东莞市一佳电子通讯科技有限公司

Dongguan YiJia Electronics Communication Technology Co.,Ltd.

规 格 承 认 书

SPECIFICATION FOR APPROVAL

日 期 Date	2022/10/24
编 号 File No	22102402
版 本 Revision	1.0

客 户 CUSTOMER: Autel Robotics Co., Ltd.

客户料号 CUSTOMER NO: 501006475

品 名 PART NAME: FR Antenna

供方料号 SUPPLIER NO: YJI01.005.070.302A

送样日期Date: 送样数量Q“TY:

客户确认CUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR

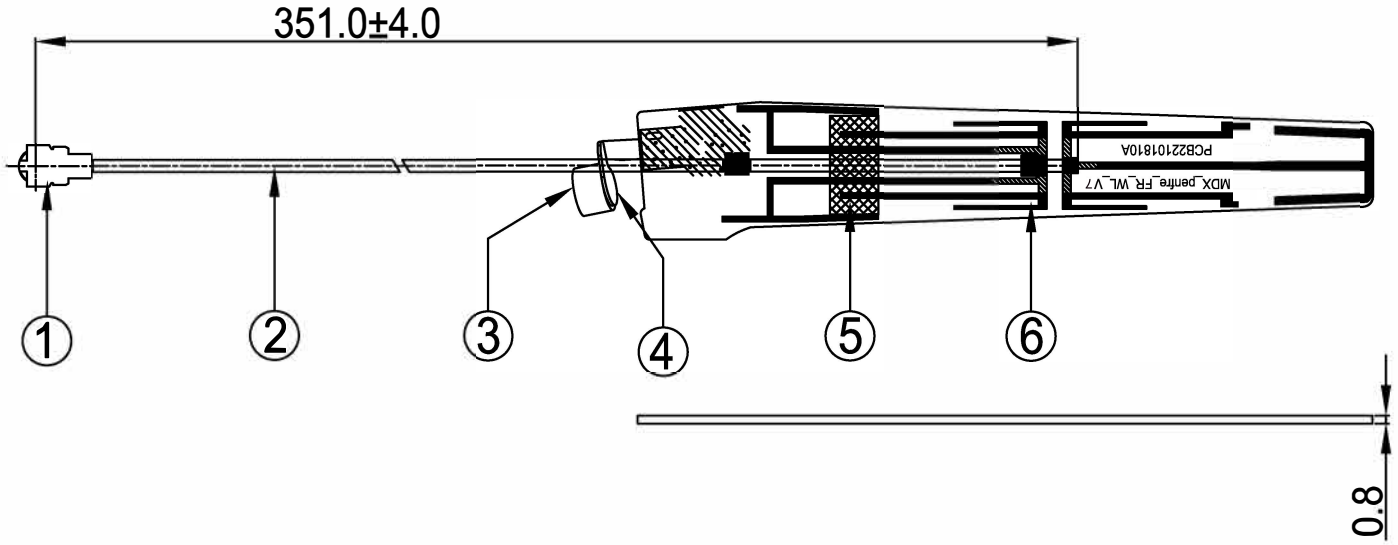
供方确认 SUPPLIER SIGNATURE		
APPROVAL	CHECK	DESIGN
ChenGuoqiang	XieLi	ChenXingyi

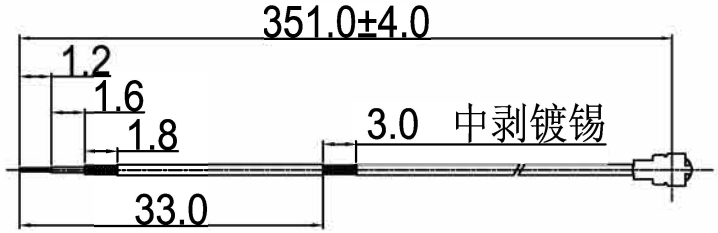
YJ-RD-F04-A

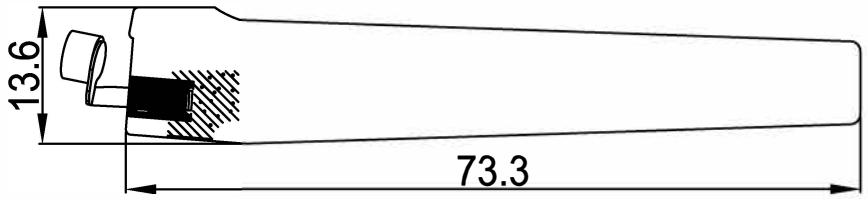
RoHS Compatible

CUSTOMER	
PART NO	

REV.	DESCRIPTION	DATE
A	首次发行	2022-09-08
B		







NO	PART NAME	DESCRIPTION	Material	Part Number	Q.TY
6	PCB	73.3*13.6*0.8MM	PCB	PCB1050XA.P01	1
5	Paste+EVA	7.5*2.5*2.0MM	Paste+EVA	EVA10391A.P01	1
4	Metal	4.6*5.4*0.3MM	C7521	MET1018XA.P01	1
3	EMI Gasket	Ø4.8*3.0MM	Ø4.8*3.0MM	EVA10288A.P01	1
2	Coaxial Cable	O.D 1.37 Black Low Loss	O.D 1.37	COA1001XA.P01	1
1	Mini Connector	Au Plated 1代 原厂	Cu	TER1000XA.P02	1

东莞市一佳电子通讯科技有限公司
Dongguan Yijia Electronics Communication Technology Co.,Ltd.
Tel :0769-85535057
Fax:0769-81664308

PART NAME: RF Antenna

PART NO.: YJI01.005.070.302A

DATE: 2022-09-08

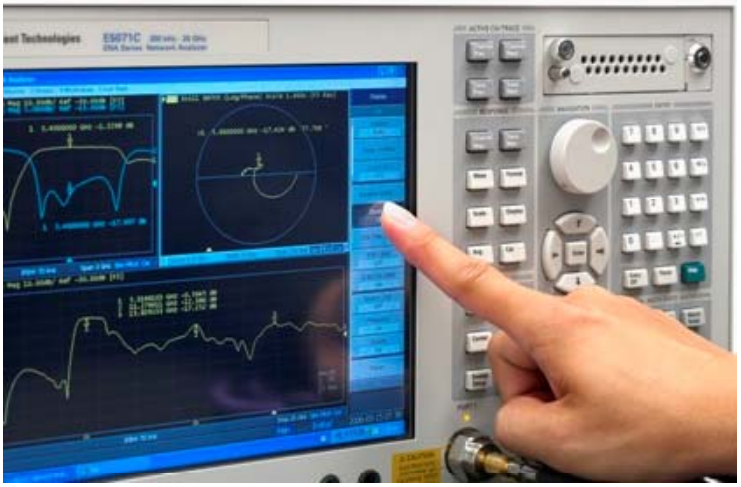
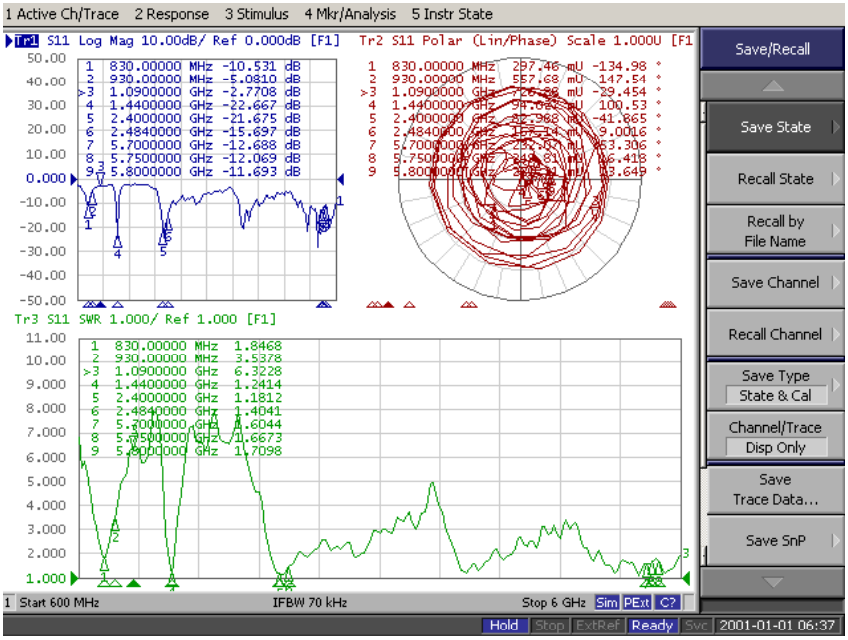
APPROVED BY	CHECKED BY	DESIGNED BY	
殷 涛	向志蓉	陈兴易	UNITS: mm SCALE: 1/1 REVISION: A

Tolerance
X.X ±0.50
X.XX±0.15
X° ±3°

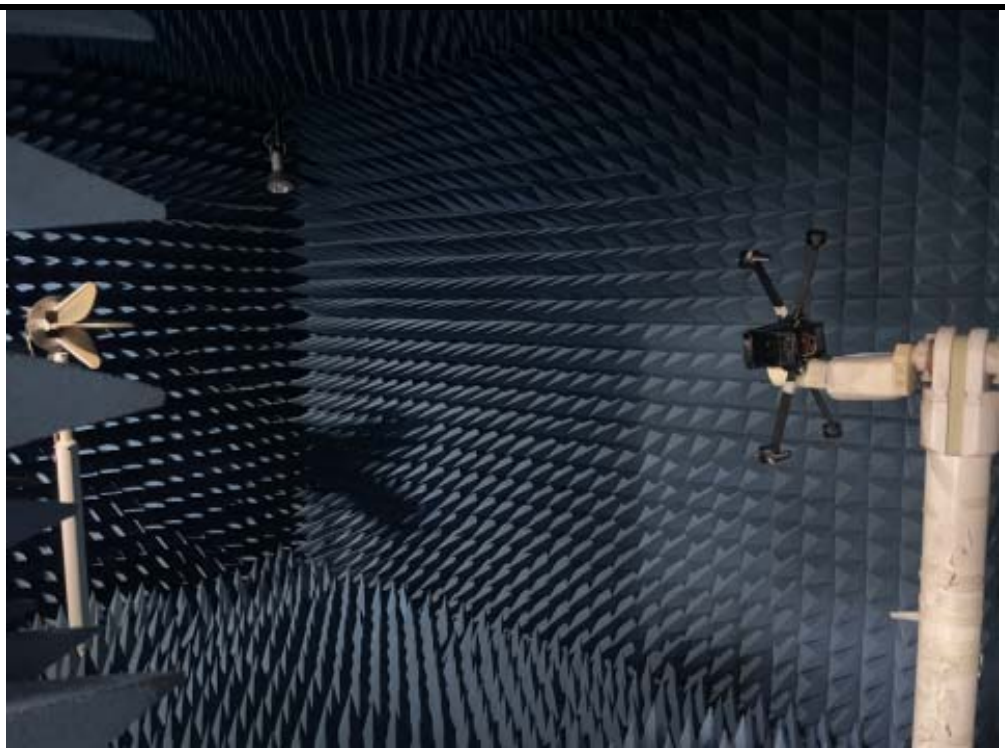
天线规格
Antenna Specification

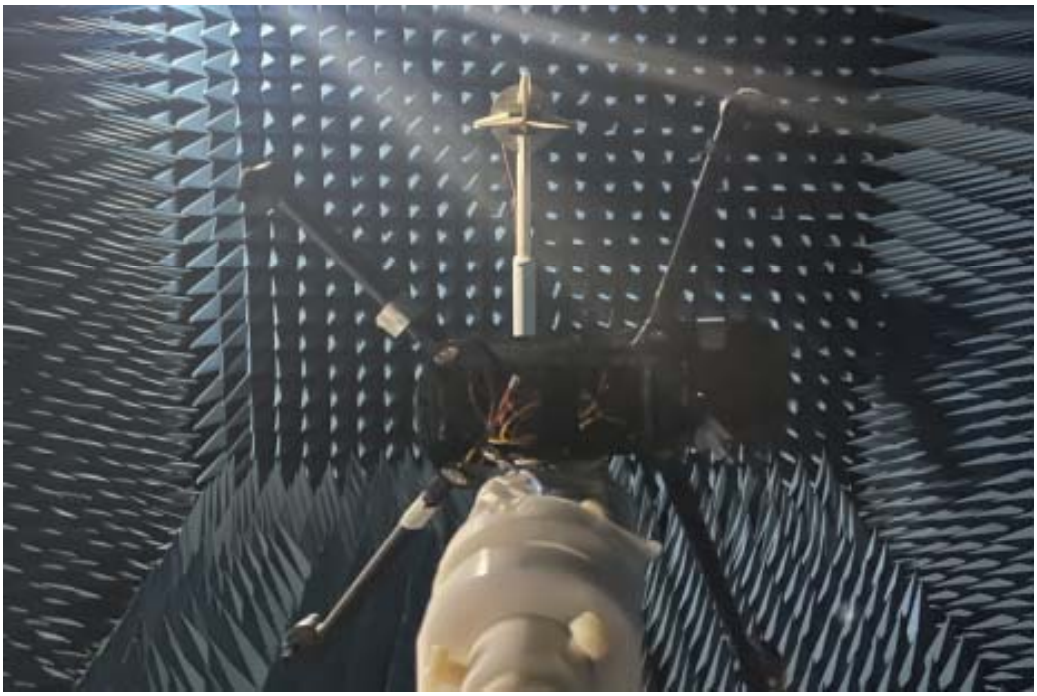
Electrical Properties	
Frequency	830-930MHz 1440MHz 2.4-2.5GHz 5.7-5.8GHz
Impedance	50 Ohm Nominal
V.S.W.R	4.0 Max@830-930MHz 2.0 Max@1440MHz 2.0 Max@2.4-2.5GHz 2.0 Max@5.7-5.8GHz
Gain	0.3 dBi@830-930MHz 2.5 dBi@1440MHz 1.7 dBi@2.4-2.5GHz 1.9 dBi@5.7-5.8GHz
Radiation	Omni-directional
Polarization	Linear
Physical Properties	
Connector	IPEX
Cable Type	O.D.1.37mm
Cable Length	315mm
Cable Color	Black
Operating Temp.	-40 ~ +85 ˚C
Storage Temp / Humidity	25±5˚C / <70%

Antenna Performance Test

Agilent E5071B	
S Parameter Test // 脚架右 FR ***Antenna***	

Antenna Passive Test





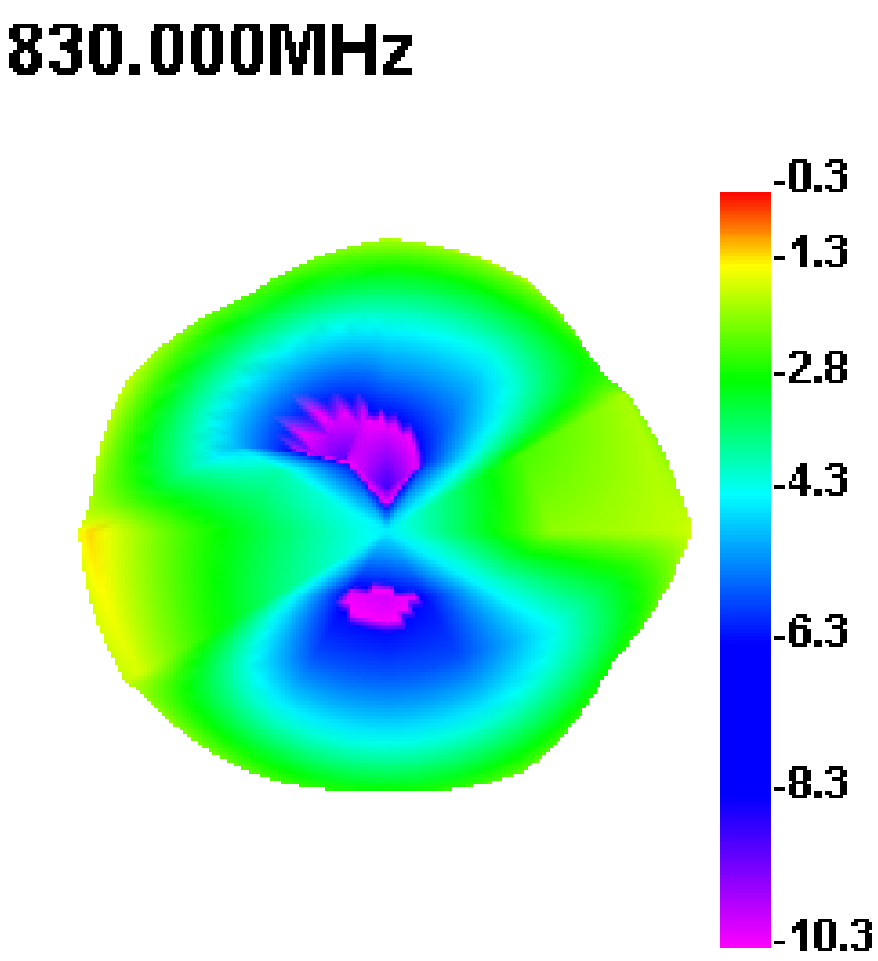
Passive Test For Antenna			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
820	41.1	-3.9	-0.8
830	44.9	-3.5	-0.3
840	41.1	-3.9	-0.5
850	37.1	-4.3	-1.0
860	37.2	-4.3	-1.2
870	38.8	-4.1	-1.2
880	40.0	-4.0	-0.7
890	41.0	-3.9	-0.4
900	43.3	-3.6	0.3
910	34.0	-4.7	-0.6
920	33.9	-4.7	-0.6
930	32.4	-4.9	-1.3
940	31.1	-5.1	-1.4
950	27.6	-5.6	-2.3
960	25.6	-5.9	-2.5

Passive Test For Antenna			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1430	50.1	-3.0	1.5
1438	58.3	-2.3	2.1
1446	63.5	-2.0	2.5
1454	64.0	-1.9	2.4
1462	62.0	-2.1	2.2
1470	57.2	-2.4	1.6
1478	50.1	-3.0	0.7
1486	43.6	-3.6	0.0
1494	41.8	-3.8	-0.1
1502	43.1	-3.7	0.2
1510	38.9	-4.1	-0.2

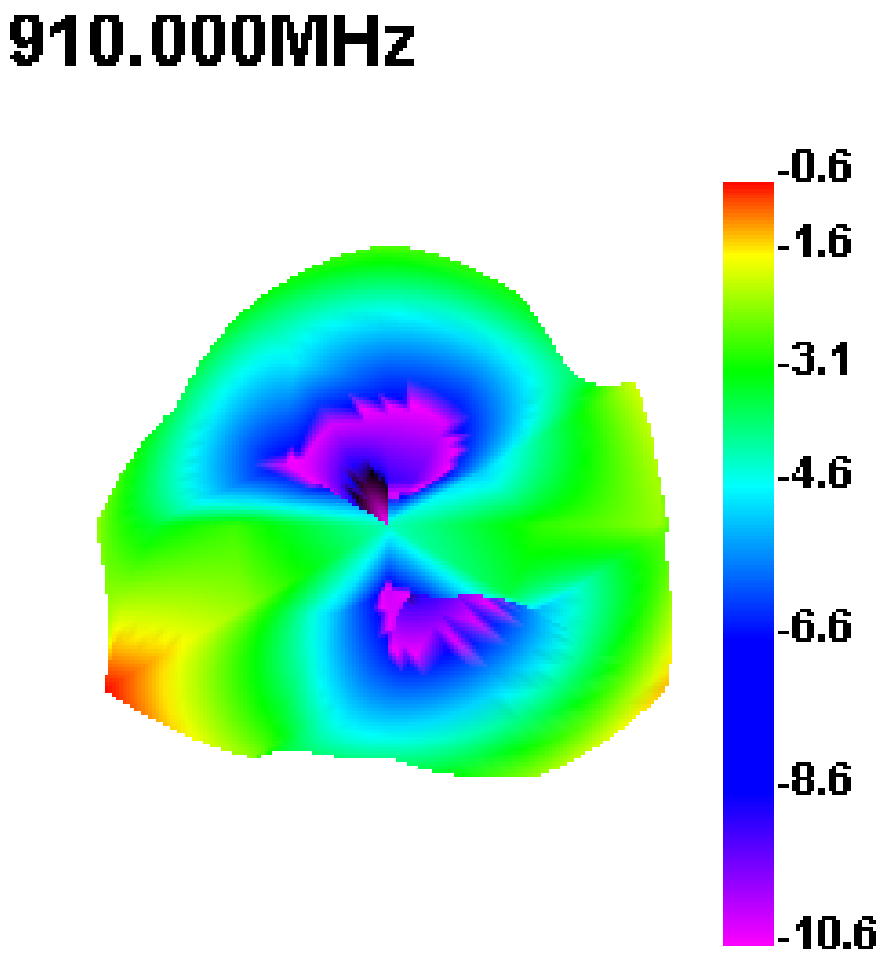
Passive Test For Antenna			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	55.5	-2.6	1.6
2410	55.8	-2.5	1.7
2420	55.2	-2.6	1.7
2430	52.7	-2.8	1.4
2440	51.6	-2.9	1.3
2450	52.6	-2.8	1.3
2460	50.9	-2.9	1.1
2470	51.7	-2.9	1.1
2480	53.3	-2.7	1.1
2490	54.2	-2.7	1.0
2500	54.6	-2.6	0.8

Passive Test For Antenna			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	18.2	-7.4	-1.6
5200	23.4	-6.3	-1.9
5250	23.9	-6.2	-2.2
5300	32.4	-4.9	-0.9
5350	38.8	-4.1	0.0
5400	41.4	-3.8	0.6
5450	40.2	-4.0	0.2
5500	35.5	-4.5	-0.6
5550	38.7	-4.1	-0.4
5600	52.0	-2.8	0.9
5650	67.0	-1.7	1.9
5700	60.7	-2.2	1.6
5750	53.3	-2.7	0.8
5800	47.8	-3.2	0.3
5850	47.1	-3.3	0.5

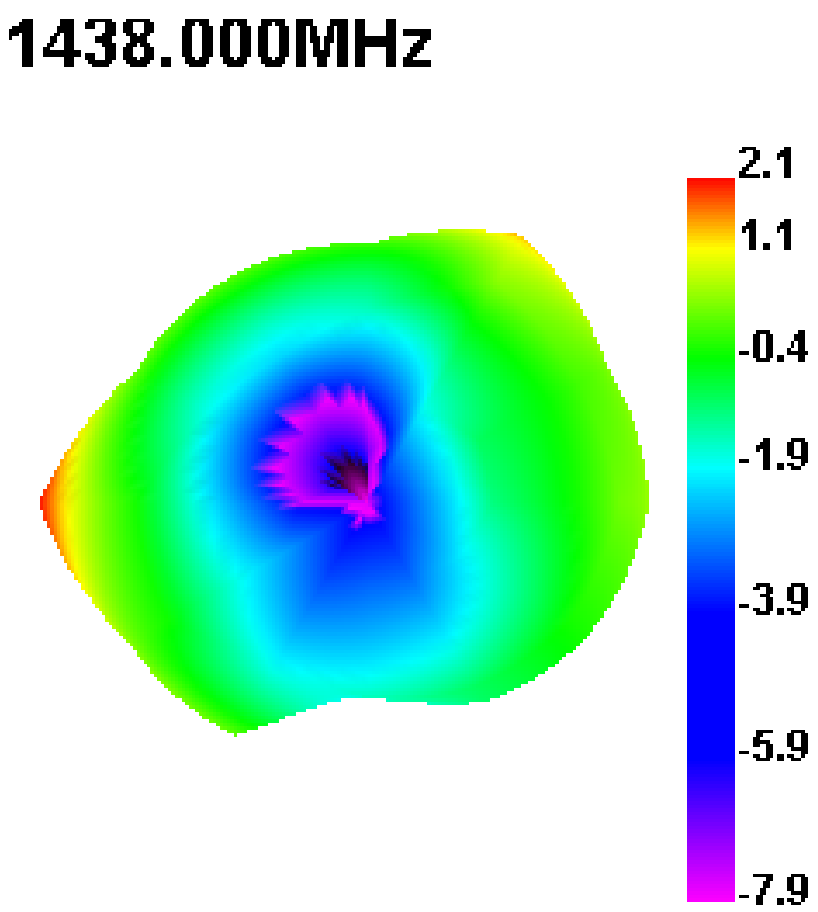
Radiation Pattem For 830MHz



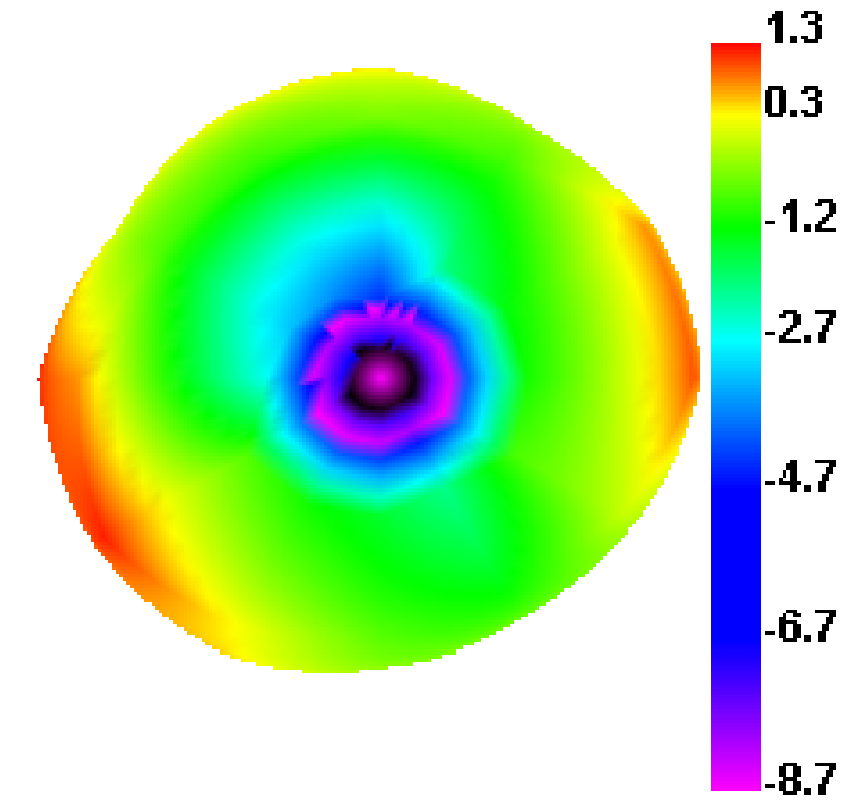
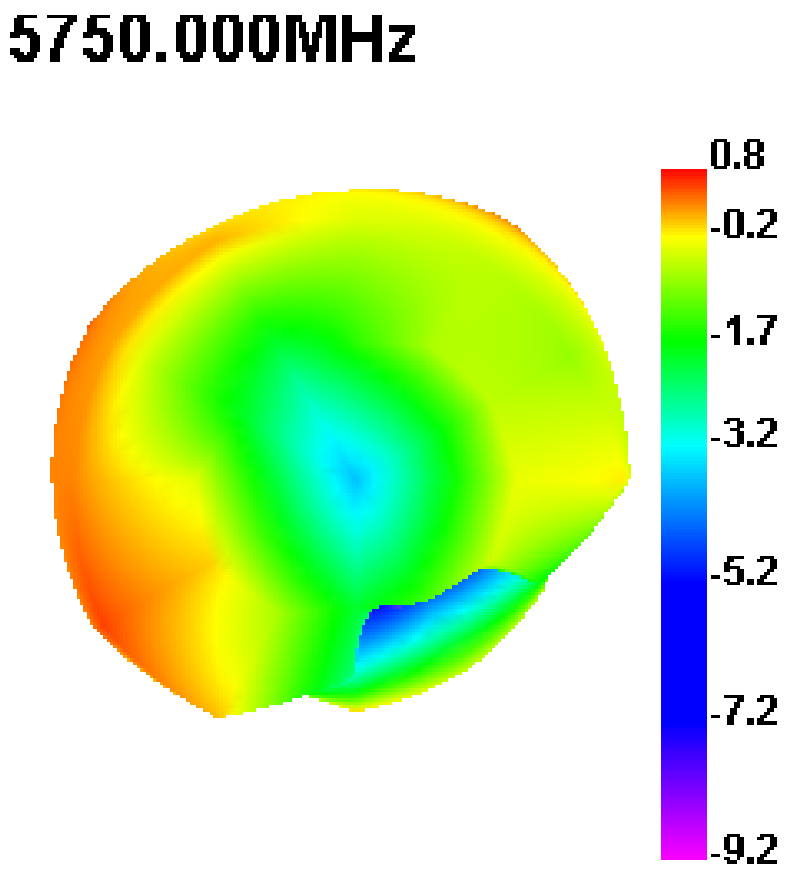
Radiation Pattem For 910MHz



Radiation Pattem For 1438MHz



Radiation Pattem For 2450MHz



Radiation Pattem For 5750MHz