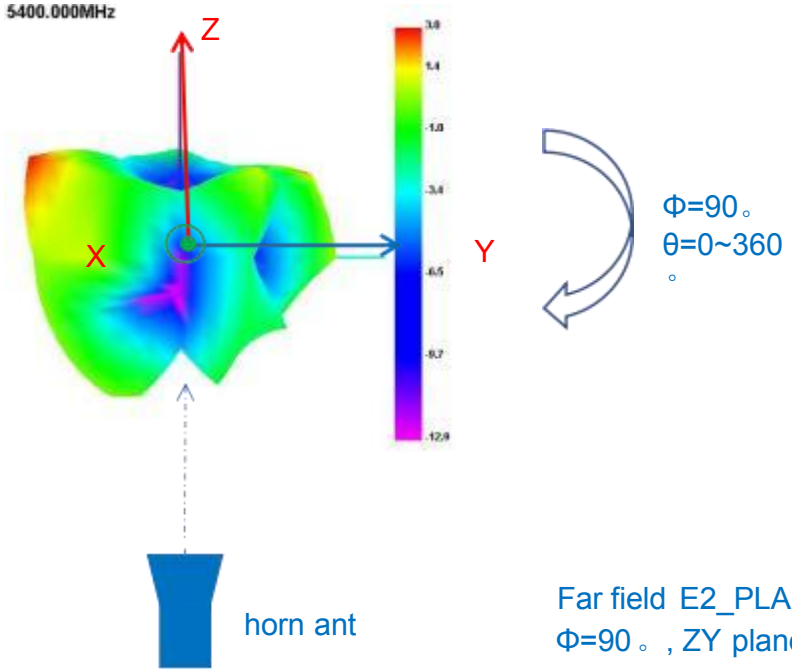
	Freq. (MHz)	Gain (dB)
PCB_ANT	5400	2.56

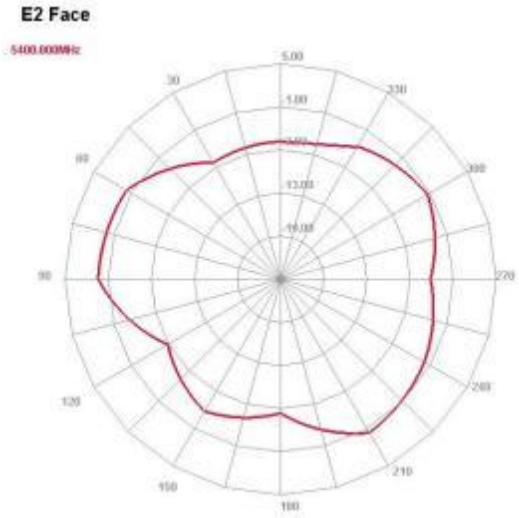




Far field E1_PLANE
Φ=0。, ZX plane

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

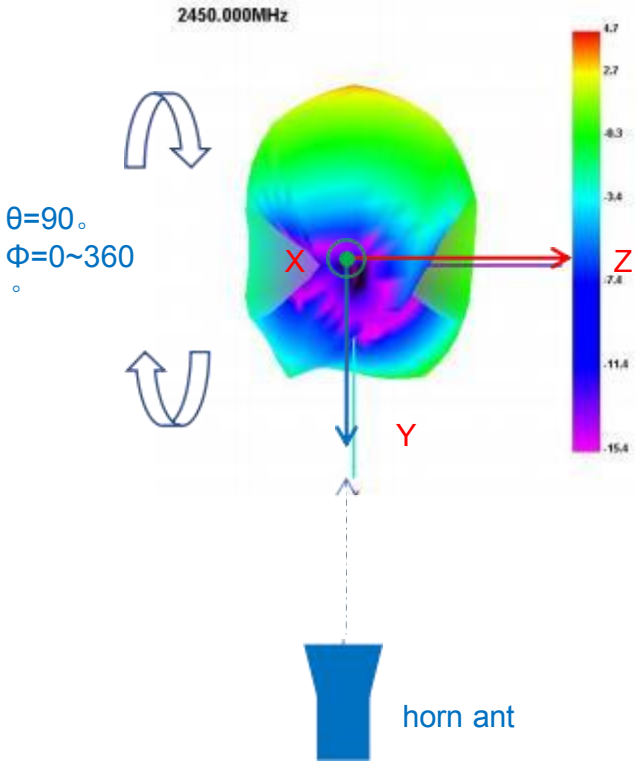


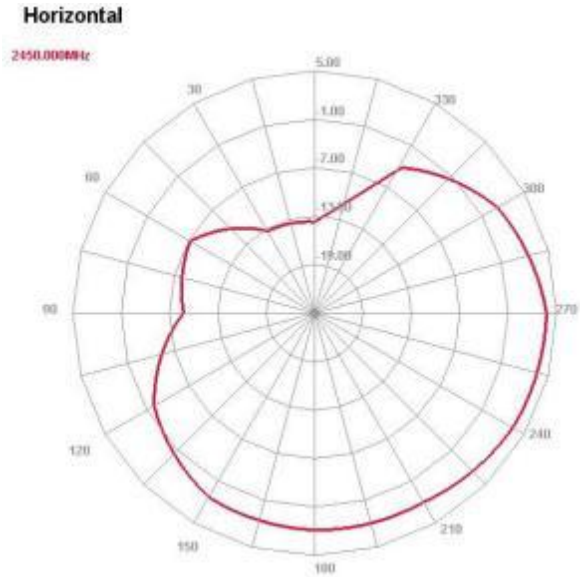


Far field E2_PLANE
Φ=90。, ZY plane

Radiation Pattern H_PLANE

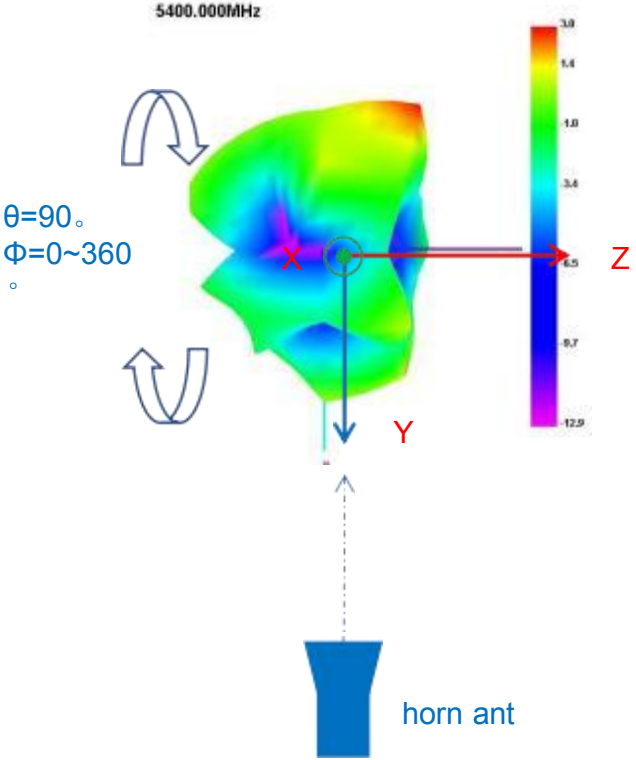
	Freq. (MHz)	Gain (dB)
PCB_ANT	2450	4.0

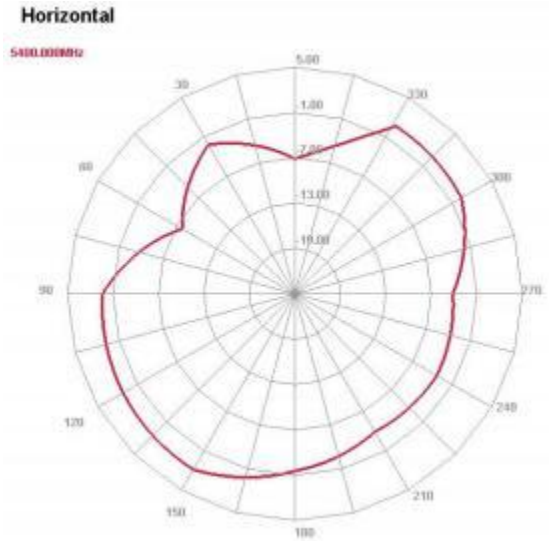




Far field H_PLANE
θ=90。, XY plane

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





Far field H_PLANE
θ=90。, XY plane