

## SPECIFICATION FOR APPROVAL

**CUSTOMER/PROJECT:** Shenzhen CTV Int Cloud Technology Co., Ltd

**CUSTOMER P.N:** \_\_\_\_\_

**PRODUCT NAME:** 868&915 LTE ANT

**MODEL NO:** 32J002A

**SPECIFICATION:** \_\_\_\_\_

| SUPPLIER AUTHORIZED SIGNATURE |         |          |
|-------------------------------|---------|----------|
| PREPARED                      | CHECKED | APPROVED |
| Mark                          |         |          |

| CUSTOMER AUTHORIZED SIGNATURE |  |    |  |
|-------------------------------|--|----|--|
| PM                            |  | QE |  |

Please return to us one copy of "SPECIFICATION FOR APPROVAL" with your approved signature.

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## 1 Noun explanation

|       |                                         |
|-------|-----------------------------------------|
| dBi   | Decibel relative isotropic antenna      |
| Tx    | Transmit frequency                      |
| Rx    | Receive frequency                       |
| TRP   | Total Radiated Power                    |
| TIS   | Total Isotropic Sensitivity             |
| VSWR  | Voltage Standing Wave Ratio             |
| GSM   | Global Service for Mobile communication |
| DCS   | Digital Communication System            |
| CDMA  | Code Division Multiple Access           |
| WCDMA | Wideband Code Division Multiple Access  |

## 2 Test equipment

network analyzer  
Agilent8960  
SATIMO64 chamber

## 3 Working frequency band

The yellow Identification is the using band

| band      | Frequency       |
|-----------|-----------------|
| GSM800    | 824MHz~896MHz   |
| GSM900    | 890MHz~915MHz   |
| DCS1800   | 1710MHz~1785MHz |
| PCS1900   | 1850MHz~1910MHz |
| CDMA800   | 825MHz~835MHz   |
| WCDMA900  | 880MHz~915MHz   |
| WCDMA2100 | 1920MHz~1980MHz |
| NB-B5     | 824MHz~896MHz   |
| NB-B8     | 890MHz~915MHz   |
| 868M-915M | 868M-915M       |

## 4 Test project

4.1 VSWR plot

4.2 Simth plot

4.3 Radiation pattern

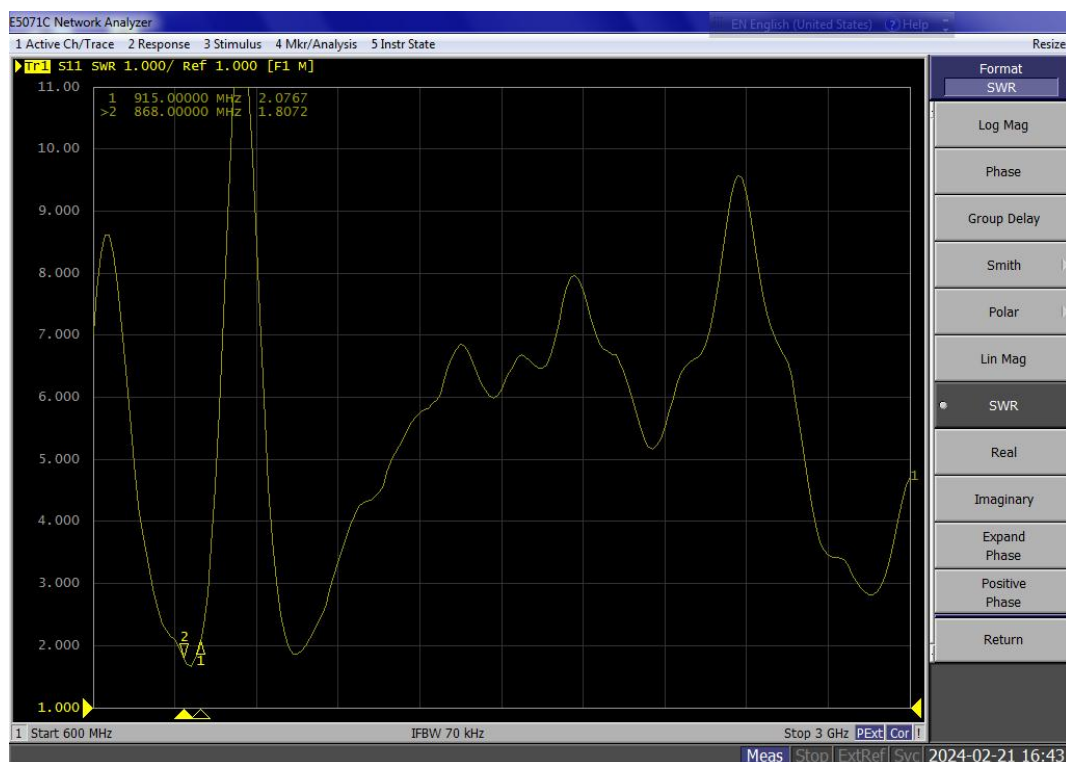
4.4 Gain & Efficiency

4.5 TRP&TIS

## 5 Antenna parameter

5.1 VSWR

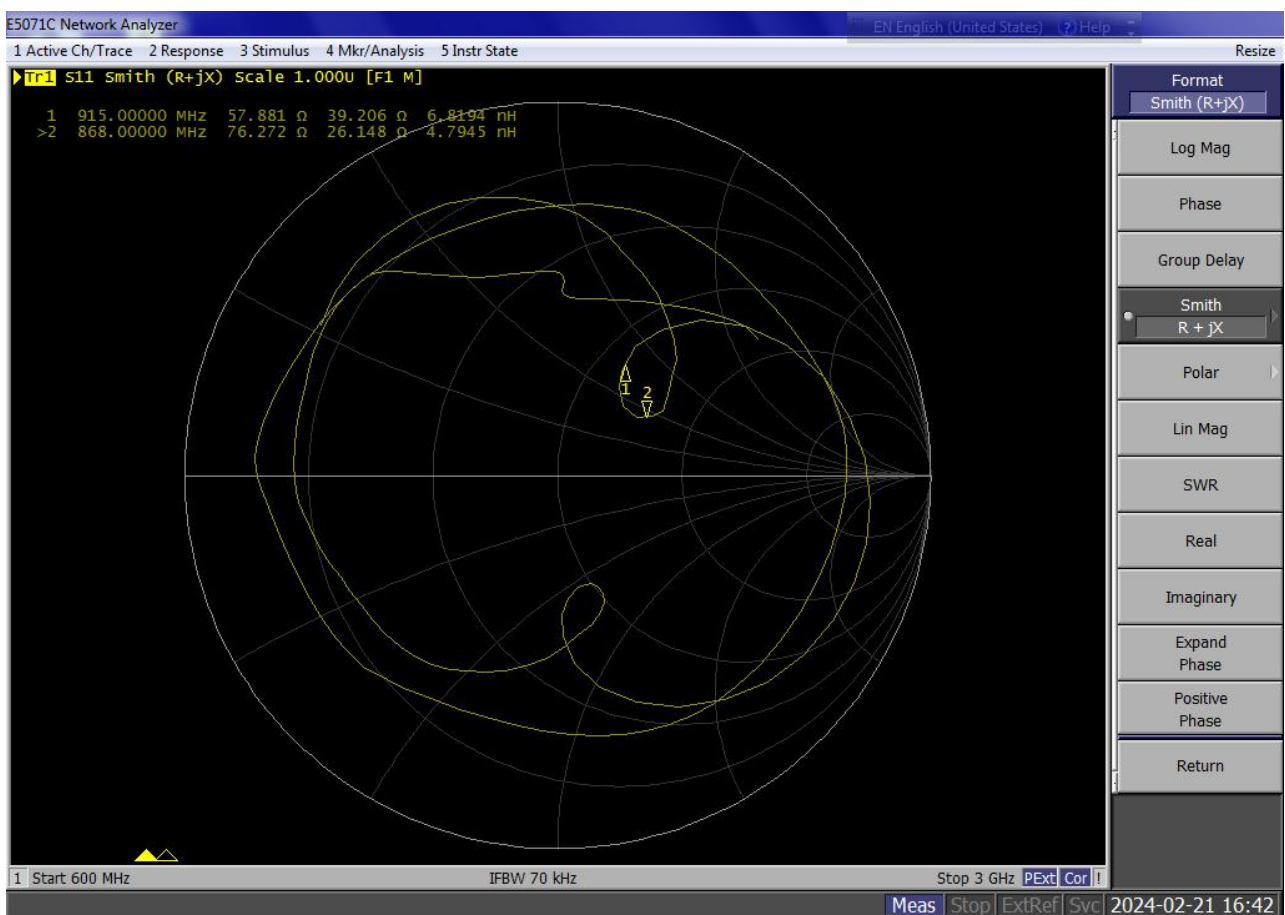
5.1.1 VSWR plot



## 5.1.2 VSWR data

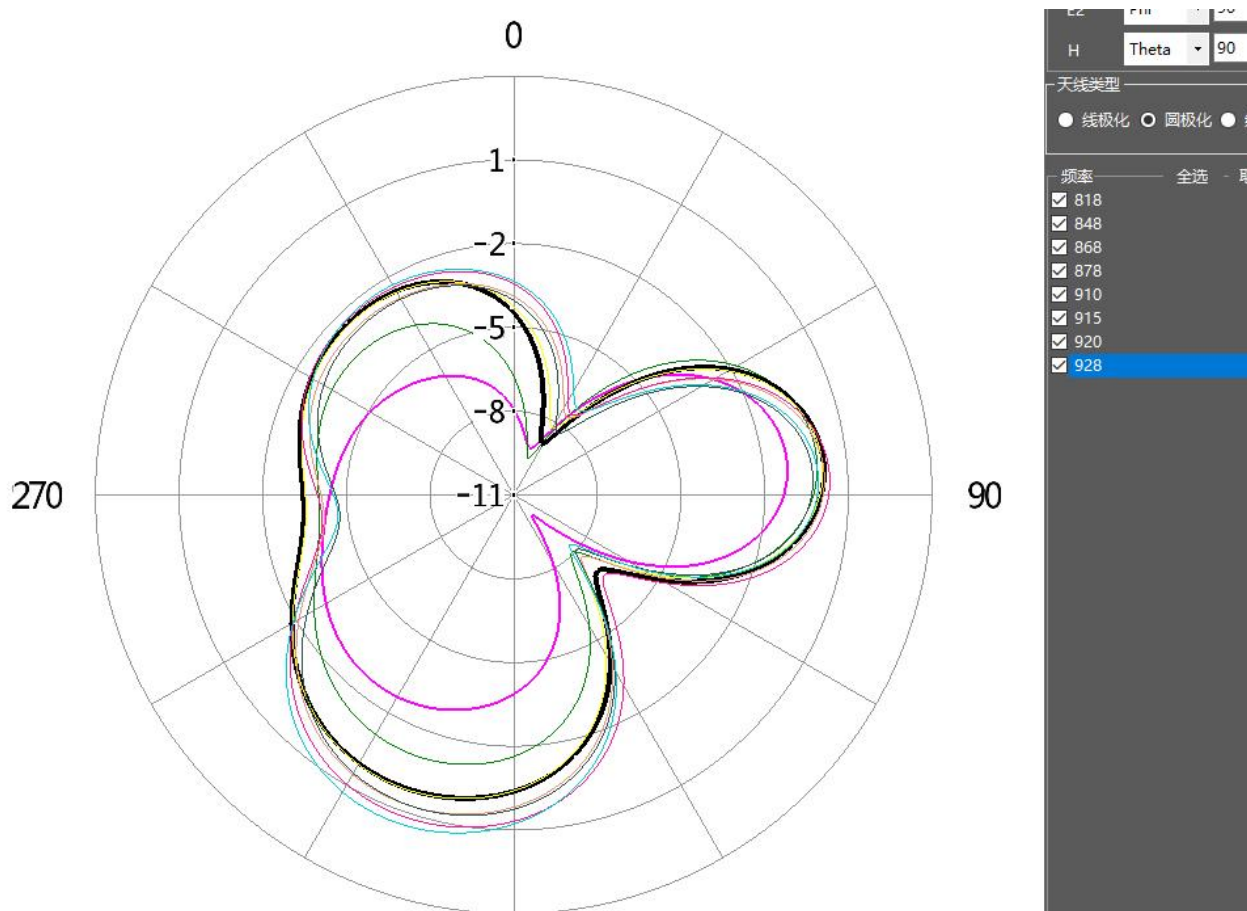
|          |      |      |
|----------|------|------|
| Freq/MHz | 868  | 915  |
| VSWR     | 1.50 | 2.07 |

## 5.2 Smith plot



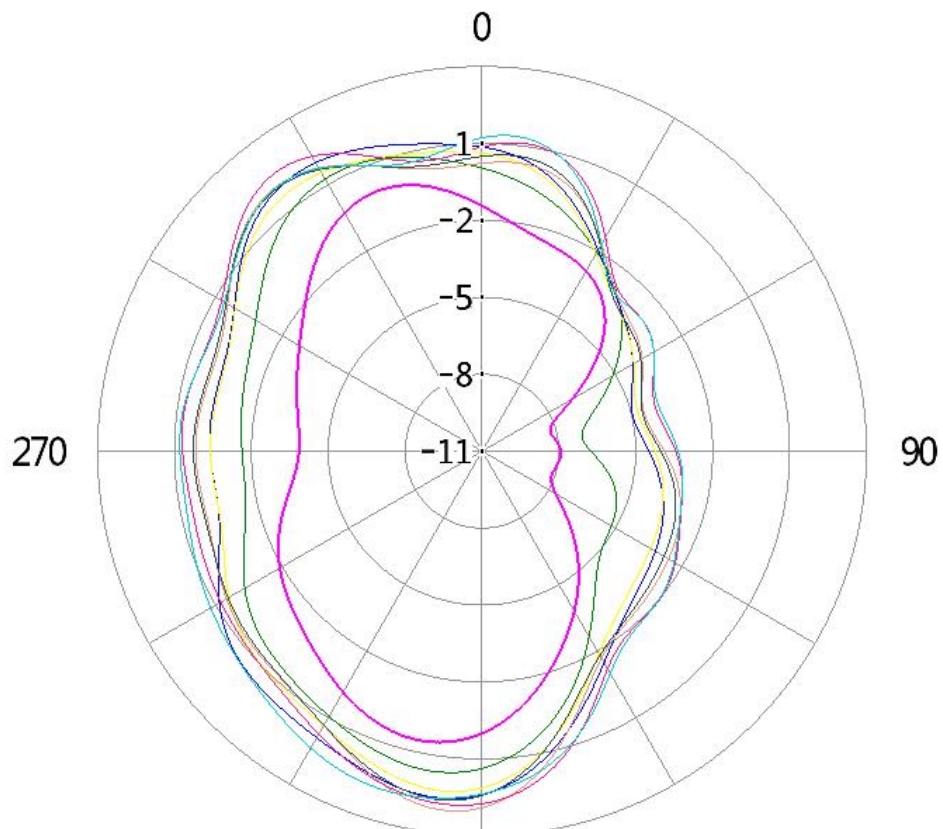
## 5.3 Radiation pattern

### 5.3.1 H-plane



5.3.2 E-plane

**E1**



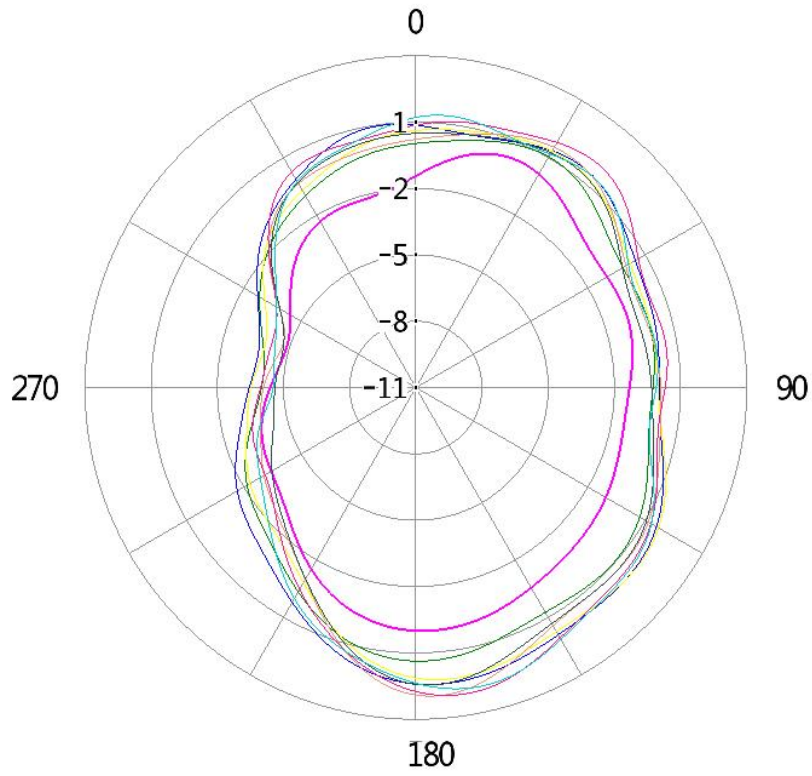
天线类型

☒ 线极化 ☐ 圆极化 ☒ 线极化

频率 全选 取消全选

- ☒ 818
- ☒ 848
- ☒ 868
- ☒ 878
- ☒ 910
- ☒ 915
- ☒ 920
- ☒ 928

## E2



|    |       |    |
|----|-------|----|
| E2 | Phi   | 90 |
| H  | Theta | 90 |

天线类型

☒ 线极化
 ☐ 圆极化
 ☒ 线极化

频率 全选 取消全选

- ☒ 818
- ☒ 848
- ☒ 868
- ☒ 878
- ☒ 910
- ☒ 915
- ☒ 920
- ☒ 928

## 5.4 UGain & Efficiency

| Frequency(MHz) | Peak Gain(dBi) | Efficiency(%) |
|----------------|----------------|---------------|
| 848            | 1.64           | 45.06         |
| 868            | 2.64           | 47.78         |
| 878            | 2.43           | 48.38         |
| 910            | 3.14           | 50.81         |
| 915            | 3.11           | 54.33         |
| 920            | 2.73           | 47.96         |

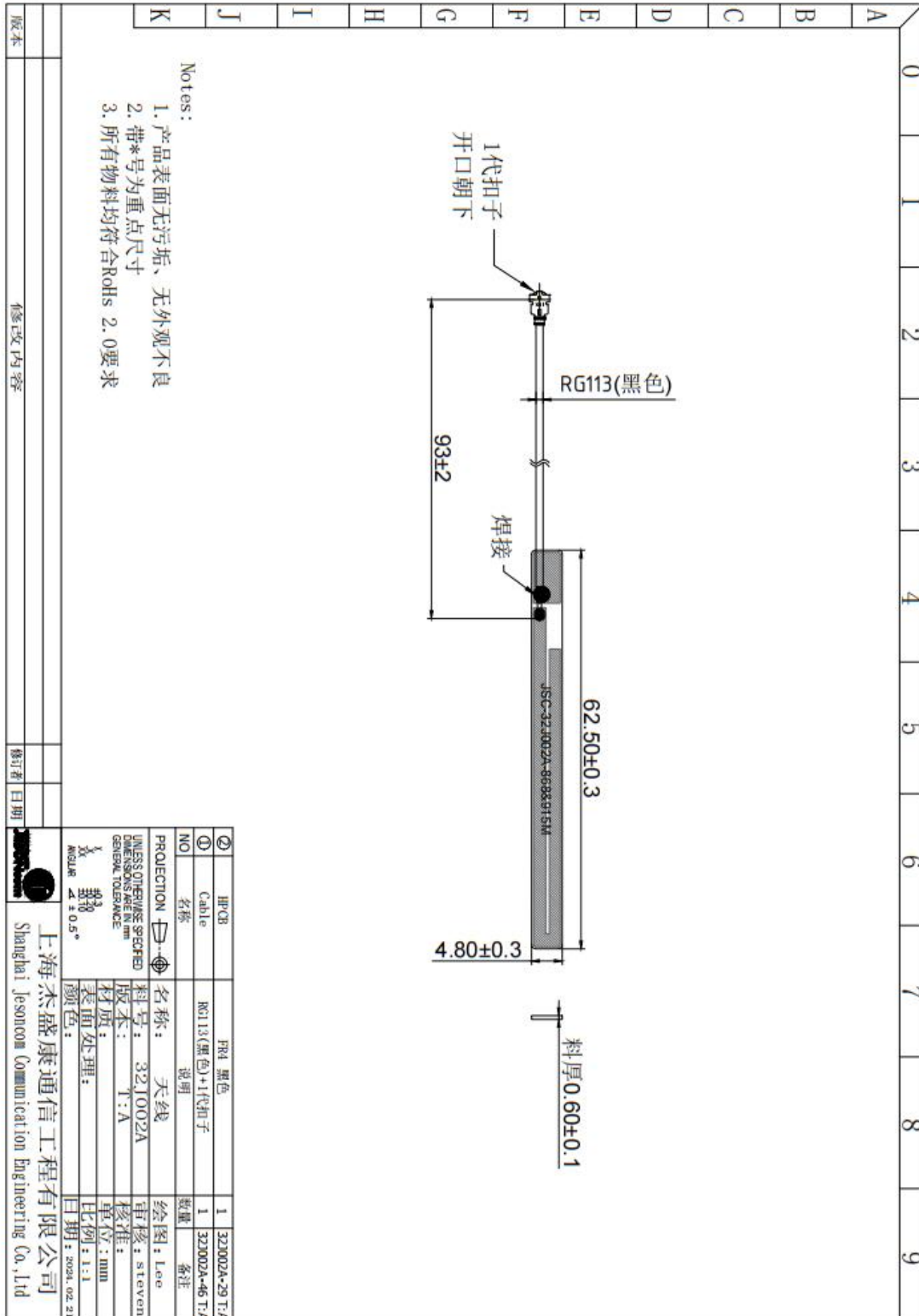
## 6 Environmental treatment suggestions

Environment does not need treatment

## 7 Impedance matching

Impedance does not need treatment

## 8 Antenna plan



## **9 Antenna installation guide**

### 9.1 Antenna installation instructions

## **10 Other**