



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     | 2023/02/17 |
| 编号<br>File No  | 23021702   |
| 版本<br>Revision | 1.0        |

客户  
CUSTOMER: 道通 Autel

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 |
|                          |       |            |

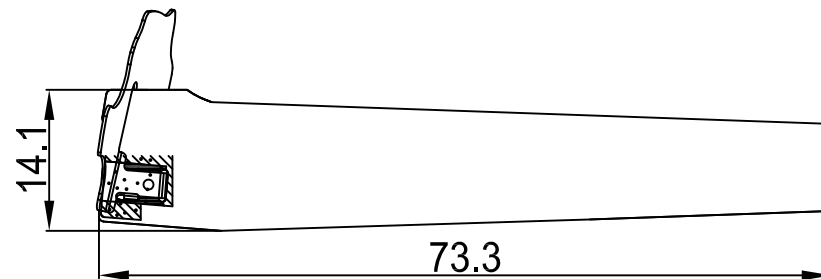
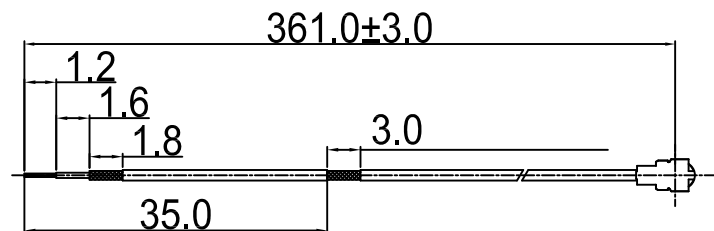
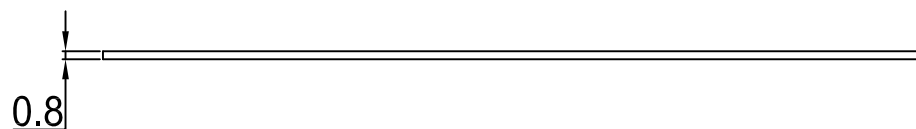
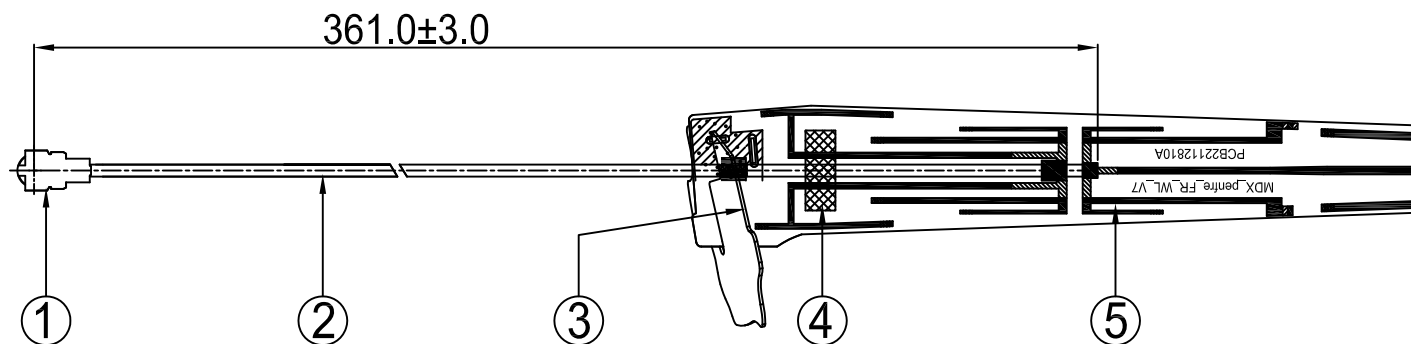
| 供方确认 SUPPLIER SIGNATURE                                                                             |       |            |
|-----------------------------------------------------------------------------------------------------|-------|------------|
| APPROVAL                                                                                            | CHECK | DESIGN     |
| <br>ChenGuoqiang | XieLi | ChenXingyi |

YJ-RD-F04-A

**RoHS**  
Compatible

CUSTOMER  
PART NO

|  |
|--|
|  |
|  |



东莞市一佳电子通讯科技有限公司

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|                              |            |             |                                                                                                                                 |                  |
|------------------------------|------------|-------------|---------------------------------------------------------------------------------------------------------------------------------|------------------|
| PART NAME: RF Antenna        |            |             | DATE: 2022-11-29                                                                                                                |                  |
| PART NO.: YJ101.005.070.302A |            |             |                                                                                                                                 |                  |
| APPROVED BY                  | CHECKED BY | DESIGNED BY | <br>UNITS: mm<br>SCALE: 1/1<br>REVISION: A | Tolerance        |
|                              |            |             |                                                                                                                                 | X.X $\pm 0.50$   |
|                              |            |             |                                                                                                                                 | X.XX $\pm 0.15$  |
|                              |            |             |                                                                                                                                 | X° $\pm 3^\circ$ |



# 天线规格

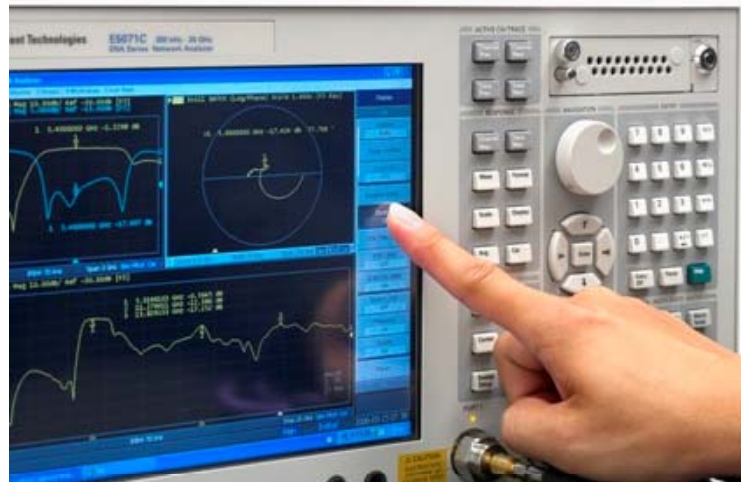
## Antenna Specification

| 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                    | 0.3 dBi@830-930MHz<br>2.5 dBi@1440MHz<br>1.7 dBi@2.4-2.5GHz<br>1.9 dBi@5.7-5.8GHz |
| Radiation               | Omni-directional                                                                  |
| Polarization            | Linear                                                                            |
| Physical Properties     |                                                                                   |
| Connector               | 1 IPEX                                                                            |
| Cable Type              | O.D.1.37mm                                                                        |
| Cable Length            | 361mm                                                                             |
| Cable Color             | Black                                                                             |
| Operating Temp.         | -40 ~ +85 °C                                                                      |
| Storage Temp / Humidity | 25±5°C / <70%                                                                     |

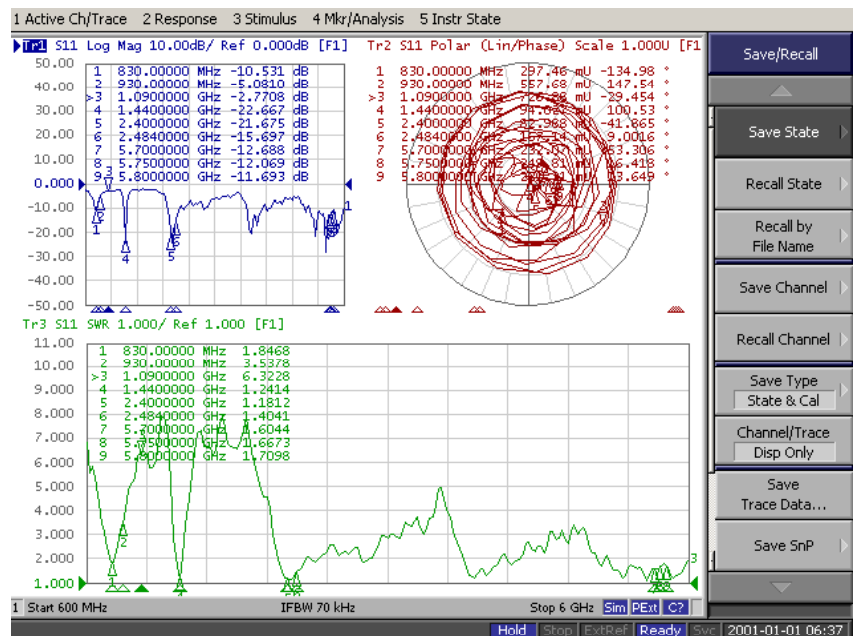


## Antenna Performance Test

**Agilent  
E5071B**

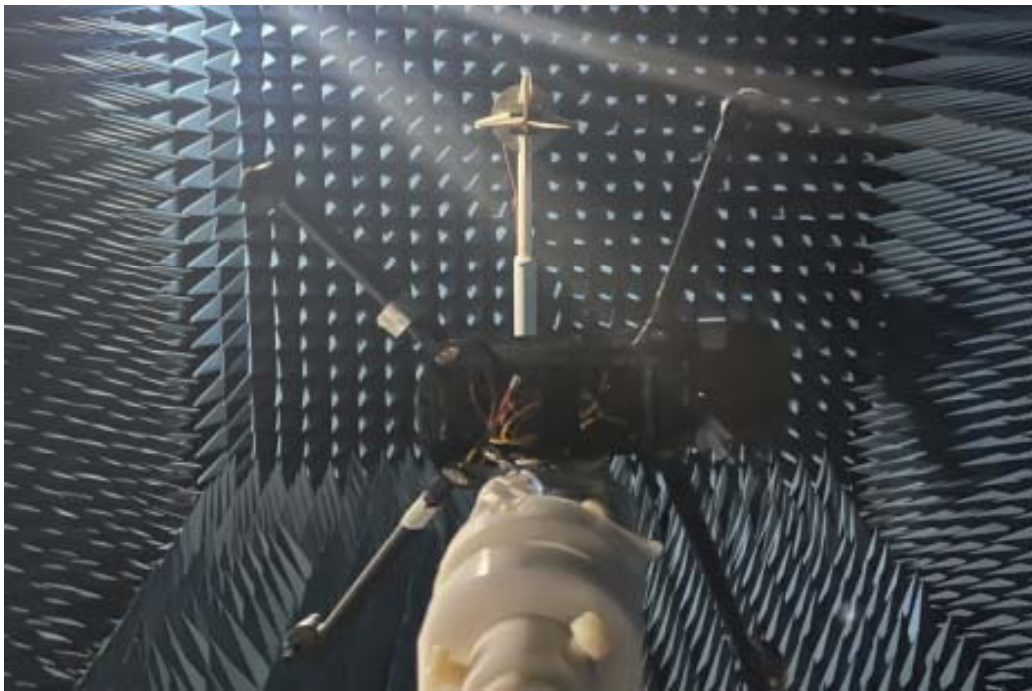


**S  
Parameter  
Test //  
FR  
Antenna**





## *Antenna Passive Test*





| Passive Test For Antenna |             |              |               |
|--------------------------|-------------|--------------|---------------|
| Freq<br>(MHz)            | Effi<br>(%) | Effi<br>(dB) | Gain<br>(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<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(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<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(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           |





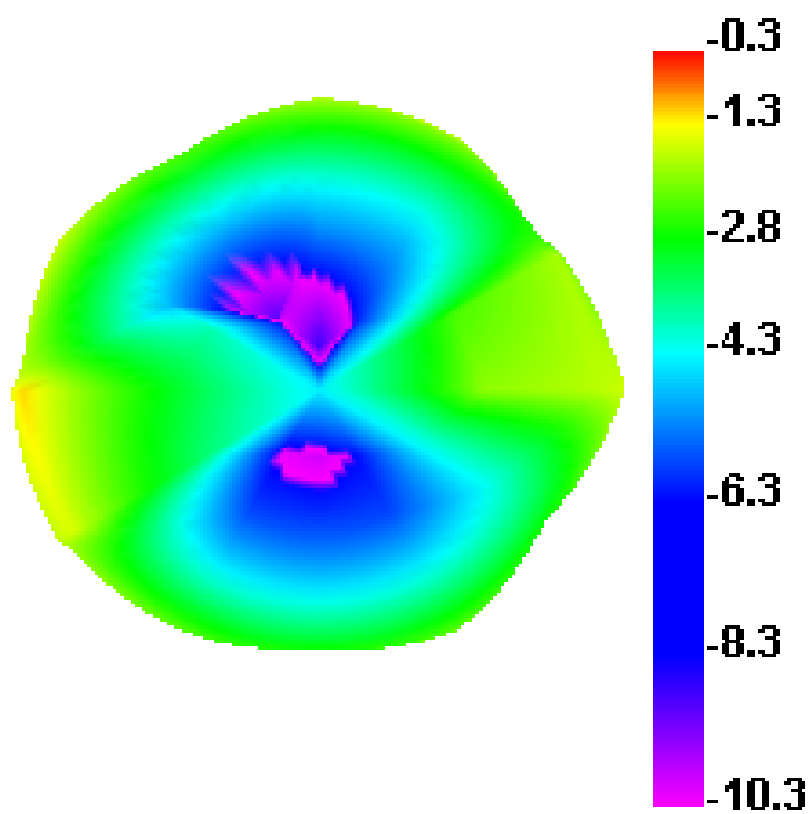
### Passive Test For Antenna

| Freq<br>(MHz) | Effi<br>(%) | Effi<br>(dB) | Gain<br>(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 Patten For 830MHz

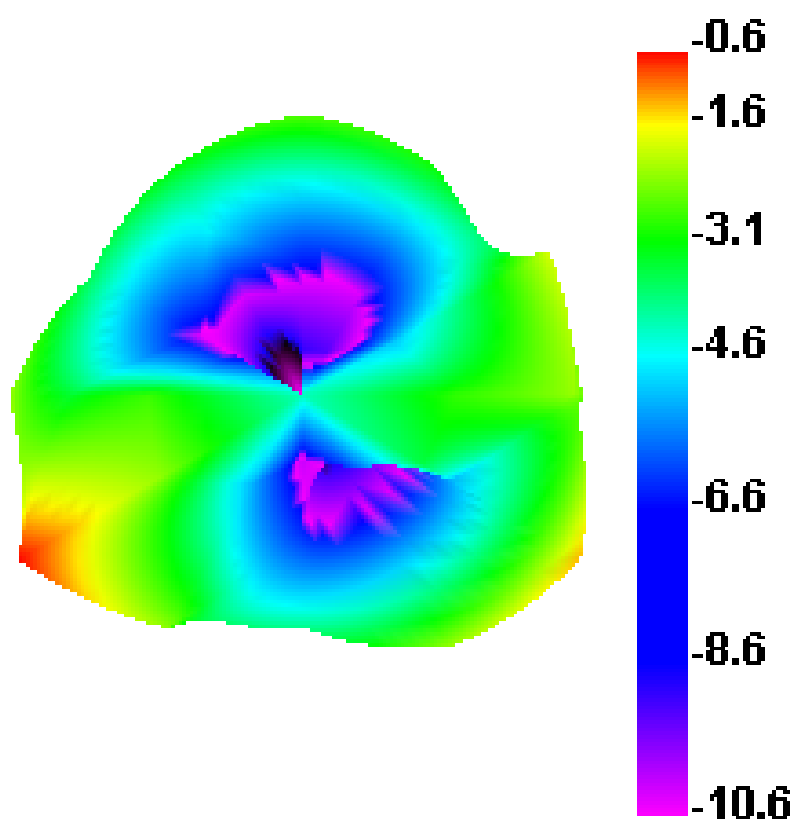
**830.000MHz**





## Radiation Patten For 910MHz

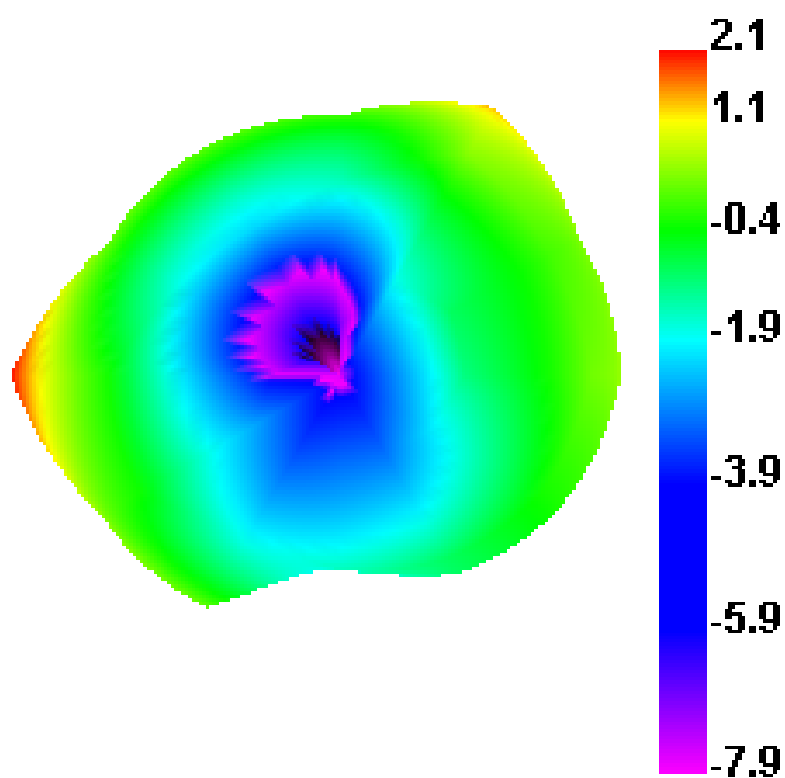
**910.000MHz**





## Radiation Patten For 1438MHz

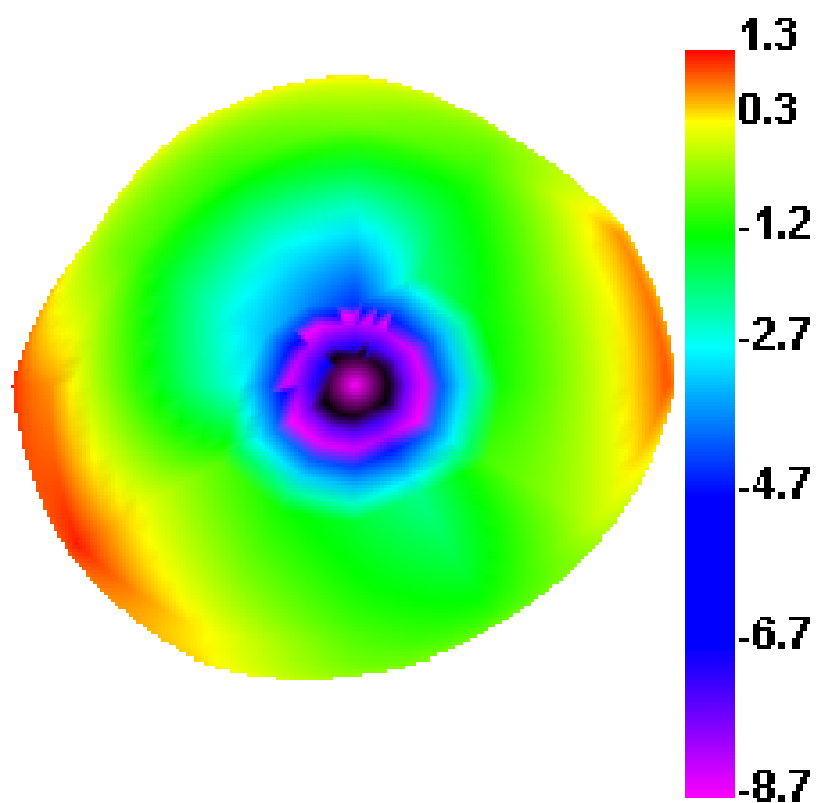
**1438.000MHz**





## Radiation Patten For 2450MHz

**2450.000MHz**





## Radiation Patten For 5750MHz

**5750.000MHz**

