



Shenzhen Free Walk Communication Technology Co. LTD

ADD:

3rd Floor, Building 2, Hezhou West Industrial Park,
Xixiang, Baoan, Shenzhen

Email: zyx_sz@yeah.net

TEL: 86-0755-29955983 FAX: 86-0755-29955983

APPROVAL SHEET

(Customer) : Shenzhen Jackson Technology Co., Ltd.son Technology Co., Ltd.

(Product) : 2.4GWIFI antenna (Dual antenna)

(Model) : D215W

Part Number: Main antenna(Z01-6084-R01)Grey Line L=360mm

Auxiliary antenna(Z08-10088-R01)Black Line L=330mm

Written By : Mr Hu

Issued Date) : 2022-12-05

CUSTOMER

ENGINEER R&D DEPT	QUALITY DEPT	APPROVED

Free Walk

R&D DEPT	ENGINEER R&D DEPT	APPROVED



Document change history

QR-ZYX-084 : A0

Form number: QR-ZYX-084 Version: A0

Product number		Document change history					
Serial number	Change type	File Number	Change date	Description of changes	Production/Revision	version	Remarks

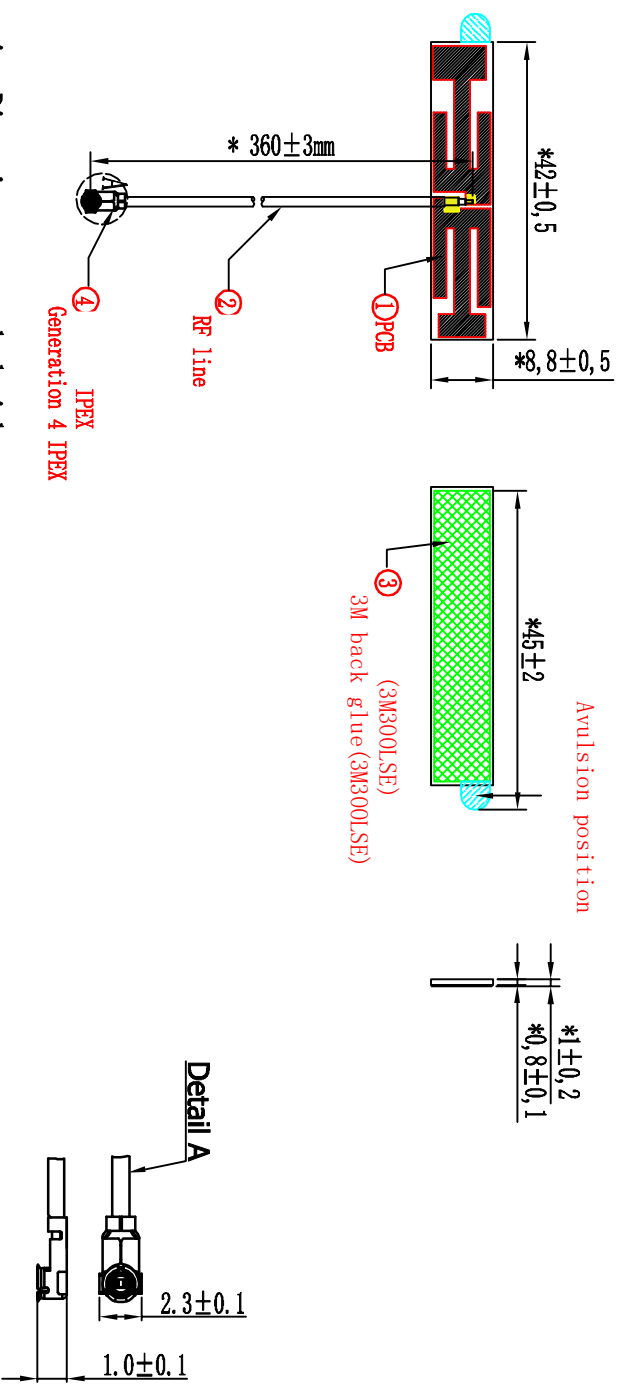
Index

(Cover)	1
(Document Change Resume).....	2
(Index)	3
(The basic parameters)	4
(Product Drawing)	5
(Test Equipment & Conditions)	6
(Test Data)	7-23
(Antenna Picture)	24
(Tee Packing Way).....	25



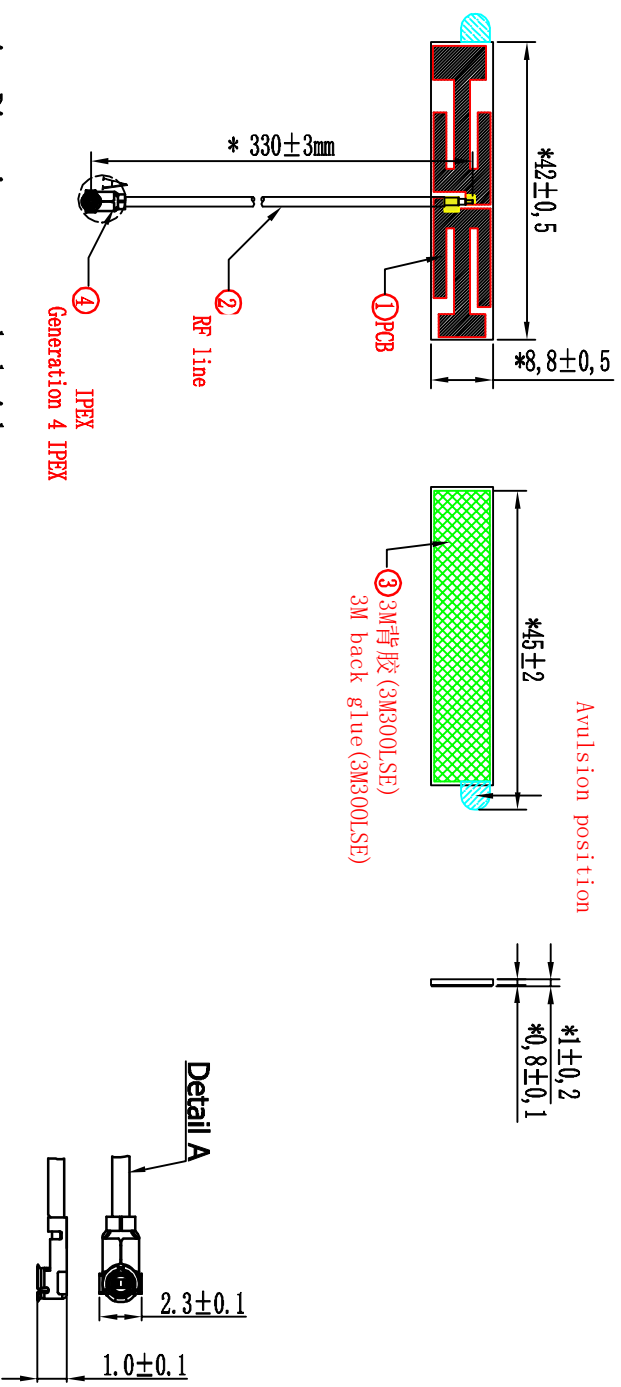
The basic parameters

A. Electrical Characteristics	
Frequency	2410 MHz ~2480MHz
VSWR	≤ 3
Efficiency	>50%
Impedance	50 Ohm
Polarization	Linear
Gain	2dBi
B. Material & Mechanical Characteristics	
Material of Radiator	$\Phi 1.13$ Main antenna Gray
Cable Type	$\Phi 1.13$ Auxiliary antenna Black
Connector Type	Fourth generation IPEX
Dimension	
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 40 °C ~ + 80 °C



notes:

- 1, Standard * is the key dimension, Dimensions not marked with tolerance shall be tested according to ± 0.15
- 2, Refer to drawing without dimension; Other dimensions are subject to actual matching;
- 3,  The Routing area,  The gold-plating,  The 3M300LSE gum
- 4, The product shall be free of oil, dust, burr, etc;
- 5, accord with ROHS



notes:

- 1、Standard * is the key dimension, Dimensions not marked with tolerance shall be tested according to ± 0.15
- 2、Refer to drawing without dimension; Other dimensions are subject to actual matching;
- 3、 The Routing area,  The gold-plating,  The 3M300LSE gum
- 4、The product shall be free of oil, dust, burr, etc;
- 5、accord with ROHS

Test Equipment & Conditions

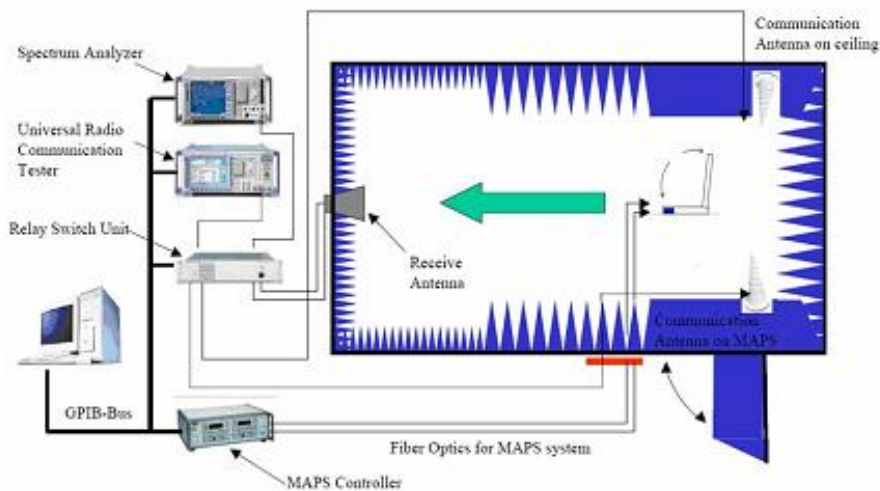
1. Network Analyzers :

Agilent 8753D 5071B

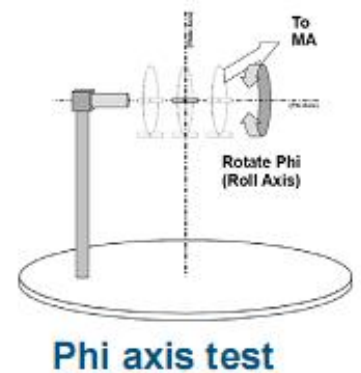
2. Communications Test Set:

Agilent 8960

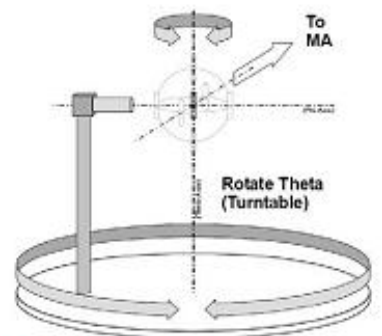
3. 3D Chamber Test System



(Testing by 3D anechoic chamber)



Phi axis test



Theta axis test



Main antenna

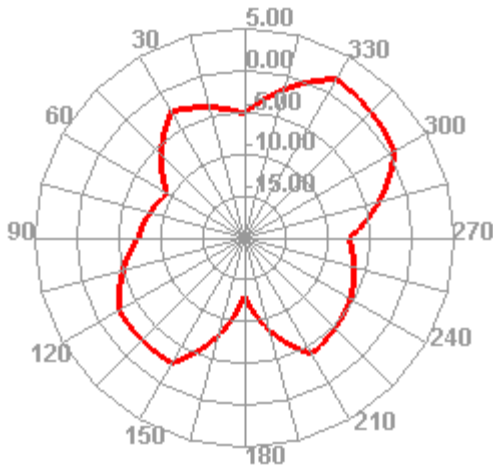
2.4GHz Efficency&Gain

Freq (MHz)	Effi (%)	Gain (dBi)
2400	64.25	2.16
2410	63.96	2.02
2420	60.83	2.01
2430	61.45	2.1
2440	60.65	2.41
2450	59.63	2.26
2460	61.67	2.55
2470	64.23	2.67
2480	64.5	2.65
2490	63.23	2.32
2500	62.72	2.28

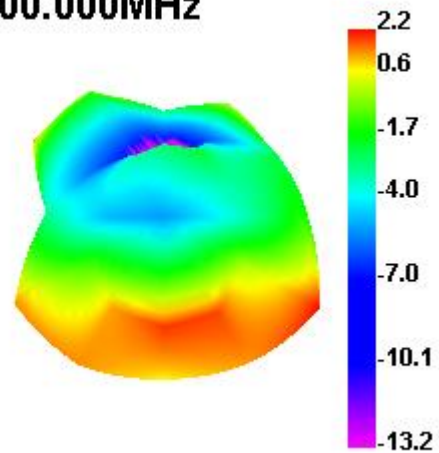
Directional map

2400MHZ(Main antenna)

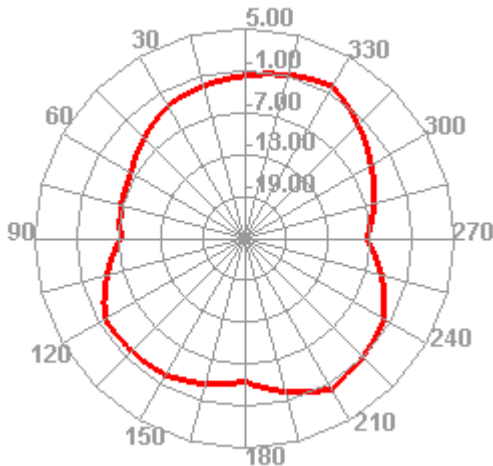
2400.000MHz E2



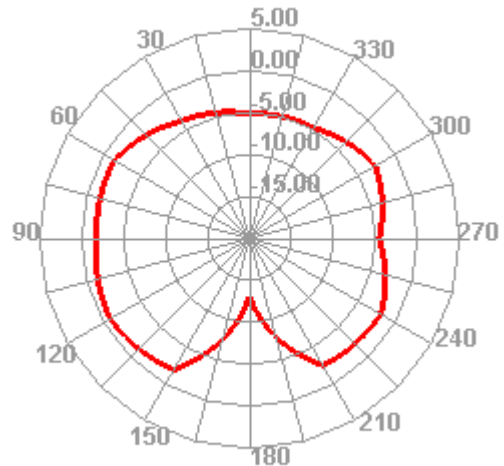
2400.000MHz



2400.000MHz H

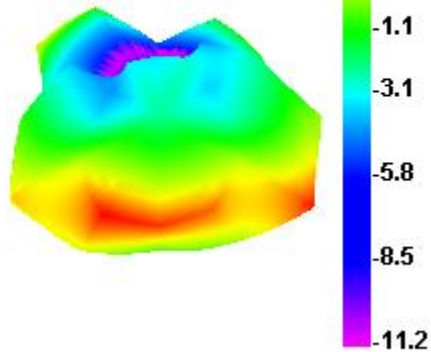


2400.000MHz E1

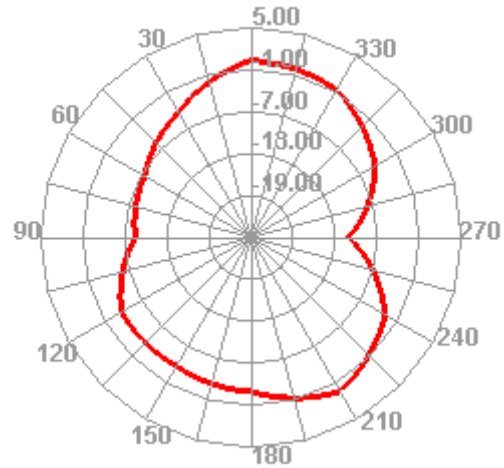


2450MHz (Main antenna)

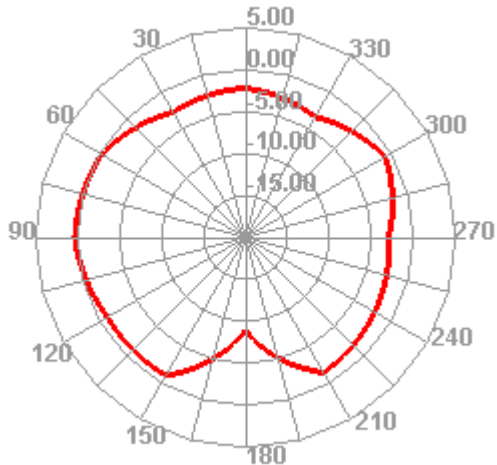
2450.000MHz



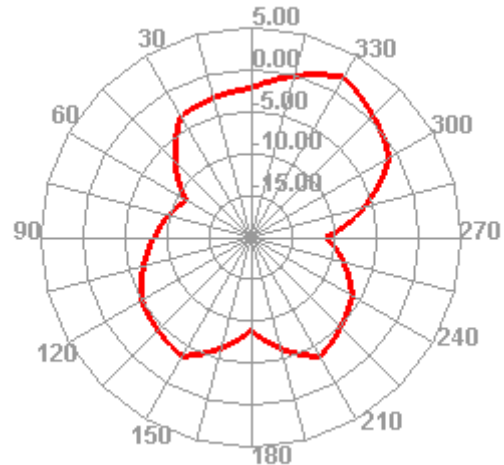
2450.000MHz H



2450.000MHz E1

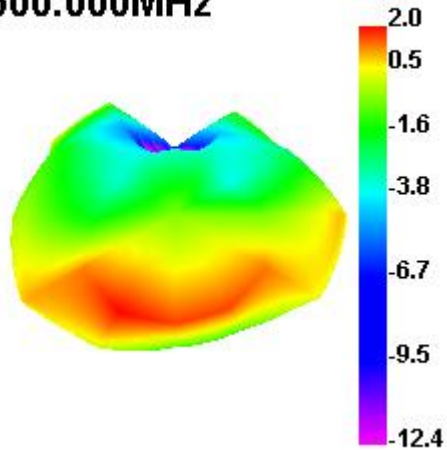


2450.000MHz E2

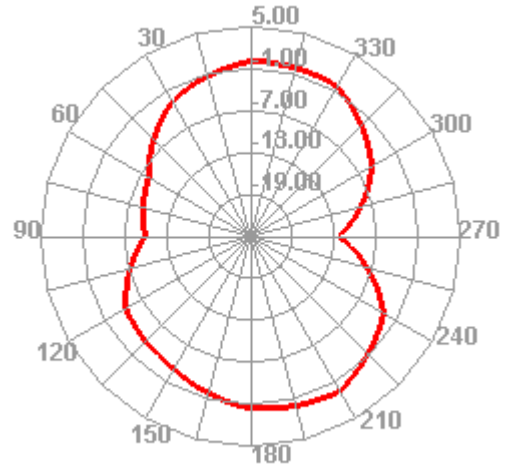


2500MHz (Main antenna)

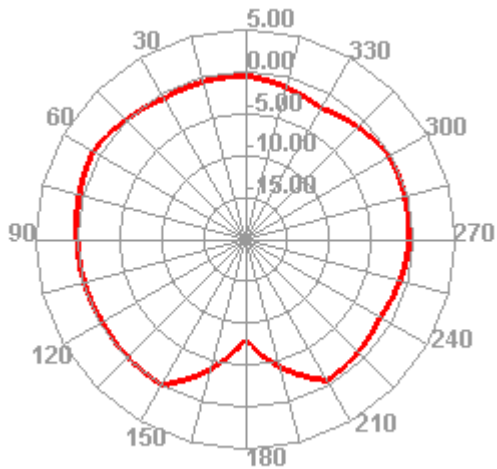
2500.000MHz



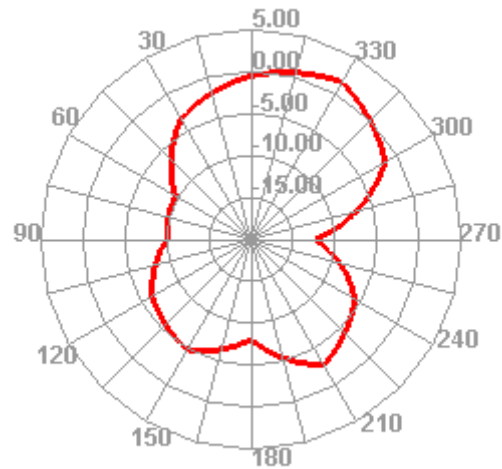
2500.000MHz H



2500.000MHz E1



2500.000MHz E2





Efficiency&Gain:Auxiliary anten

2.4GHz

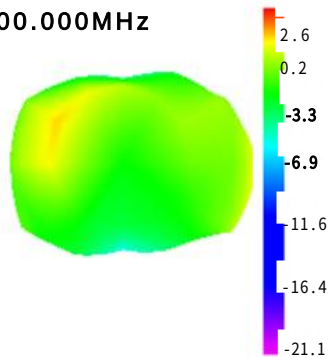
Freq (MHz)	Effi (%)	Gain (dBi)
2400	64.11	2.56
2410	60.24	2.14
2420	61.67	2.18
2430	58.25	2.01
2440	62.2	2.12
2450	58.82	2.01
2460	65.89	2.54
2470	64.3	2.52
2480	65.83	2.65
2490	61.96	2.37
2500	59.07	2.16

Directional map

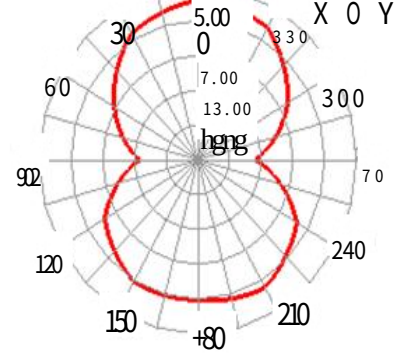
2400MHZ(Auxiliary anten

2400MHz

2400.000MHz

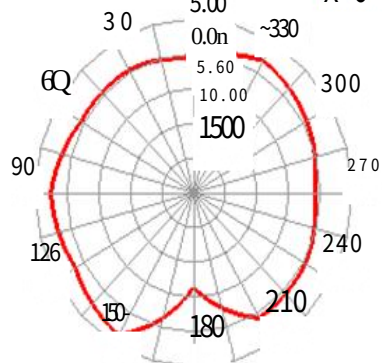


2400.000MHz H



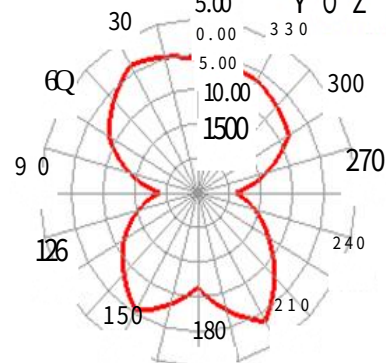
2400.000MHz E1

X 0 Z



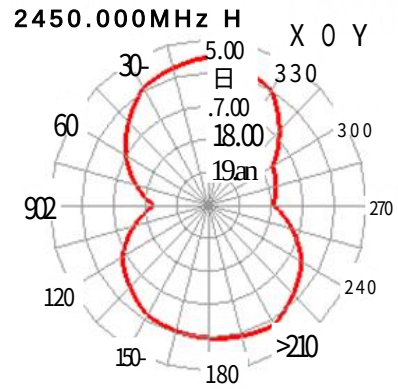
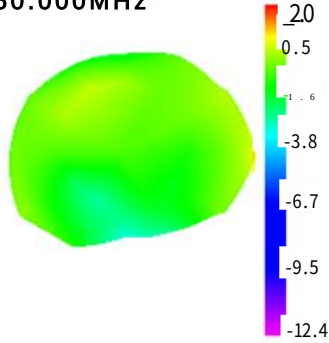
2400.000MHz E2

Y 0 Z

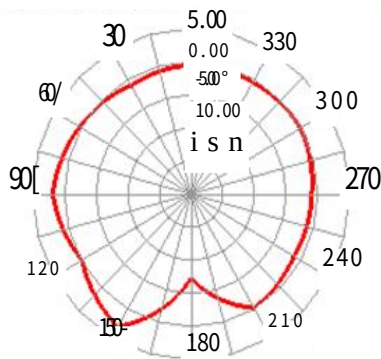


2450MHz (Auxiliary antenna)

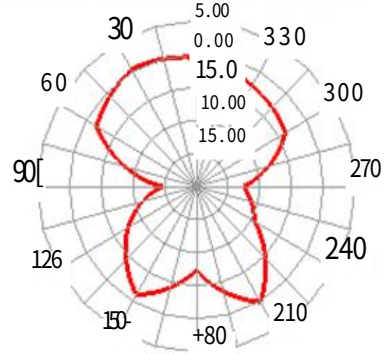
2450MHz 2450.000MHz



2450.000MHz E1 X 0 Z



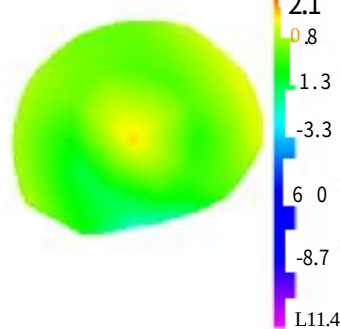
2450.000MHz E2 Y 0 Z



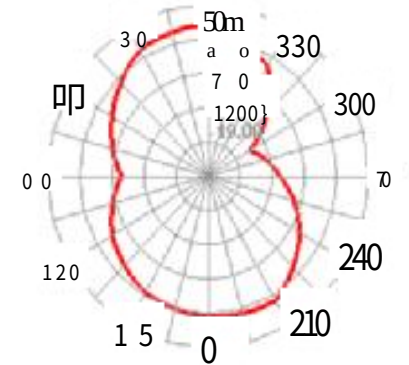
2500MHZ (Auxiliary antenna)

2500MHz

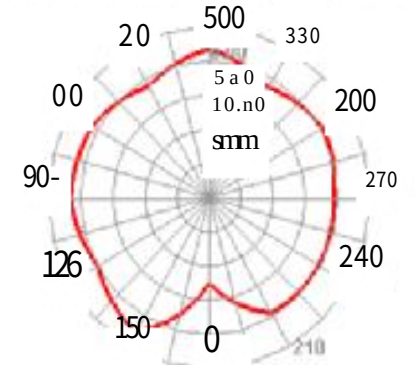
2500.000MHz



2500.000MHz H X O Y



2500.000MHz E1 X O Z



2500.000MHz E2 Y O Z

