

# ANTENNA SPECIFICATION0

CUS P/N : T2970  
CREDITS P/N :

ApplicationDate: 2022-12-9  
Editor:

Rev: R:A0  
Page 1 of 7

## Index

|    |     |       |                                    |             |
|----|-----|-------|------------------------------------|-------------|
| 1. |     |       | <b>General Description</b>         | <b>1</b>    |
|    |     |       |                                    |             |
| 2. |     |       | <b>Electrical Specifications</b>   | <b>2</b>    |
|    | 2-1 |       | <b>Set-up</b>                      | <b>2</b>    |
|    |     | 2-1-1 | <i>Frequency Band</i>              | <b>2</b>    |
|    |     | 2-1-2 | <i>Impedance</i>                   | <b>2</b>    |
|    |     | 2-1-3 | <i>Matching Requirements</i>       | <b>2</b>    |
|    |     | 2-1-4 | <i>VSWR</i>                        | <b>2</b>    |
|    | 2-2 |       | <b>Test Data</b>                   | <b>3to4</b> |
|    |     | 2-2-1 | <i>VSWR</i>                        | <b>3</b>    |
|    |     | 2-2-2 | <i>TRP&amp;TIS</i>                 | <b>4</b>    |
|    |     |       |                                    |             |
|    |     |       |                                    |             |
| 3. |     |       | <b>Mechanical Specification</b>    | <b>5to7</b> |
|    | 3-1 |       | <b>Mechanical Configuration</b>    | <b>5</b>    |
|    |     | 3-1-1 | <b>Mechanical Configuration</b>    | <b>5</b>    |
|    |     | 3-1-2 | <b>Mechanical Configuration</b>    | <b>6</b>    |
|    | 3-2 |       | <b>Measurement Data</b>            | <b>7</b>    |
|    | 3-3 |       | <b>Salt-Spray Test</b>             | <b>7</b>    |
|    |     |       |                                    |             |
| 4. |     |       | <b>Environment Characteristics</b> | <b>7</b>    |
|    |     |       |                                    |             |
|    |     |       |                                    |             |

# ANTENNA SPECIFICATION0

CUS P/N : T2970  
CREDITS P/N :

ApplicationDate: 2022-12-9  
Editor:

Rev: R:A0  
Page 2 of 7

## 1. General Description

This report summarizes the electrical performance results of the proposed Internal antenna to support the F12 (BT) program. The antenna is an assembly BT 2.4G.



## 2. Electrical Specifications

### 2-1 Set-up

#### 2-1-1 Frequency Band

| Frequency Band | Tx(MHz)               | Rx(MHz) |
|----------------|-----------------------|---------|
|                |                       |         |
|                |                       |         |
| <b>WIFI</b>    | <b>2400-2450-2500</b> |         |

#### 2-1-2 Impedance

Nominal Impedance(including matching circuit) : **50** ohms

#### 2-1-3 Matching Requirements

The matching circuit on the PCB of the handset is according to

Figure 1

Optimum matching circuit is highly dependent on the handset and thus.

Final matching circuit layout and values will be defined when handset is available.

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#### 2-1-4 VSWR And GAIN

| VSWR       |      |      | GAIN |       |      |      |
|------------|------|------|------|-------|------|------|
| Freq. Band | OPEN | SPEC | Band | Freq. | OPEN | SPEC |

# ANTENNA SPECIFICATION0

CUS P/N : T2970  
CREDITS P/N :

ApplicationDate: 2022-12-9  
Editor:

Rev: R:A0  
Page 3 of 7

|         |            |         |                       |
|---------|------------|---------|-----------------------|
| 2400MHz | $\leq 2.5$ | 2400MHz | $\geq -1.0\text{dBi}$ |
| 2450MHz | $\leq 2.0$ | 2450MHz | $\geq 0.5\text{dBi}$  |
| 2500MHz | $\leq 2.0$ | 2500MHz | $\geq -1.0\text{dBi}$ |

※Measuring a  $50\Omega$  test jig is connected to a network analyzer to measure the VSWR

※※All test value is done in customer approval fixture.

## 2-2 Test Data

### 2-2-1 BT VSWR

|                            |                  |
|----------------------------|------------------|
| Model No:                  | File:            |
| CREDITS NO:                | Note:<br>BT-VSWR |
| Sample No:                 |                  |
| Test Condition: Free Space | Matching: 客供     |
| Confirmation:              | Engineer:        |

# ANTENNA SPECIFICATION0

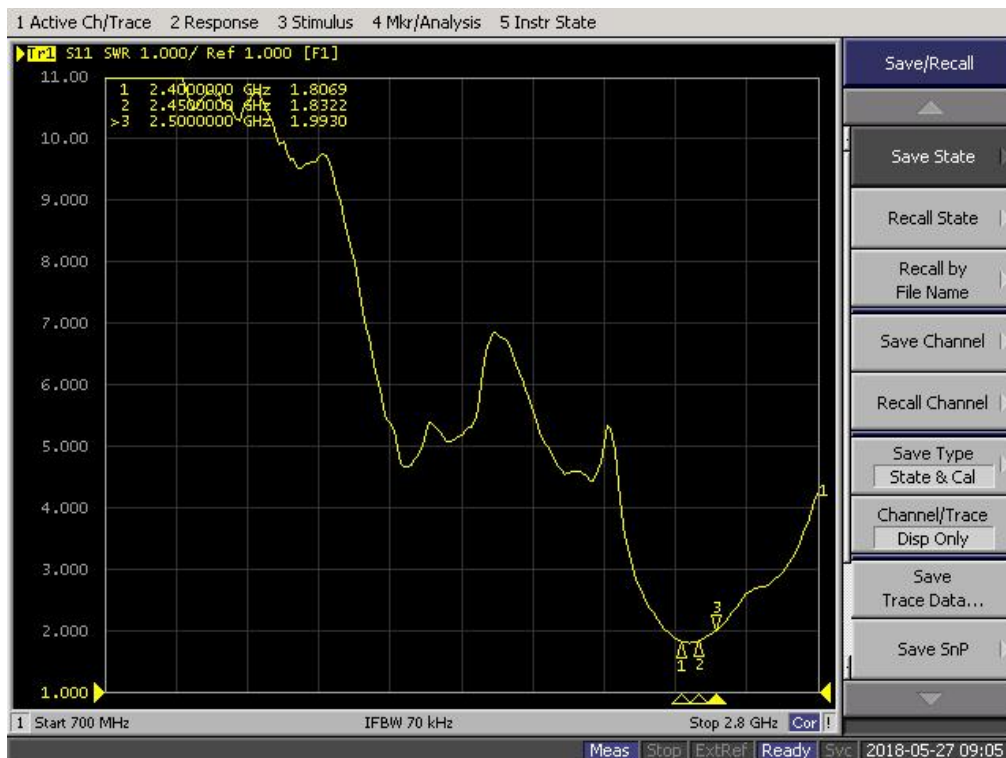
CUS P/N : T2970  
CREDITS P/N :

ApplicationDate: 2022-12-9  
Editor:

Rev: R:A0  
Page 4 of 7

## 2-2-2 BT GAIN&EFF

| Passive Test For BT |             |              |               |               |            |             |             |             |                      |                    |
|---------------------|-------------|--------------|---------------|---------------|------------|-------------|-------------|-------------|----------------------|--------------------|
| Freq<br>(MHz)       | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) | Gain<br>(dBd) | UHS<br>(%) | DHIS<br>(%) | Max<br>(dB) | Min<br>(dB) | Directivity<br>(dBi) | Beamwidth<br>(3dB) |
| 2400                | 38.15       | -4.18        | 1             | -1.15         | 16.755     | 21.397      | 1           | -11.33      | 5.18                 | 0                  |
| 2410                | 37.93       | -4.21        | 0.98          | -1.17         | 16.611     | 21.323      | 0.98        | -11.36      | 5.19                 | 0                  |
| 2420                | 36.91       | -4.33        | 0.91          | -1.24         | 16.003     | 20.912      | 0.91        | -11.57      | 5.24                 | 0                  |
| 2430                | 35.46       | -4.5         | 0.76          | -1.39         | 15.253     | 20.212      | 0.76        | -11.84      | 5.27                 | 0                  |
| 2440                | 35.09       | -4.55        | 0.72          | -1.43         | 15.089     | 20          | 0.72        | -11.91      | 5.26                 | 0                  |
| 2450                | 34.57       | -4.61        | 0.69          | -1.46         | 14.837     | 19.732      | 0.69        | -11.94      | 5.3                  | 0                  |
| 2460                | 33.34       | -4.77        | 0.55          | -1.6          | 14.206     | 19.138      | 0.55        | -12.16      | 5.32                 | 0                  |
| 2470                | 33.25       | -4.78        | 0.55          | -1.6          | 14.145     | 19.101      | 0.55        | -12.11      | 5.33                 | 0                  |
| 2480                | 32.71       | -4.85        | 0.48          | -1.67         | 13.964     | 18.746      | 0.48        | -12.08      | 5.34                 | 0                  |
| 2490                | 31.93       | -4.96        | 0.4           | -1.75         | 13.566     | 18.364      | 0.4         | -12.1       | 5.36                 | 30                 |
| 2500                | 32.01       | -4.95        | 0.44          | -1.71         | 13.496     | 18.512      | 0.44        | -12.12      | 5.38                 | 30                 |



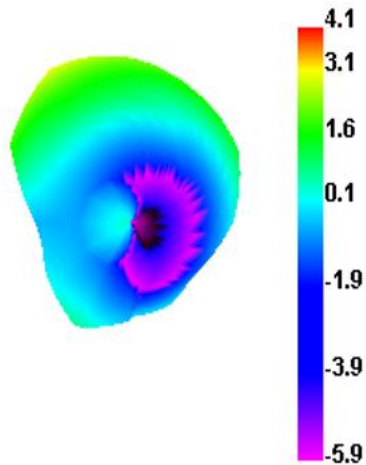
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CREDITS P/N :

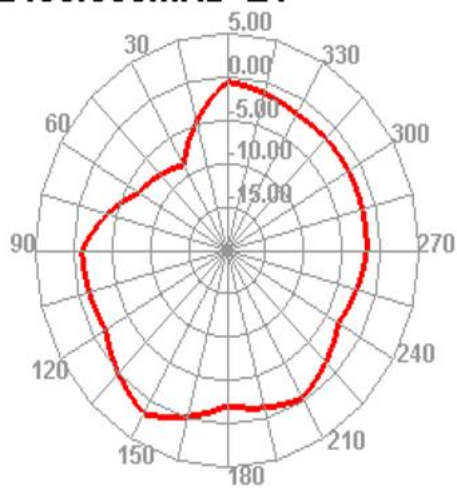
ApplicationDate: 2022-12-9  
Editor:

Rev: R:A0  
Page 5 of 7

**2400.000MHz**



**2400.000MHz E1**



# ANTENNA SPECIFICATION0

CUS P/N : T2970  
CREDITS P/N :

ApplicationDate: 2022-12-9  
Editor:

Rev: R:A0  
Page 7 of 7

## 3. Mechanical Specification

### 3-1-1 Mechanical Configuration( 组装图 )

### 3-2 Measurement Data

### 3-3 Salt-Spray test

35°C, 85%RH, 48Hours(According to MIL-STD-810E)The

salt-spray is generated from a 5% salt solution., The VSWR, Gain, Radiation Pattern must be met specifications after the salt-spray test.

## 4. Environment Characteristic

| NO. | ITEM                                                     | TEST CONDITION                                                   | SPECIFICATION                       |
|-----|----------------------------------------------------------|------------------------------------------------------------------|-------------------------------------|
| 4-1 | High Temperature/Humidity<br>Storage Test(non operating) | 1.Temperature: +70 ±2°C<br>2.Humidity: 90~95%RH<br>3.Time: 48hrs | No material deformation is allowed. |

ANTENNA SPECIFICATION0

CUS P/N : T2970  
CREDITS P/N :

ApplicationDate: 2022-12-9  
Editor:

Rev: R:A0  
Page 8 of 7

