



Specification For Approval

Customer: Jiangxi Province Xingzhi Cheng Electronics Co., Ltd.

Supplier : Guangzhou Gaoke Zhongshi Communication Technology Co., Ltd.

CustomerP/N:

Product Name : 2.4G & 5.8G built-in antenna

Production number: GKZS-2.4G & 5.8G-P0311-RF1.13I-120

Supplier confirmation and seal (Supplier Signature)

Engineer	Reviewed and Approved by	Approved by:
Liu Guangjin	Chao Xiaoxin	Hu Zewei
November 25,2025	November 25,2025	November 25,2025

Customer confirmation stamp (Customer Signature)

Engineer	Reviewed and Approved by	Approved by:
YTD	YTD	YTD

Note: After the customer confirms and stamps the document, please return this acknowledgment letter to our company.

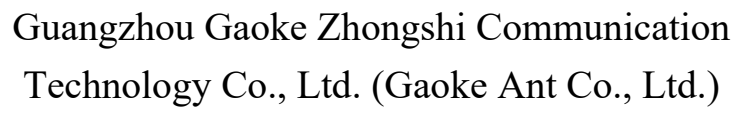
GuangzhouGaokeZhongshiCommunicationTechnologyCo.,Ltd.

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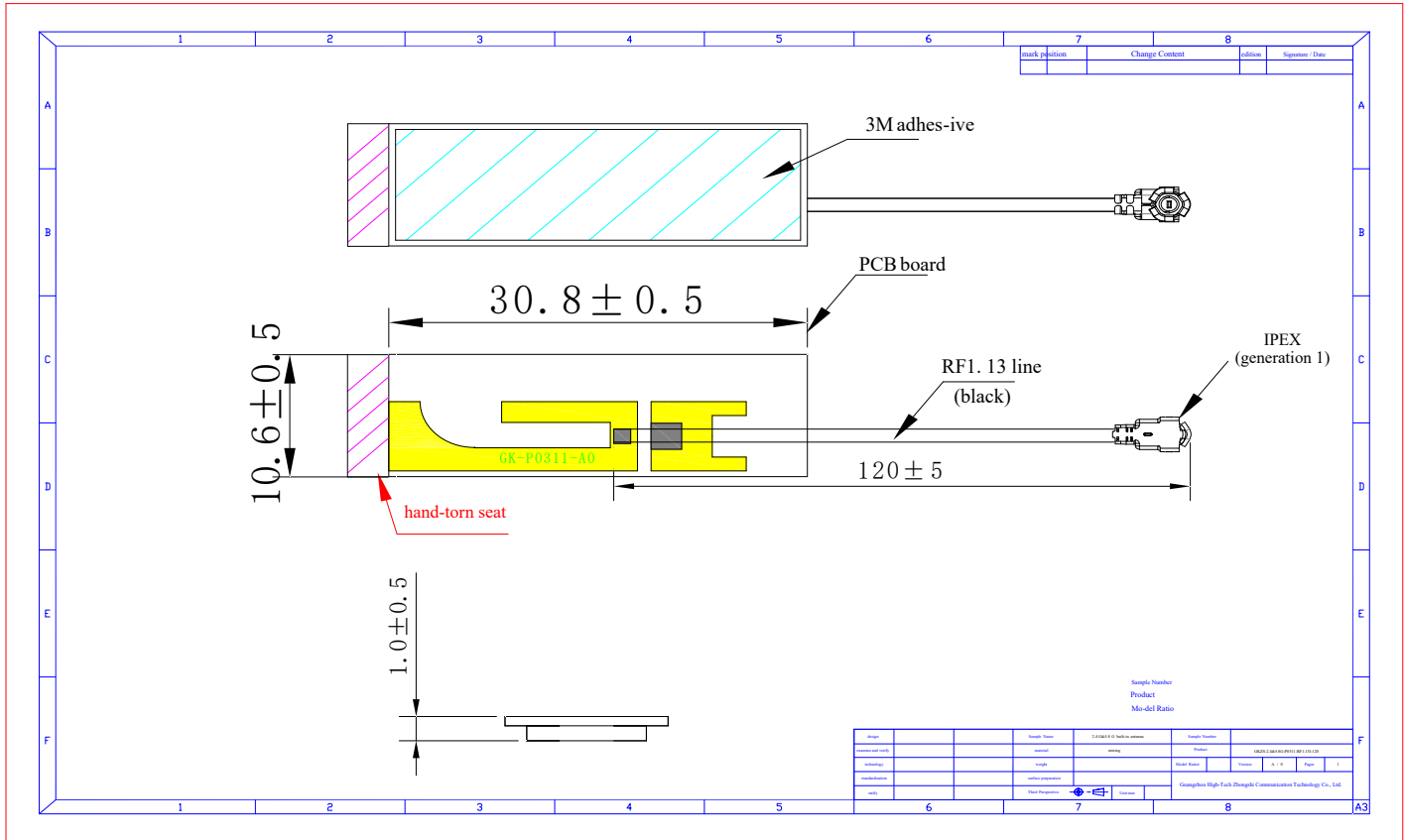
<http://www.gkzs.com.cn>



DescriptionRecord

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I. Product Structure Drawing (mm)



II. Physical Product Image



III. Antenna Technical Specifications

Design Specifications	Typical
Antenna types	PCB built-in antenna
Working Frequency	2400-2500MHz 5158-5850MHz
Gain	2.31 dBi (peak) @ 2400–2500 MHz 3.15 dBi (peak) @ 5158–5850 MHz
Antenna efficiency	$\geq 35\%$
Voltage Standing Wave Ratio	≤ 2.5
Polarization method	Linear polarization
Radiation pattern	Omnidirectional
Feeding impedance	50 Ω
Power Handling	33dBm
Antenna Interface	IPEX (Generation 1) / RF1.13 cable (black), L = 120 mm
Antenna dimensions	30.8x10.6mm
Weight	0.9g
Operating temperature	-40~80°C
Comment	/

IV. Wire Parameters

• Structural parameters

Structural	Material	Standard value(mm)
Inner conductor	SC	7/0.08(Ø0.24)
1. Insulation	FEP	Ø0.68±0.03
2. Outer conductor	TC	Weaving 4×16/0.05
3. Sheath	FEP	Ø1.13±0.05

Note: SC is silver-plated copper wire, and TC is tin-plated copper wire. The insulation color is transparent, and the common colors of the sheath include black, gray.

• Electrical performance parameters

Characteristic impedance (Ω)	50±3
Capacitor (pf/m)	98±5
Transmission rate (%)	69
Transmission delay(ns/m)	4.8
Pressure resistance (V)	1000
Maximum operating frequency (MHz)	6000
Stationed at Bobi VSMR	≤1.30@0-3GHz: ≤1.35@3-6GHz

Attenuation(dB/m)	Frequency(MHz)	Typical value	Frequency(MHz)	Typical value
	0.1GHz	0.75	9GHz	-
	0.4GHz	1.27	10GHz	-
	1GHz	2.20	At 20° sea level	
	2GHz	3.40		
	3GHz	4.20		
	4GHz	4.85		
	5GHz	5.60		
	6GHz	6.15		

• Reliability

Minimum bending radius (mm)	≥15 at a time; Repeat 25
Rated temperature/voltage (°C/V)	-55°C ~ +200°C/30V

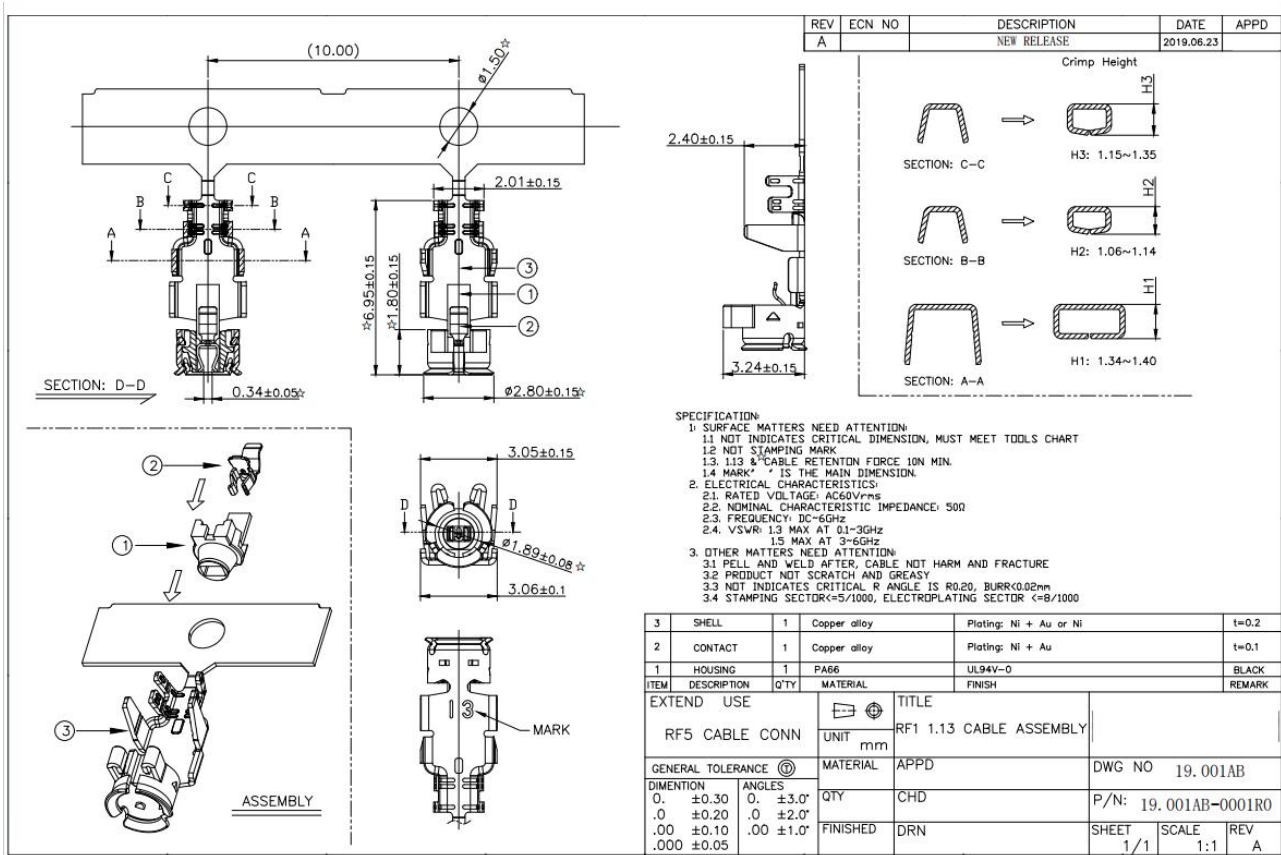
• Packaging

Packaging method	Paper shaft
Length (m/ axis)	1000
Number of joints per axis (pieces)	≤5
The shortest line (m)	≥30

• Storage and processing

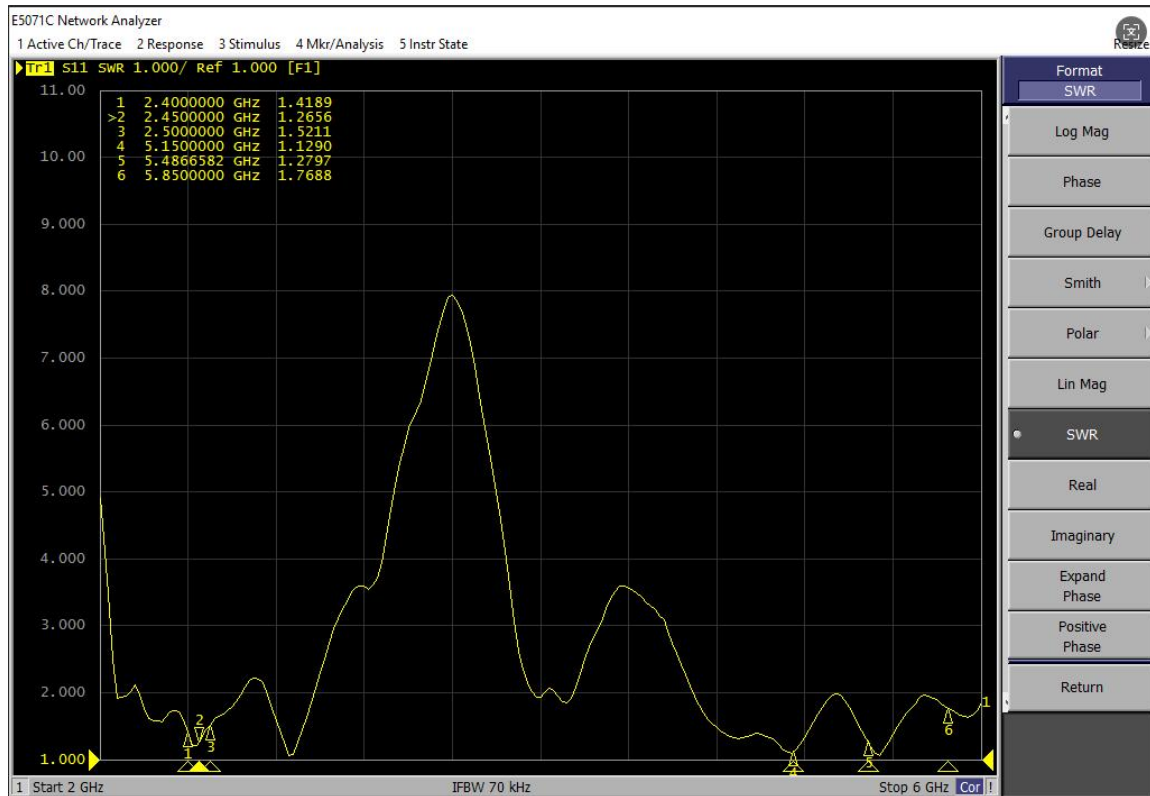
Storage	Temperature ≤30 degrees Celsius, humidity 10% - 75%; The optimal storage period is three months. Beyond three months, solderability will decrease, but electrical performance will not be affected
Processing	Processing temperature: ≤250°C, shrinkage ≤2mm; Displacement length: ≤40mm
Processing method	Wire cutting machine for wire stripping processing (Please confirm other processing methods before use)

V. Connector Parameters

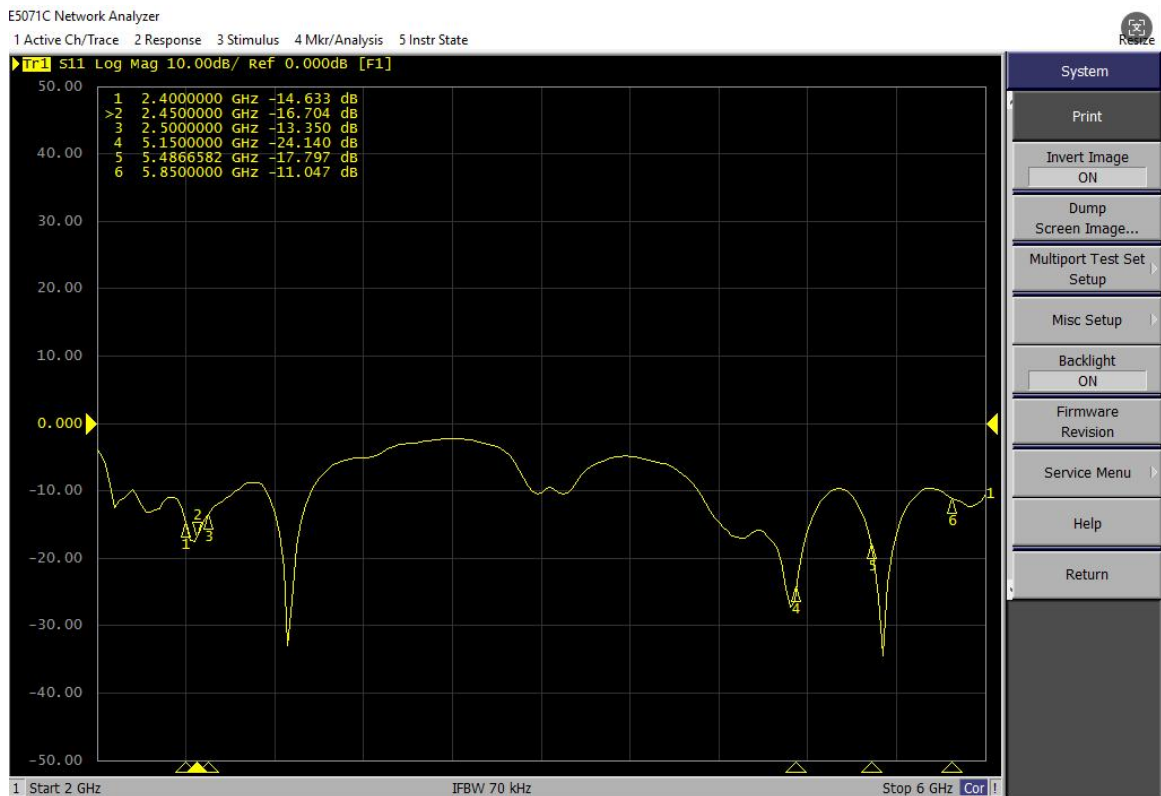


VI. Antenna Performance Testing (Prototype Testing)

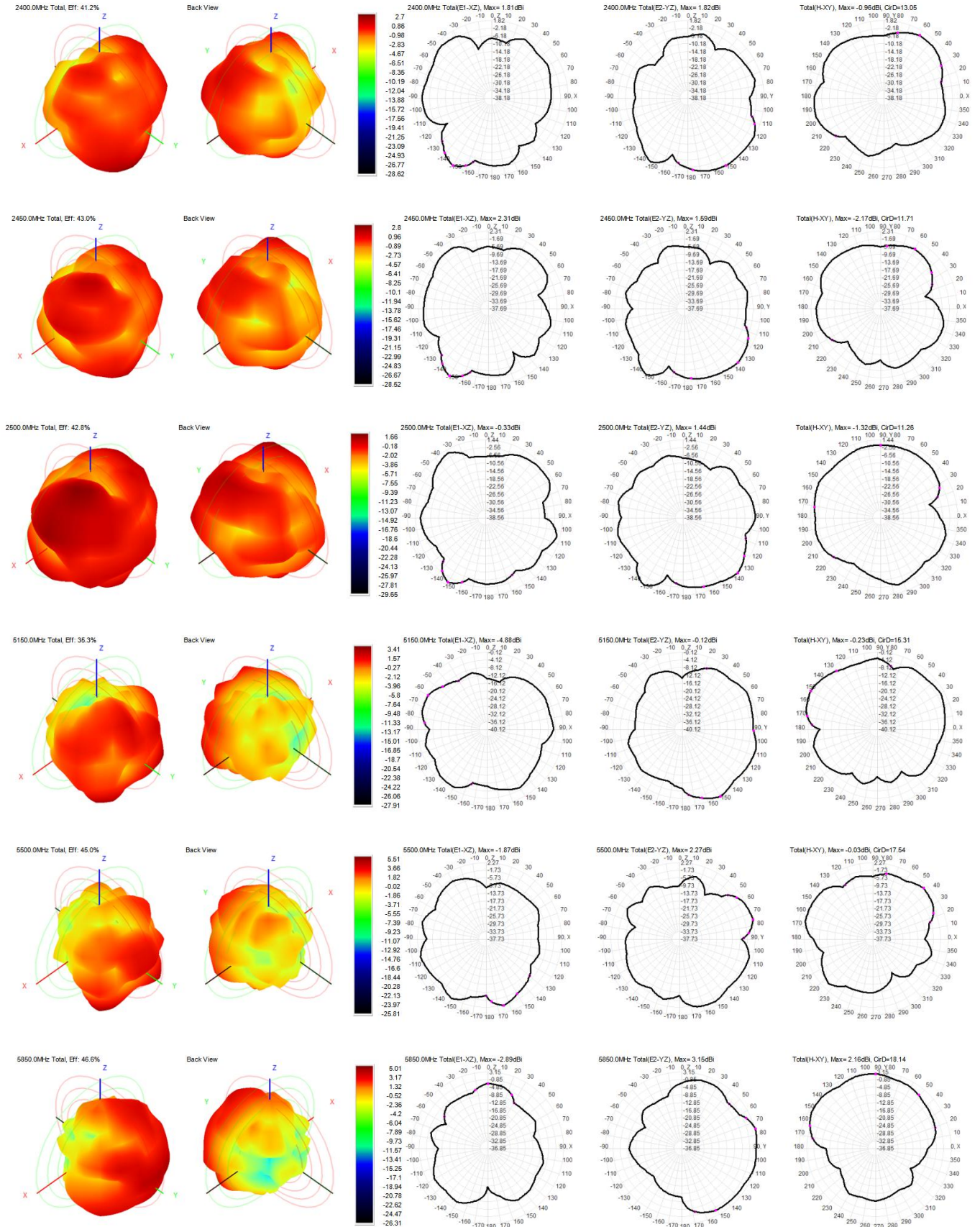
1、Standing Wave Ratio



2、Return Loss 、



2、Directional Diagram (2D and 3D)



3、Efficiency Curve Chart

