



深圳市正大信维通讯设备有限公司

Shenzhen Zhengdaxinwei Communication Equipment Co., Ltd

产品承认书

APPROVAL

CUSTOMER: Zhejiang hongquan electronic technology co., ltd

DESCRIPTION: 915 Spring antenna

型 号
MODEL NO: ZDXV-915MHz spring antenna

客 户 料 号
CUS PART NO:

日 期
D A T E: 2023.10.10

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	业 务 SALES DEPARTMENT
李倩楠	杨东东	丁志强

客户承认签章

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	业 务 SALES DEPARTMENT

Manufacturer's name: Shenzhen Zhengda Xinwei Communication Equipment Co., LTD

The company address: No.486, Zhangbei Road, Zhangbei Community, Longcheng Street, Longgang District, Shenzhen

The company web site: www.zdxwtx.com Contact phone number: 0755-28839286

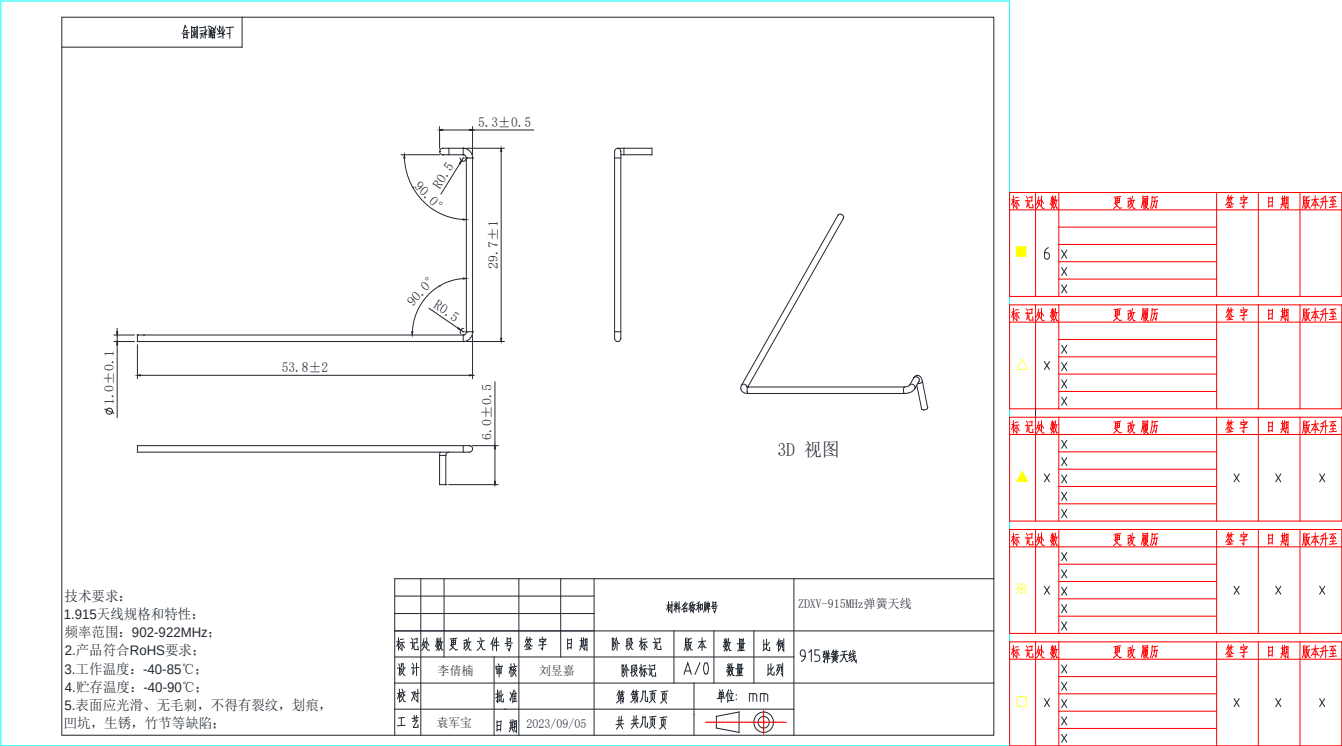
fax: 0755-89909291

email: yangwenjing@zidasv.net

Description Record

[illegible]

1. Product size



2.Electrical Specification :

型号	915 天线	Model	915 Antenna
主要技术参数		Main Technical Specifications	
频率范围 (MHz)	902-922MHz	Frequency Range (MHz)	902-922MHz
电压驻波比	≤3.0	VSWR	≤3.0
增益 (dBi)	0.31	Gain (dBi)	0.31
输入阻抗 (Ω)	50	Input Impedance (Ω)	50
极化形式	N/A	Polarization Type	N/A
接口形式	N/A	Connector Type	N/A
工作温度	-40℃~+85℃	Working Temperature	-40℃~+85℃
储存温度	-40℃~+90℃	Storage Temperature	-40℃~+90℃

2-1. Frequency Band:

Frequency Band	MHz
LORA 天线	902-922MHz

2-2. Impedance

2-3. VSWR

2-3-1.Measurement frequency points and VSWR value

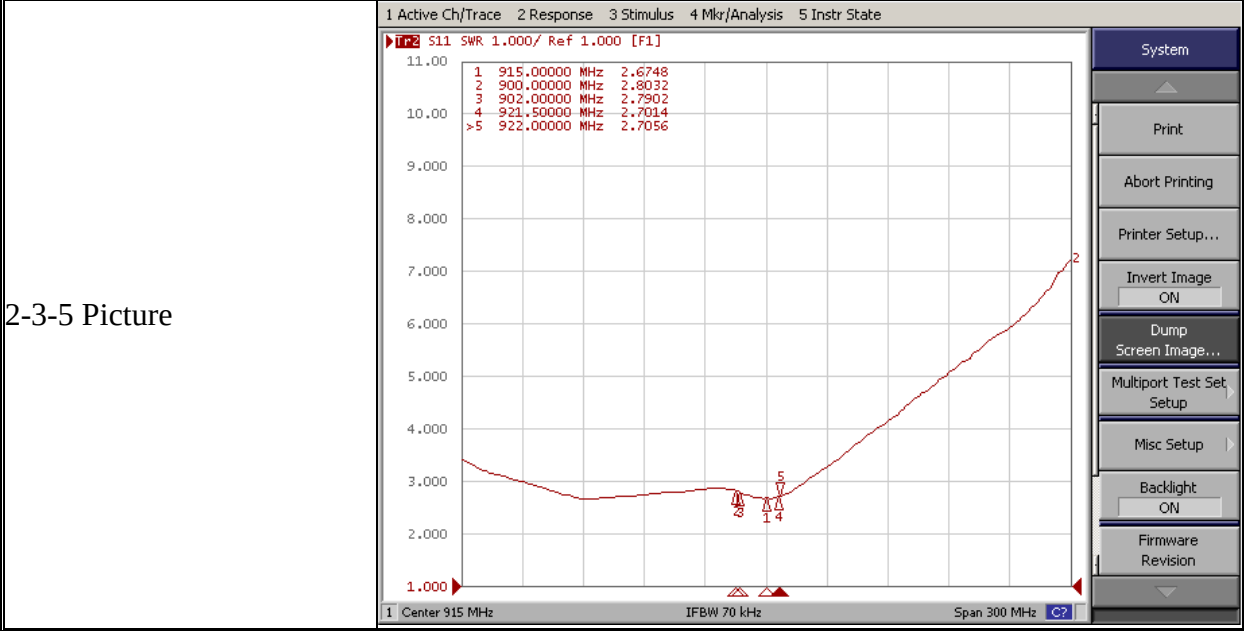
50 ohm nominal

Frequency (Unit MHz)	902	915	921.5	922
VSWR	2.79	2.67	2.70	2.70

2-3-2. VSWR

Frequency Band(MHz)	902	915	921.5	922
2-3-3. Typical Value:	≤3.0	≤3.0	≤3.0	≤3.0

2-3-4 Measuring Method	1. A 50Ωcoaxial cable is connected to the Antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm			
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2-4. Efficiency and Gain

- Measuring instruments: microwave darkroom, network analyzer, standard antenna.

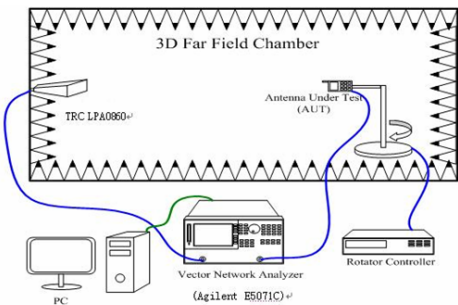


图 1. 微波暗室内部仪器设置

$$G_{AUT} = G_{stand} + P_{AUT} - P_{stand}$$

G_{AUT} : Gain of AUT

G_{stand} : Gain of Standard Gain Antenna

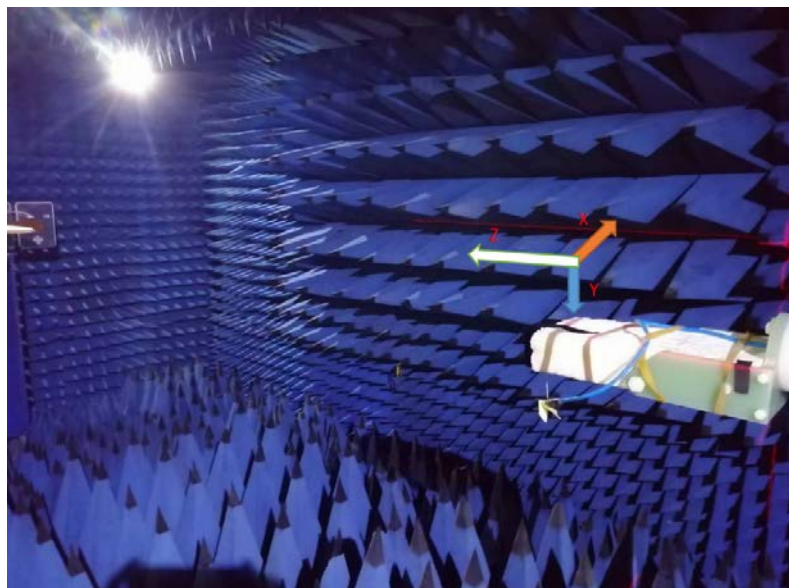
P_{AUT} : Measured Power of AUT

P_{stand} : Measured Power of Standard Gain Antenna

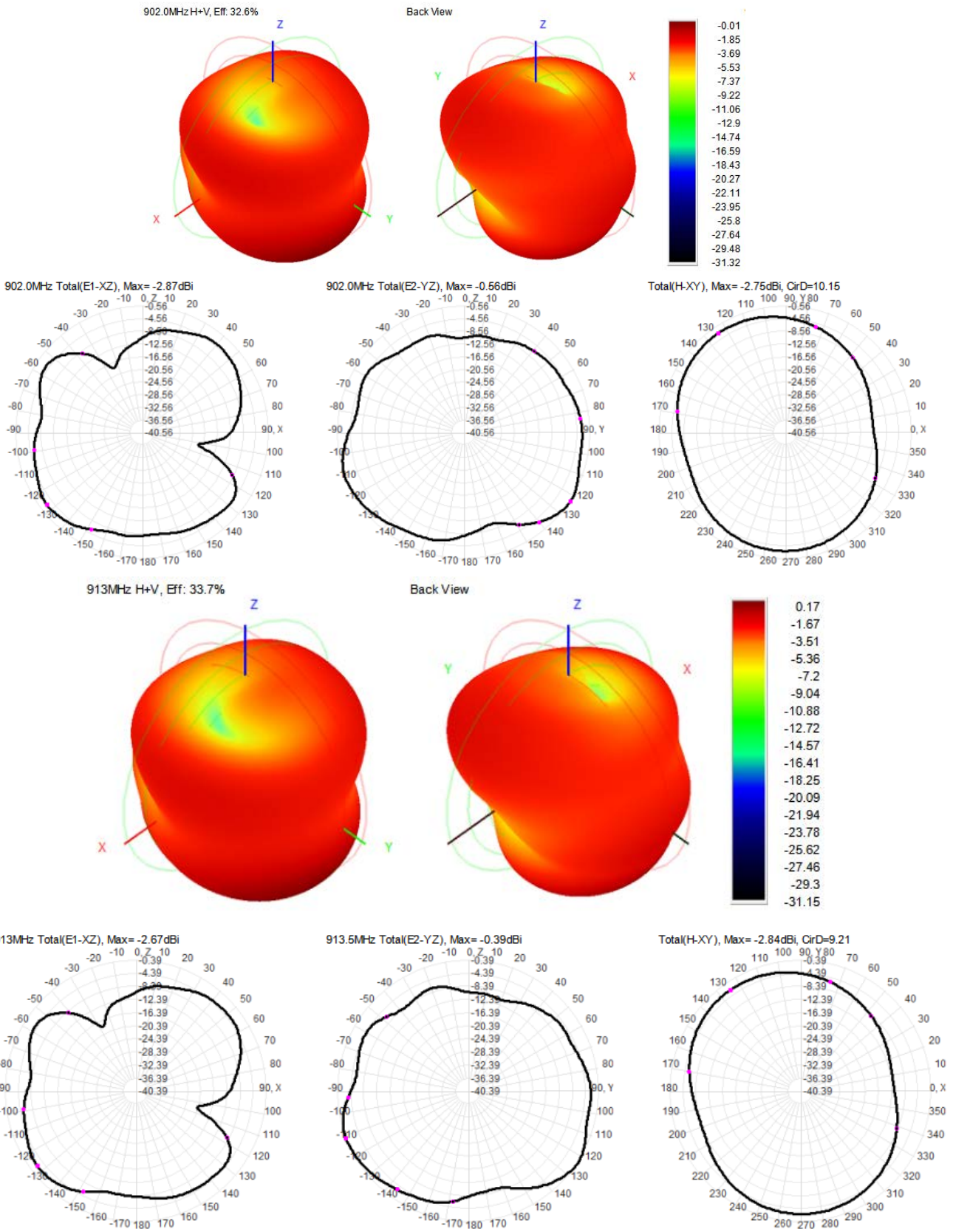
2-4-1 Efficiency and Gain

Frequency(MHz)	Efficiency (%)	Peak GAIN (dBi)
902	32.63	-0.01
913	33.72	0.17
915	34.66	0.27
916	35.07	0.31
921.5	33.84	0.09
922	33.65	0.05

3. Test environment

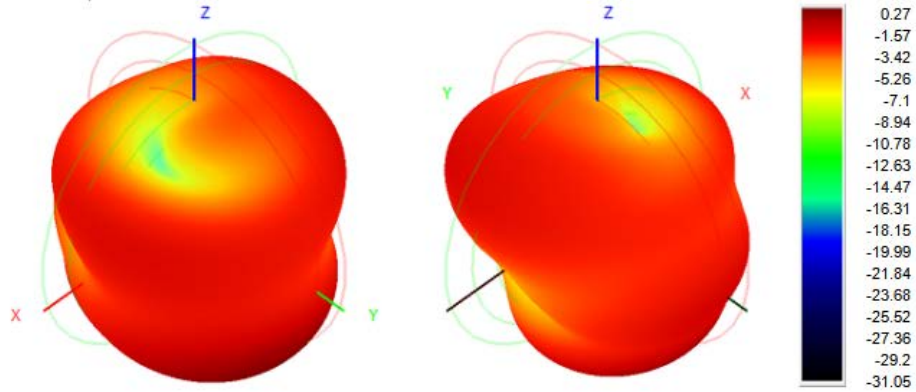


4.Directiona1 diagram/ 方向图



915MHz H+V, Eff: 34.7%

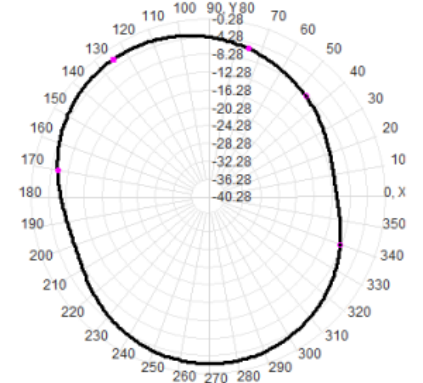
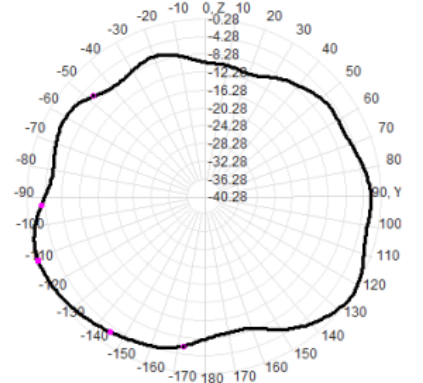
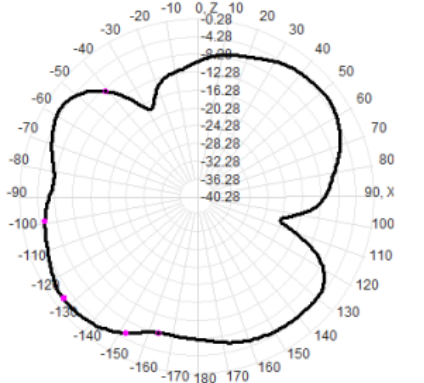
Back View



915MHz Total(E1-XZ), Max= -2.54dBi

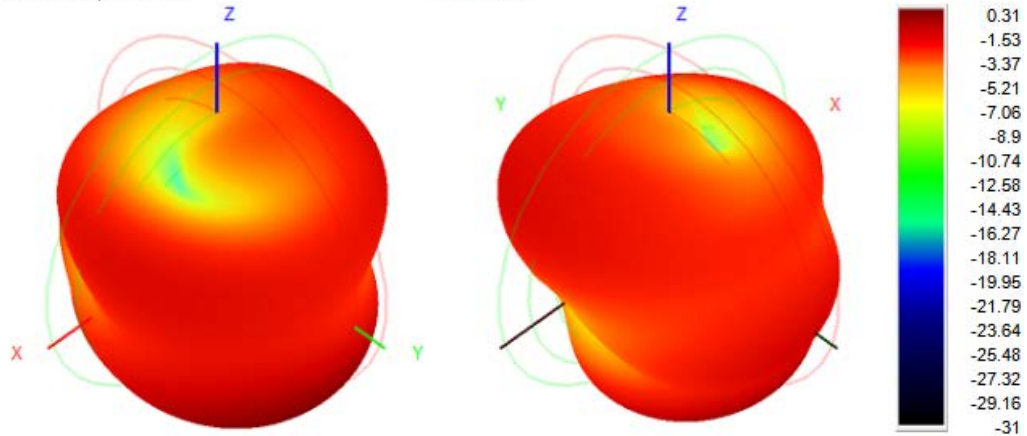
915MHz Total(E2-YZ), Max= -0.28dBi

Total(H-XY), Max= -2.76dBi, CirD=9.00



916MHz H+V, Eff: 35.1%

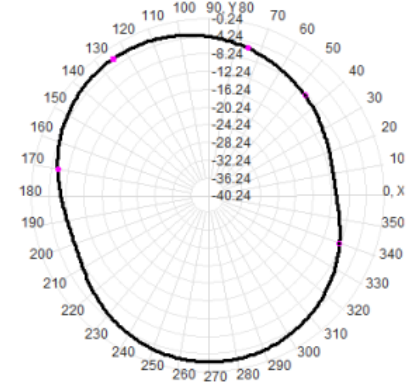
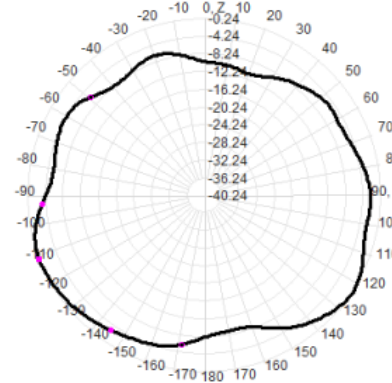
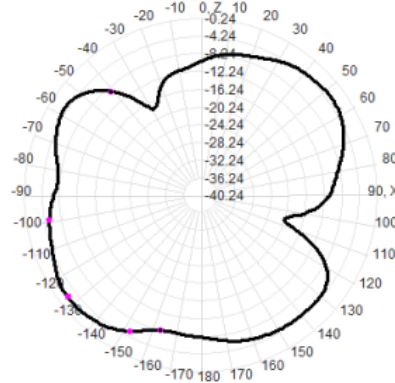
Back View



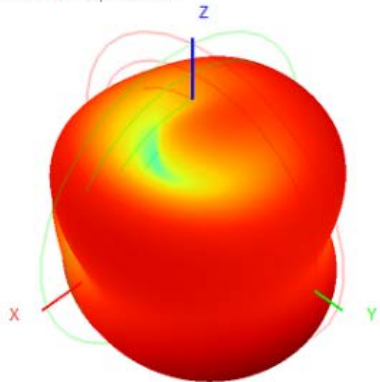
916MHz Total(E1-XZ), Max= -2.48dBi

916MHz Total(E2-YZ), Max= -0.24dBi

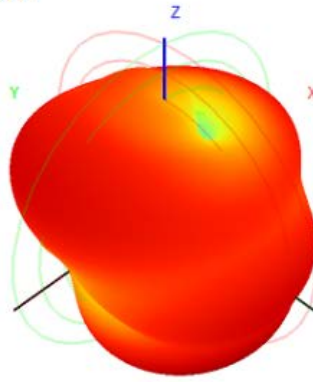
Total(H-XY), Max= -2.73dBi, CirD=8.88



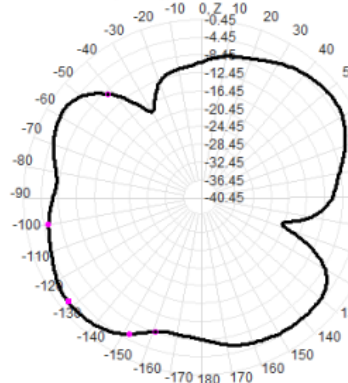
921.5MHz H+V, Eff: 33.8%



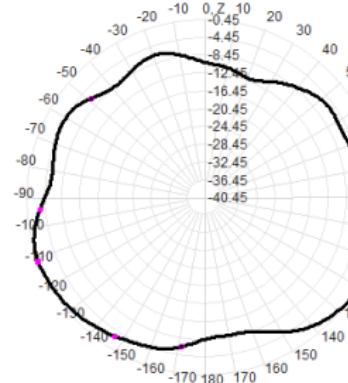
Back View



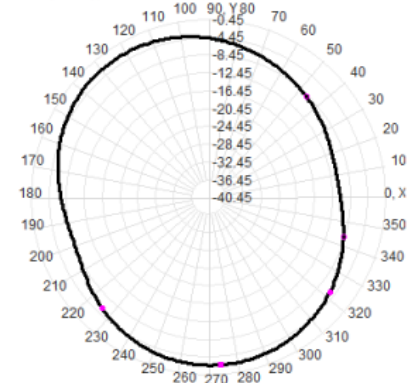
921.5MHz Total(E1-XZ), Max=-2.58dBi



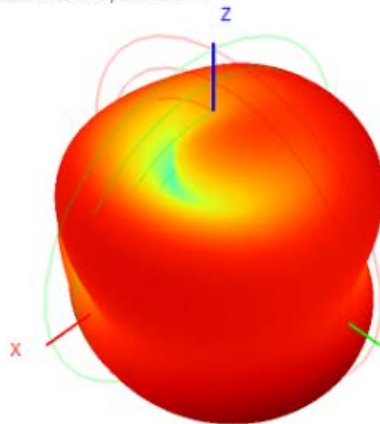
921.5MHz Total(E2-YZ), Max=-0.45dBi



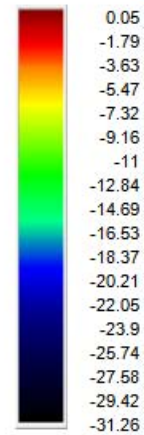
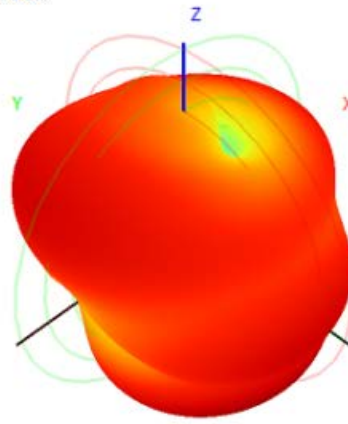
Total(H+V), Max=-2.89dBi, CirD=8.41



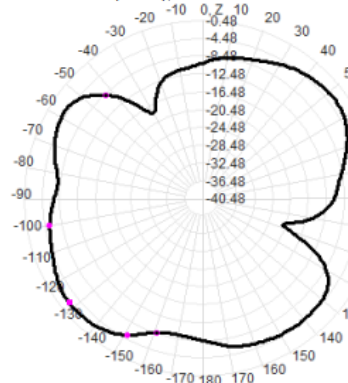
922.0MHz H+V, Eff: 33.6%



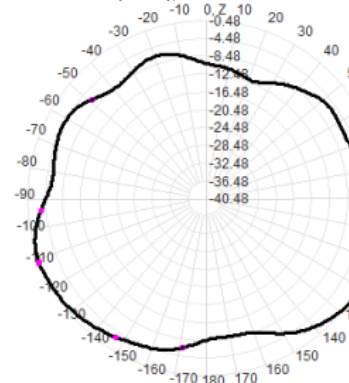
Back View



922.0MHz Total(E1-XZ), Max=-2.61dBi



922.0MHz Total(E2-YZ), Max=-0.48dBi



Total(H+V), Max=-2.91dBi, CirD=8.38

