

# Shenzhen Yunding Communication Electronics Co., LTD

TEL: +86 0755-23073599

FAX: +86 0755-23097189

E-mail:wht0809@163.com

## APPROVAL

CUSTOMER:

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DESCRIPTION: **Small black pepper-SME bend male-2.4G**

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PART NO.:

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CUS PART NO.:

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D A T E: **2023.11.15**

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Yunding signature

ENGINEERING DEPARTMENT	Q C DEPARTMENT	SALES DEPARTMENT

Customer signature

ENGINEERING DEPARTMENT	Q C DEPARTMENT	PURCHASING DEPARTMENT

**TEL: 0755 23073599**

**✂ Approval in duplicate, please signed by your company.**

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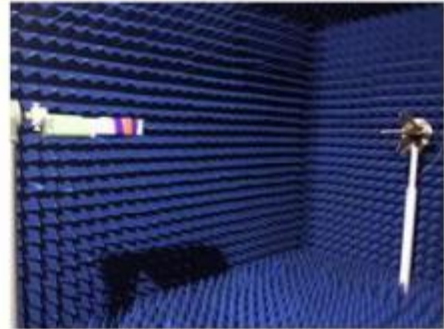
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## 1. Test items and equipment

	Test items	Equipment
1. S11-parameter	1. Return Loss 2. VSWR	network analyzer: Agilent E5071B HP 8753D
2.Active test	1. Transmitting power 2. Receiving sensitivity	1. Darkroom: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2.general-purpose tester : Agilent 8960 E5515B ×2 StarPoint SP6011
3.Passive test	1.Gain 2.Efficiency	1. Darkroom: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. network analyzer: Agilent E5071B HP 8753D



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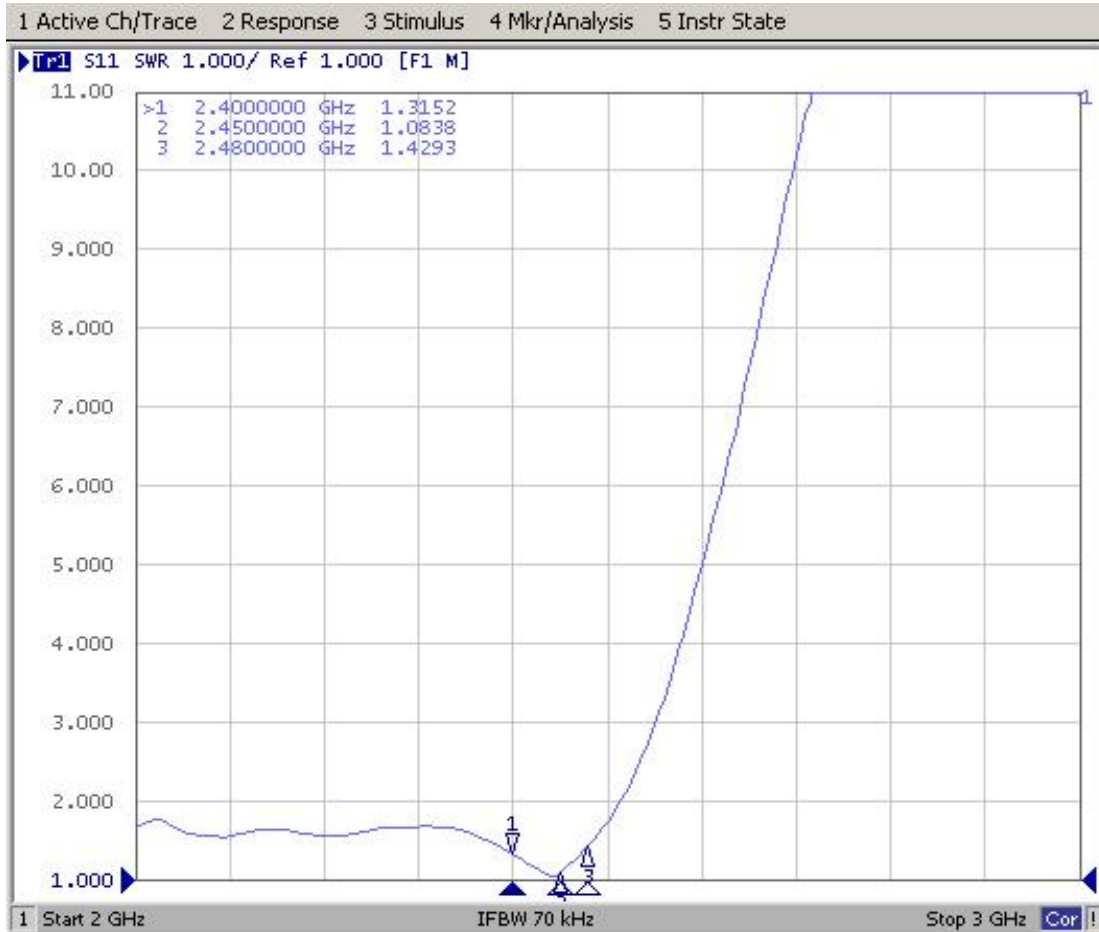
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antenna performance

SWR



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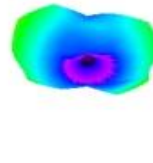
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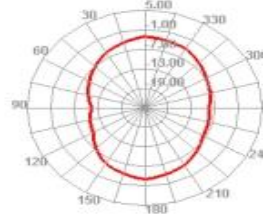
## 3. Antenna efficiency and gain

Passive Test For WIFI2.4			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	48.34	-3.16	2.28
2410	46.8	-3.3	2.16
2420	43.37	-3.63	1.9
2430	43.11	-3.65	2.02
2440	45.18	-3.45	2.37
2450	47.63	-3.22	2.73
2460	47.88	-3.2	2.84
2470	49.57	-3.05	3.05
2480	49.06	-3.09	2.98
2490	50.43	-2.97	3.01
2500	51.4	-2.89	2.97

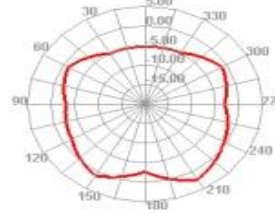
2400.000MHz



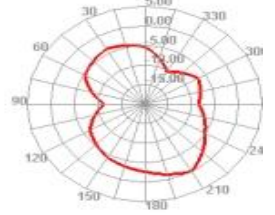
2400.000MHz H



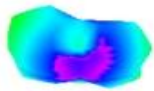
2400.000MHz E1



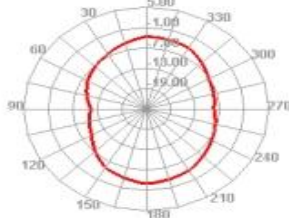
2400.000MHz E2



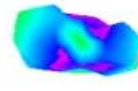
2450.000MHz



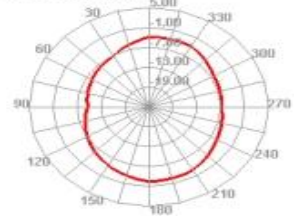
2450.000MHz H



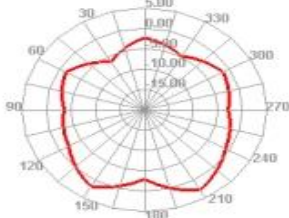
2500.000MHz



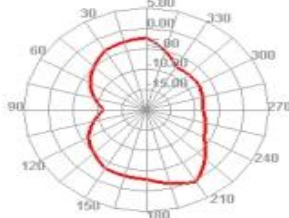
2500.000MHz H



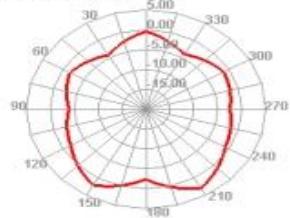
2450.000MHz E1



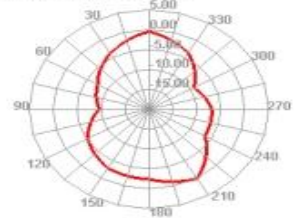
2450.000MHz E2



2500.000MHz E1



2500.000MHz E2



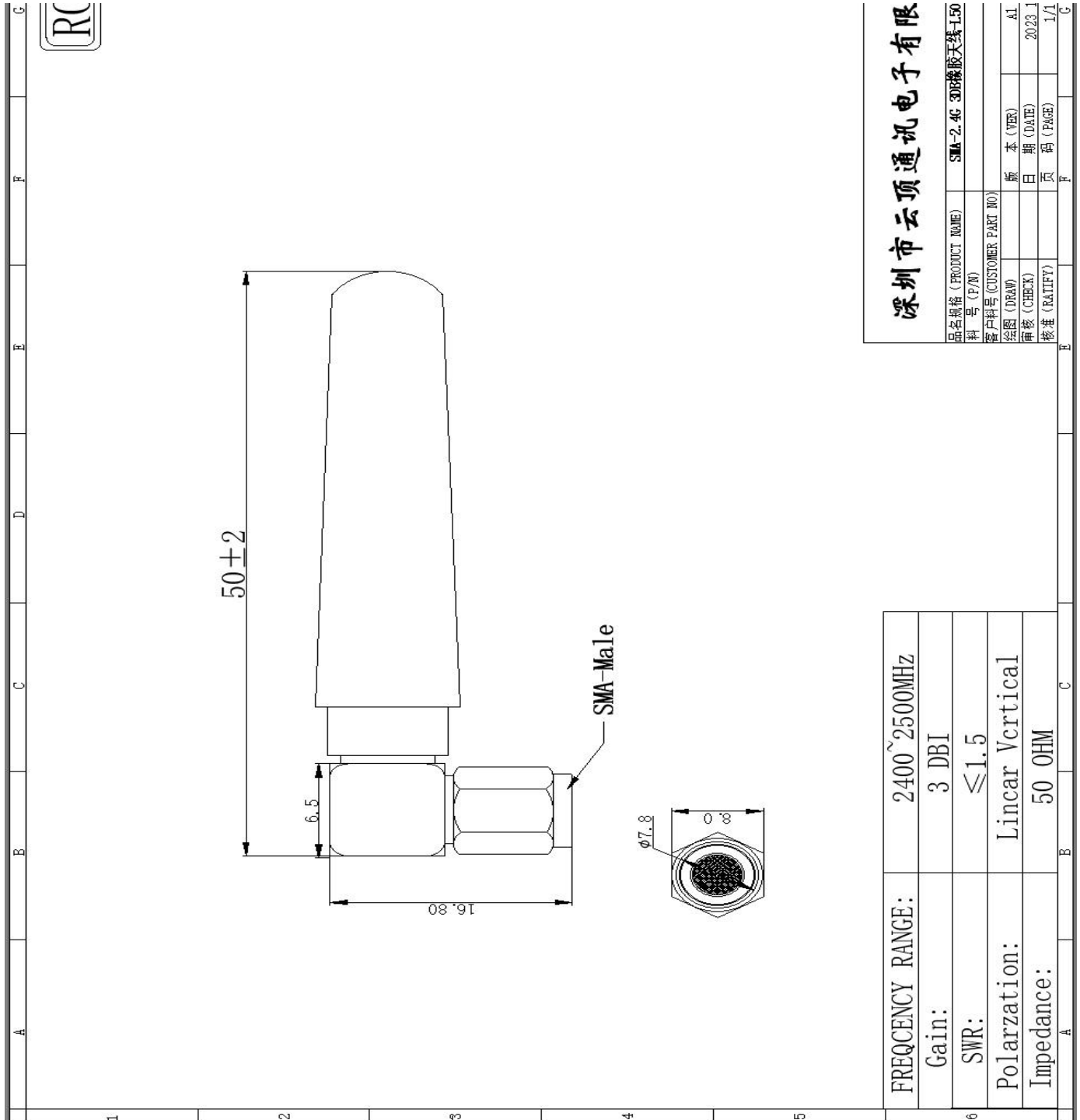
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## 4. Antenna structure diagram:



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## Technical parameters of electrical apparatus

### Electrical Specifications

Frequency Range	2400~2500MHz
VSWR	$\leq 1.5$
Input Impedance	50 $\Omega$
Gain	3DBI
Maximum Input Power	50W

### Mechanical Specifications

Antenna Color	Black
Input connector	SMA
Antenna length	50mm
Working Temperature	-40°C~+85°C
Working Humidity	20~80%

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## Environment performance test:

Project	Test condition	Test results
<b>Storage environment</b>	Test temperature, humidity, pressure without stated condition as follwings :1.Temperature: -30 °C ~ +80 °C ;2.Relative humidity: 45%-85%;3,Pressure: 86kpa-106kpa	Electrical and mechanical performance normal
<b>High and low temperature test</b>	Having 5 times cycle between -40°C to 70°C,Then in common condition 1-2 hours test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
<b>Resistance constant hot and humid test</b>	Relative humidity:95±3%,Test temperature: 40°C,last 2 hours , put it after 5 min test the electrical function. Test products during common condition 1-2 hours ,Then test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
<b>Vibration test</b>	Vibrate Frequency:10-55HZ; Distance :0.35mm;Acceleration :50.0m/s;Sweep frequency cycle:30 times	Electrical and mechanical performance normal
<b>Fall test</b>	From 1 mheight fall down 3 times freely (vertical direction)	Electrical and mechanical performance normal

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## 主要技术特性 (TECHNICAL SPECIFICATIONS):

温度范围 (Temperature):	-55~+155°C
特性阻抗 (Impedance):	50 Ω
频率范围 (Frequency Range):	DC~12.4GHz
工作电压 (Working Voltage):	335V max(有效值)
耐压 (Withstand Voltage):	1000V rms(海平面最小值)
接触电阻 (Contact resistance):	
	内导体之间 (Center Contact) ≤3m Ω
	外导体之间 (Outer Contact) ≤2m Ω
绝缘电阻 (Insulation resistance):	≥5000m Ω
电压驻波比 (VSWR):	直式 (Right angle) ≤1.10
耐用性 (Durability):	≥500次

## 材料与涂覆 (MATERIAL AND PLATING):

壳体 (Shell):	黄铜 (Brass)	镀硬金 (Gold plated)
插针 (Contact pin):	黄铜 (Brass)	镀硬金 (Gold plated)
插孔 (Socket contact):	铍青铜 (Beryllium brass)	镀硬金 (Gold plated)
绝缘体 (Insulator):	聚四氟乙烯 (PTFE)	
O型密封件 (O-ring sealing):	硅橡胶 (6146 silastic)	
塑胶件 (Plastic parts):	ABS	