



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<br>Date     | 2022/10/24 |
| 编号<br>File No  | 22102401   |
| 版本<br>Revision | 1.0        |

客户  
CUSTOMER: Autel Robotics Co., Ltd.

客户料号  
CUSTOMER NO: 501006474

品名  
PART NAME: FL Antenna

供方料号  
SUPPLIER NO: YJI01.005.070.301A

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     |
| <br>ChenGuoqiang | XieLi | ChenXingyi |

YJ-RD-F04-A

RoHS  
Compatible

CUSTOMER  
PART NO

REV.

DESCRIPTION

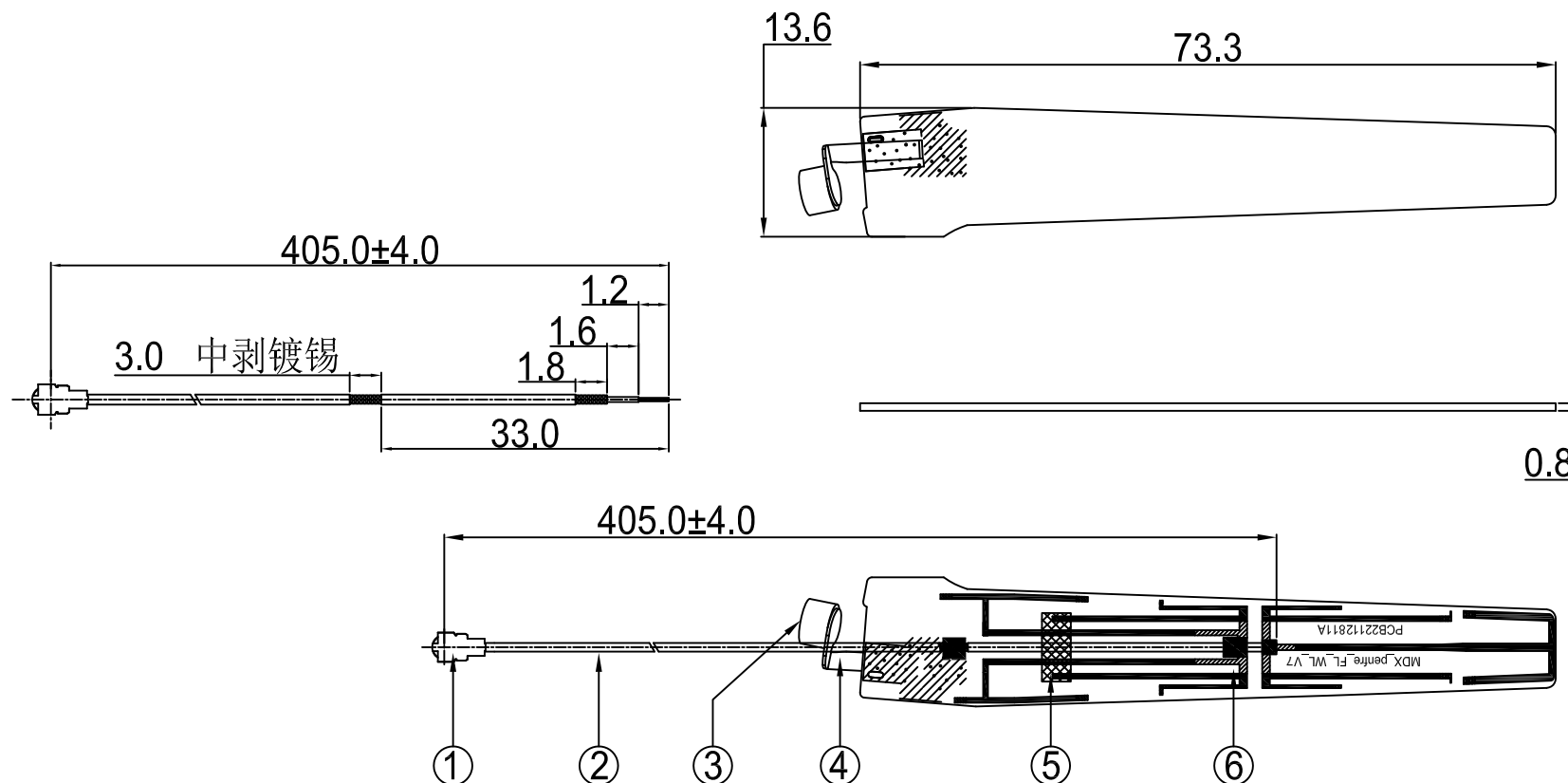
DATE

△

首次发行

2022-10-24

△



|    |                |                        |            |               |      |
|----|----------------|------------------------|------------|---------------|------|
| 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 Gray Low Loss | O.D 1.37   | COA1001XA.P01 | 1    |
| 1  | Mini Connector | Au Plated 1代 原厂        | Cu         | TER1000XA.P02 | 1    |
| NO | PART NAME      | DESCRIPTION            | Material   | Part Number   | Q.TY |



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.: YJI01.005.070.301A

DATE: 2022-10-24

APPROVED BY

CHECKED BY

DESIGNED BY



Tolerance

殷涛

黄志林

陈兴易

UNITS: mm

X.X ±0.50

SCALE: 1/1

X.XX±0.15

REVISION: A

X° ±3°



# 天线规格

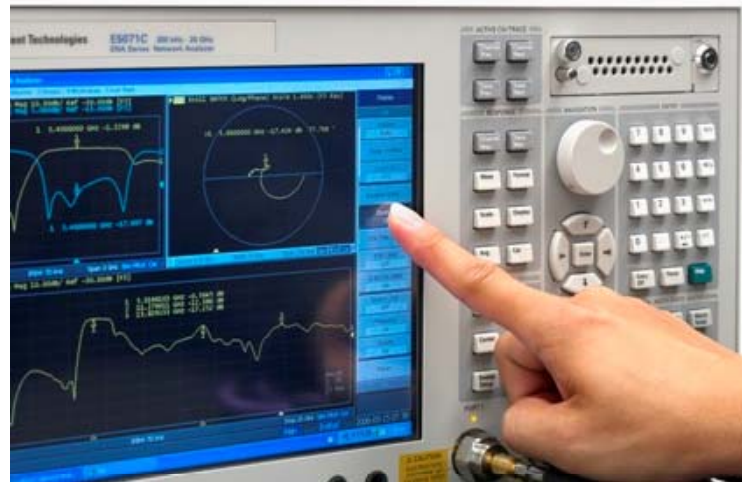
## Antenna Specification

| Electrical Properties   |                                                                                   |
|-------------------------|-----------------------------------------------------------------------------------|
| Frequency               | 830-930MHz<br>1440MHz<br>2.4-2.5GHz<br>5.7-5.8GHz                                 |
| Impedance               | 50 Ohm Nominal                                                                    |
| V.S.W.R                 | 4.0 Max@830-930MHz<br>2.0 Max@1440MHz<br>2.0 Max@2.4-2.5GHz<br>2.0 Max@5.7-5.8GHz |
| Gain                    | 0.6 dBi@830-930MHz<br>1.4 dBi@1440MHz<br>1.9 dBi@2.4-2.5GHz<br>2.1 dBi@5.7-5.8GHz |
| Radiation               | Omni-directional                                                                  |
| Polarization            | Linear                                                                            |
| Physical Properties     |                                                                                   |
| Connector               | IPEX                                                                              |
| Cable Type              | O.D.1.37mm                                                                        |
| Cable Length            | 405mm                                                                             |
| Cable Color             | Gray                                                                              |
| Operating Temp.         | -40 ~ +85 °C                                                                      |
| Storage Temp / Humidity | 25±5°C / <70%                                                                     |

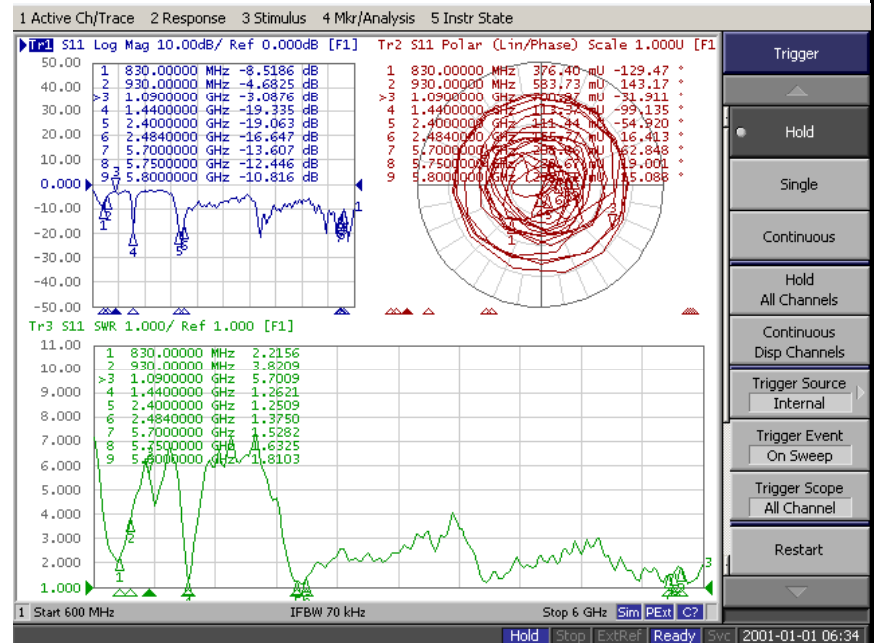


# Antenna Performance Test

**Agilent  
E5071B**

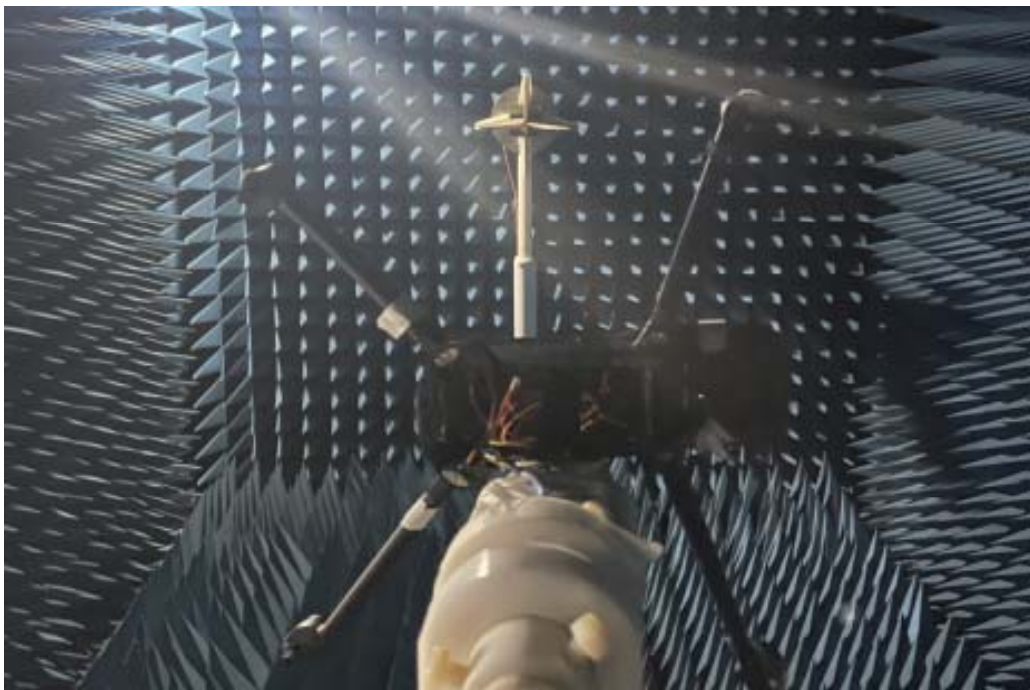


**S  
Parameter  
Test //**  
**脚架左 FL**  
**Antenna**





## *Antenna Passive Test*





### Passive Test For Antenna

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 820           | 45.2        | -3.5         | 0.3           |
| 830           | 51.6        | -2.9         | 0.5           |
| 840           | 49.9        | -3.0         | 0.6           |
| 850           | 47.5        | -3.2         | 0.1           |
| 860           | 45.8        | -3.4         | 0.2           |
| 870           | 42.7        | -3.7         | 0.1           |
| 880           | 38.5        | -4.2         | -0.4          |
| 890           | 35.7        | -4.5         | -0.9          |
| 900           | 36.4        | -4.4         | -0.8          |
| 910           | 28.6        | -5.4         | -2.0          |
| 920           | 28.8        | -5.4         | -2.0          |
| 930           | 28.7        | -5.4         | -1.9          |
| 940           | 29.4        | -5.3         | -1.9          |
| 950           | 27.5        | -5.6         | -2.1          |
| 960           | 27.1        | -5.7         | -2.1          |



### Passive Test For Antenna

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 1430          | 45.7        | -3.4         | 0.4           |
| 1438          | 52.2        | -2.8         | 1.0           |
| 1446          | 57.3        | -2.4         | 1.3           |
| 1454          | 59.4        | -2.3         | 1.4           |
| 1462          | 59.6        | -2.3         | 1.2           |
| 1470          | 57.1        | -2.4         | 0.7           |
| 1478          | 52.2        | -2.8         | 0.4           |
| 1486          | 46.9        | -3.3         | 0.0           |
| 1494          | 46.3        | -3.4         | 0.0           |
| 1502          | 48.4        | -3.2         | 0.1           |
| 1510          | 44.0        | -3.6         | -0.2          |



### Passive Test For Antenna

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 2400          | 55.5        | -2.6         | 1.8           |
| 2410          | 56.3        | -2.5         | 1.9           |
| 2420          | 56.1        | -2.5         | 1.8           |
| 2430          | 54.1        | -2.7         | 1.5           |
| 2440          | 52.8        | -2.8         | 1.2           |
| 2450          | 54.7        | -2.6         | 1.2           |
| 2460          | 54.0        | -2.7         | 0.9           |
| 2470          | 54.5        | -2.6         | 0.9           |
| 2480          | 53.6        | -2.7         | 0.8           |
| 2490          | 52.4        | -2.8         | 0.7           |
| 2500          | 51.8        | -2.9         | 0.6           |



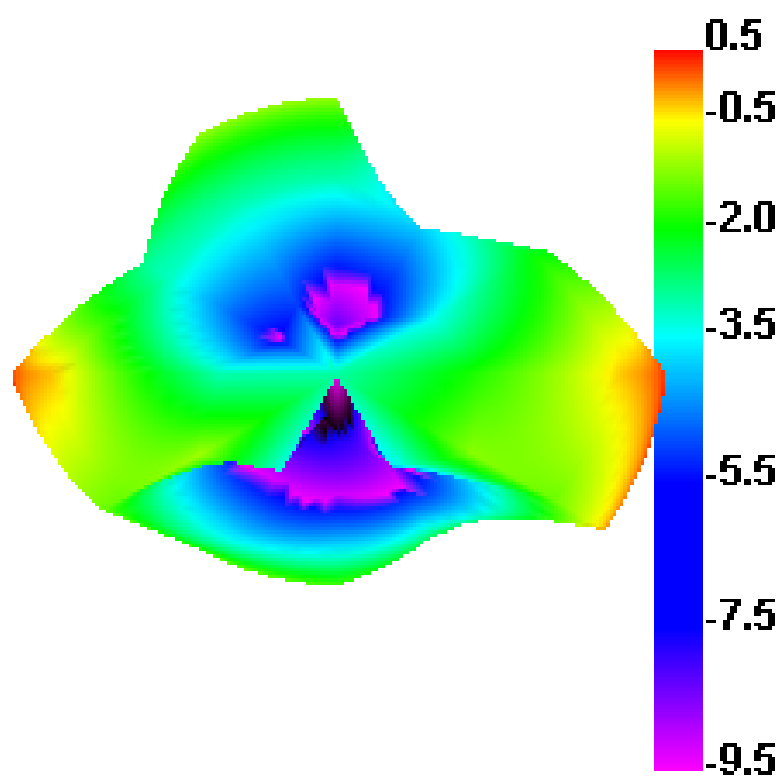
### Passive Test For Antenna

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) |
|---------------|-------------|--------------|---------------|
| 5150          | 18.2        | -7.4         | -0.4          |
| 5200          | 27.6        | -5.6         | 0.7           |
| 5250          | 24.6        | -6.1         | -0.3          |
| 5300          | 28.4        | -5.5         | 0.7           |
| 5350          | 33.1        | -4.8         | 0.7           |
| 5400          | 40.0        | -4.0         | 0.5           |
| 5450          | 38.6        | -4.1         | -0.2          |
| 5500          | 32.1        | -4.9         | -1.1          |
| 5550          | 32.6        | -4.9         | -1.0          |
| 5600          | 42.8        | -3.7         | 0.3           |
| 5650          | 60.9        | -2.2         | 2.1           |
| 5700          | 57.1        | -2.4         | 1.7           |
| 5750          | 51.3        | -2.9         | 0.9           |
| 5800          | 45.5        | -3.4         | 0.4           |
| 5850          | 47.1        | -3.3         | 0.6           |



## Radiation Patten For 830MHz

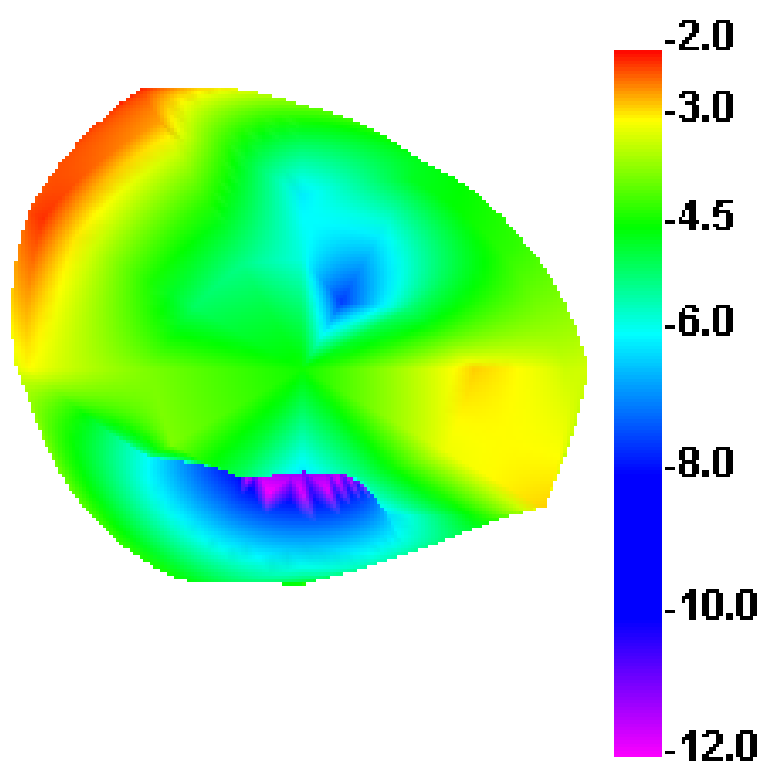
**830.000MHz**





## Radiation Patten For 910MHz

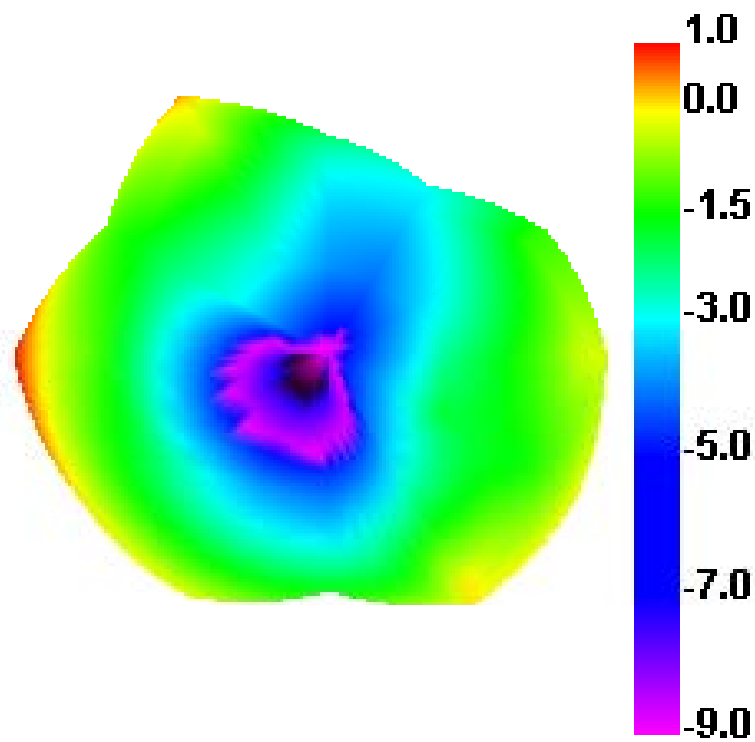
**910.000MHz**





## Radiation Patten For 1438MHz

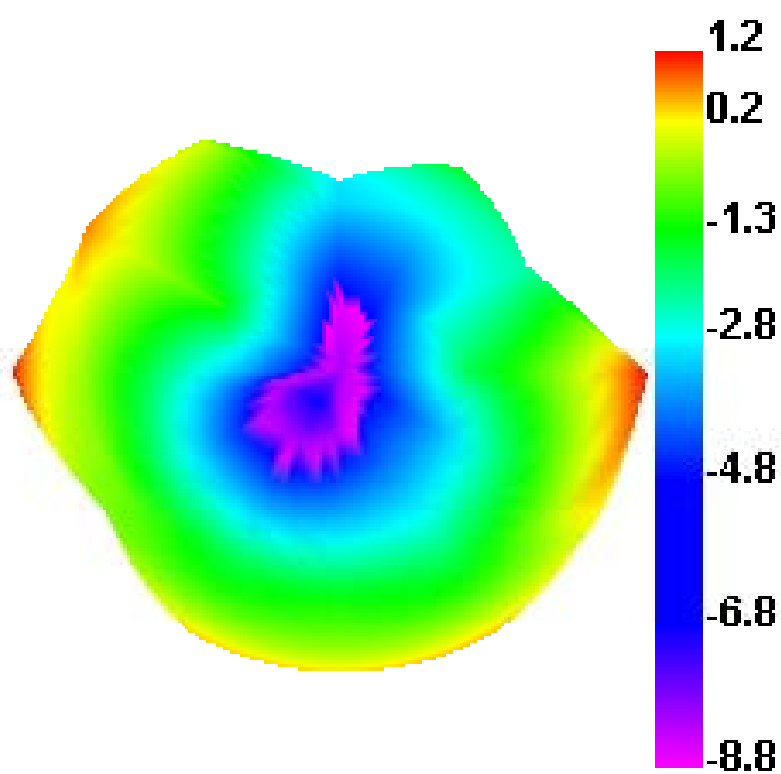
**1438.000MHz**





## Radiation Patten For 2450MHz

**2450.000MHz**





## Radiation Patten For 5750MHz

**5750.000MHz**

