

Shenzhen COLMI Technology Co., Ltd

ANTENNA SPECIFICATION0

CUS P/N : T2970
CREDITS P/N :

ApplicationDate: 2022-12-9
Editor:

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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)
WIFI	2400-2450-2500	

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.

客供

2-1-4 VSWR And GAIN

VSWR			GAIN			
Freq. Band	OPEN	SPEC	Band	Freq.	OPEN	SPEC

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

※Measuring a 50Ω 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: BT-VSWR
Sample No:	
Test Condition: Free Space	Matching: 客供
Confirmation:	Engineer:

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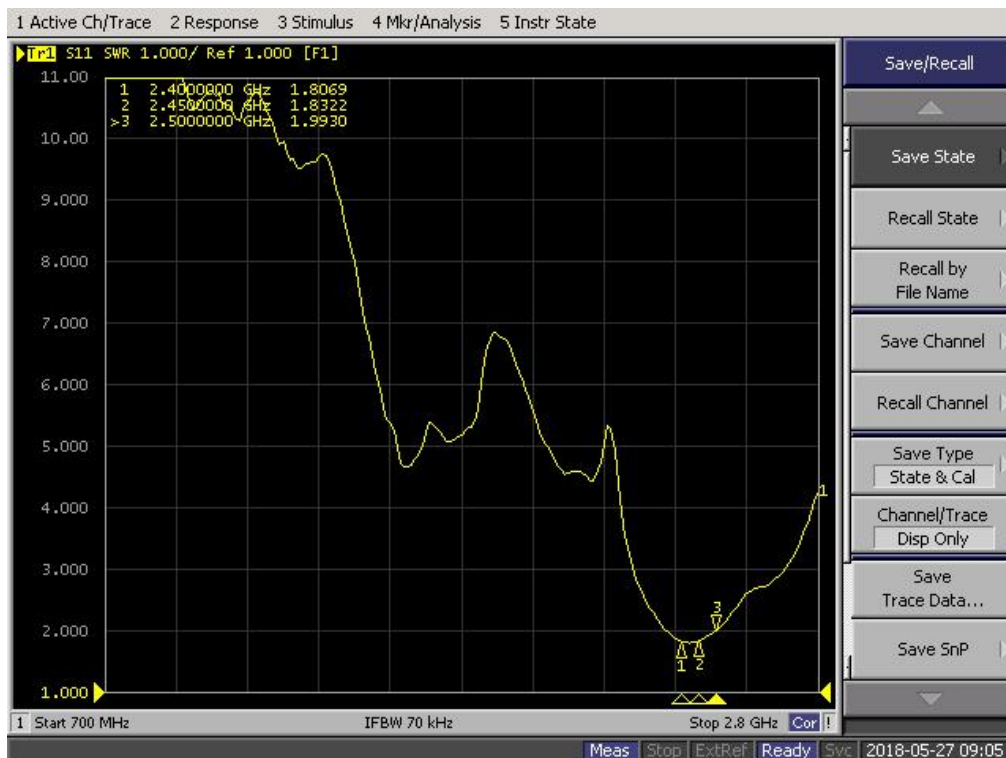
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2-2-2 BT GAIN&EFF

Passive Test For BT										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (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



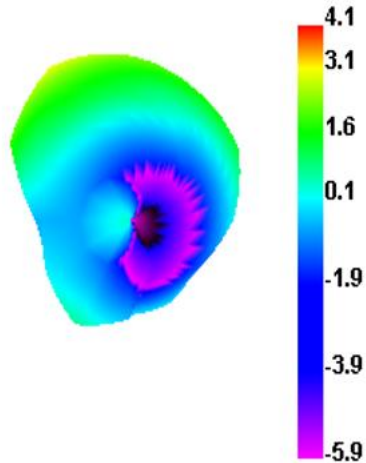
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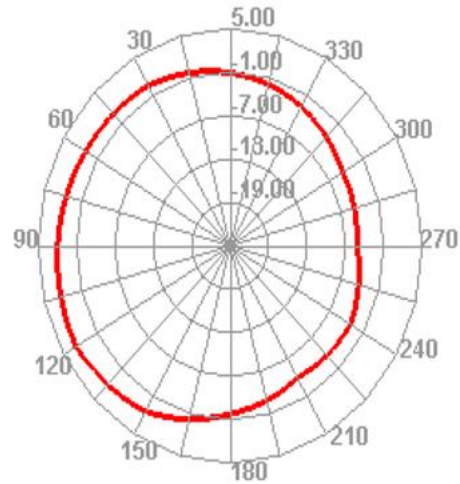
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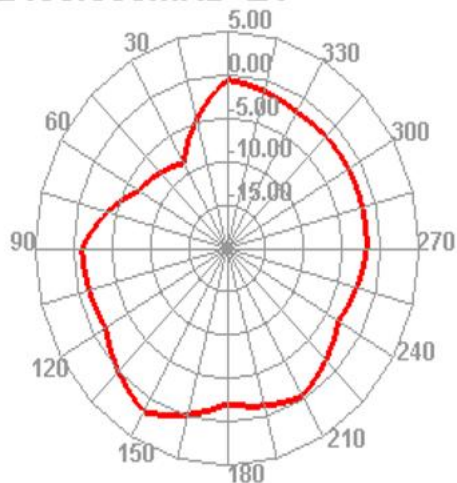
2400.000MHz



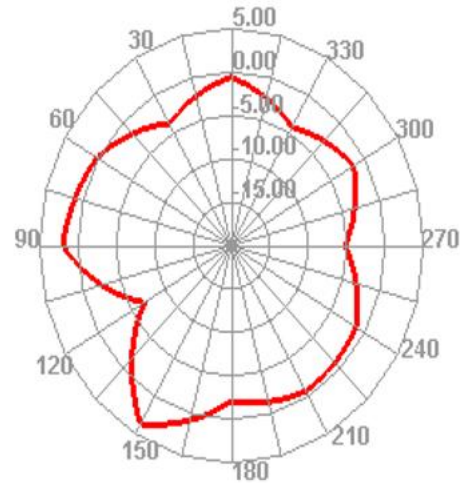
2400.000MHz H



2400.000MHz E1



2400.000MHz E2



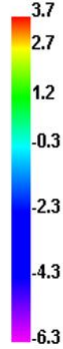
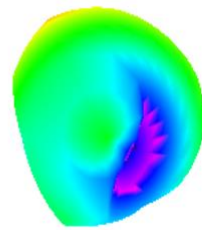
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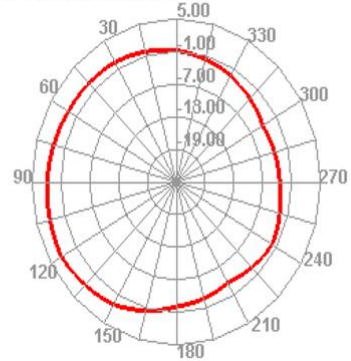
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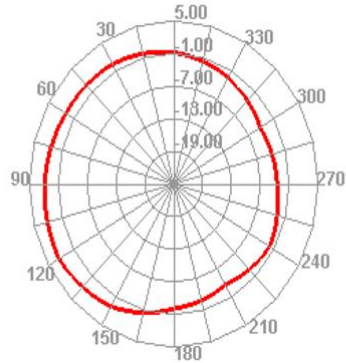
2450.000MHz



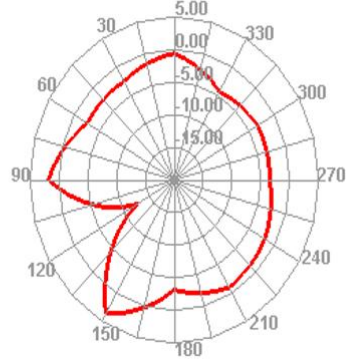
2450.000MHz H



2450.000MHz H



2450.000MHz E2

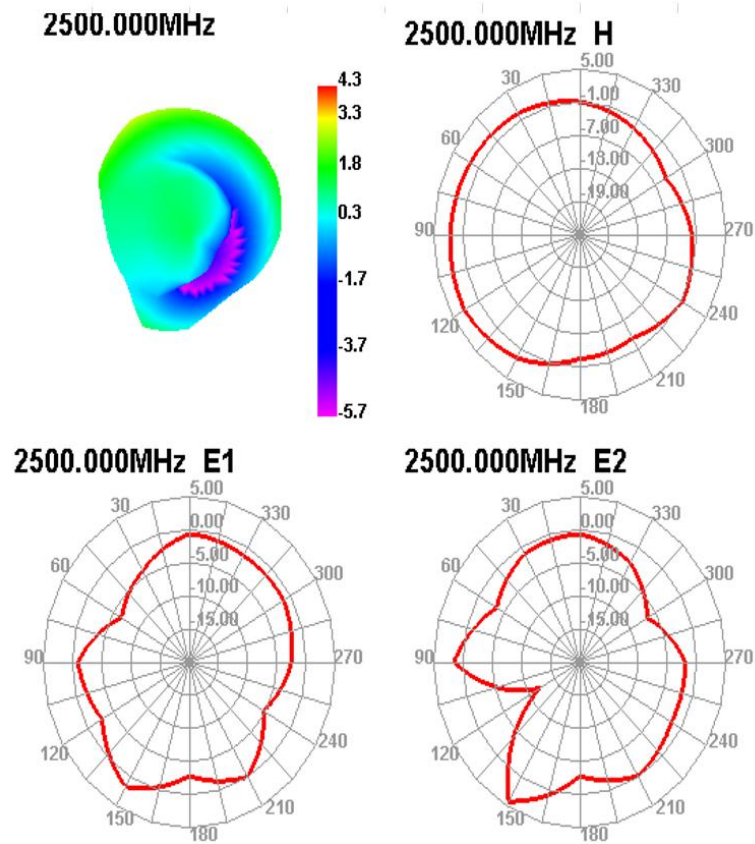


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3. Mechanical Specification

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

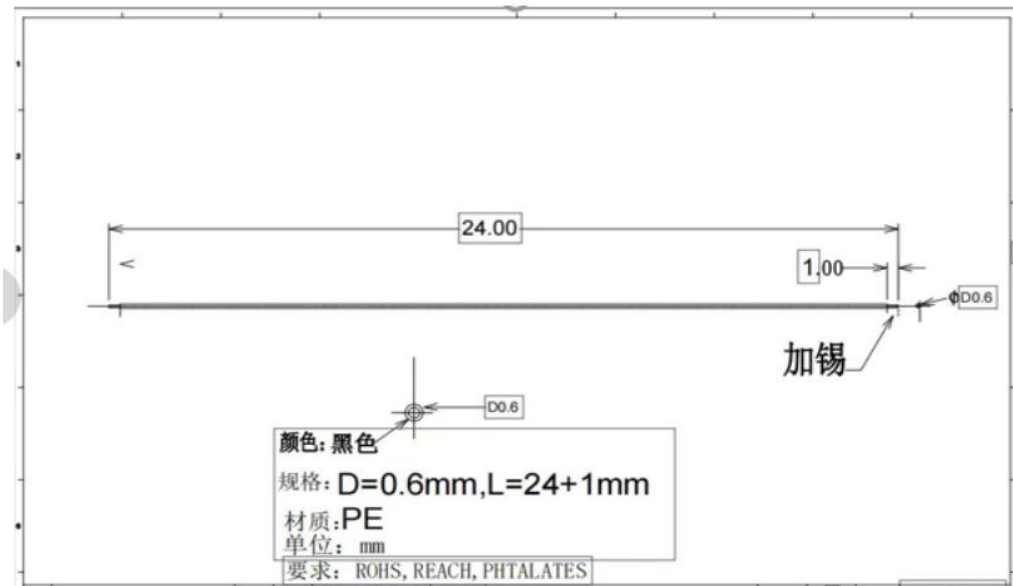
NO.	ITEM	TEST CONDITION	SPECIFICATION
4-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: +70 ±2°C 2.Humidity: 90~95%RH 3.Time: 48hrs	No material deformation is allowed.

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Gain, Radiation
be met
after these test.

4-2	Low Temperature/Humidity Storage Test(non operating)	1.Temperature: -30±2°C 2.Humidity: 0%RH 3.Time:48hrs	
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