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Jiuwei, Xixiang, Baoan District, Shenzhen

# Product specification

Project Name: K13

Product Name: K13-BT-ANT

Product part number:

Producer	Audit	Date
Huangjiajun	Wu Yanlong	2023-08-08

Customer confirmation:

Customer Name: Shenzhen Leyifeng Technology Co., Ltd
Approved by:
Date:
Comment:

Please sign and stamp your company and return one copy to our company for archiving. Thank you for your cooperation!



Shenzhen Xingtong Wireless Technology Co., Ltd

Date

2023-08-08

Version

A0

File number

XT-YF-004

Product model

K13-BT-ANT

Product number

K13-APP-RA

## 1. Product Construction:

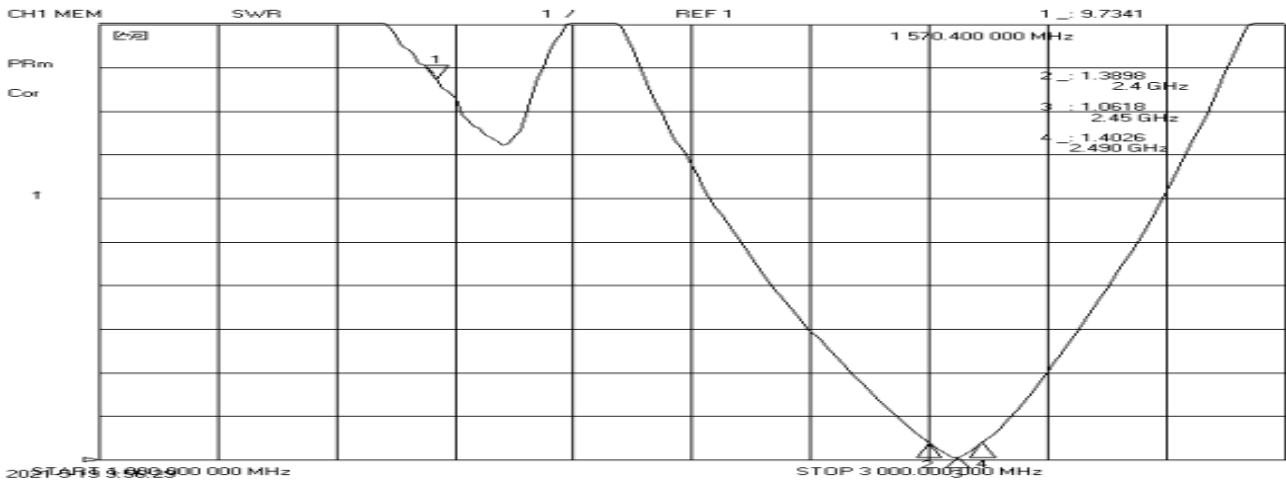
- 1. Antenna material: FPC
- 2. Adhesive type: 3M9471
- 3. Antenna size: 19 \* 7 (tolerance  $\pm 0.2\text{mm}$ )
- 4. Coaxial dimension: None

## 2. Parameter index:

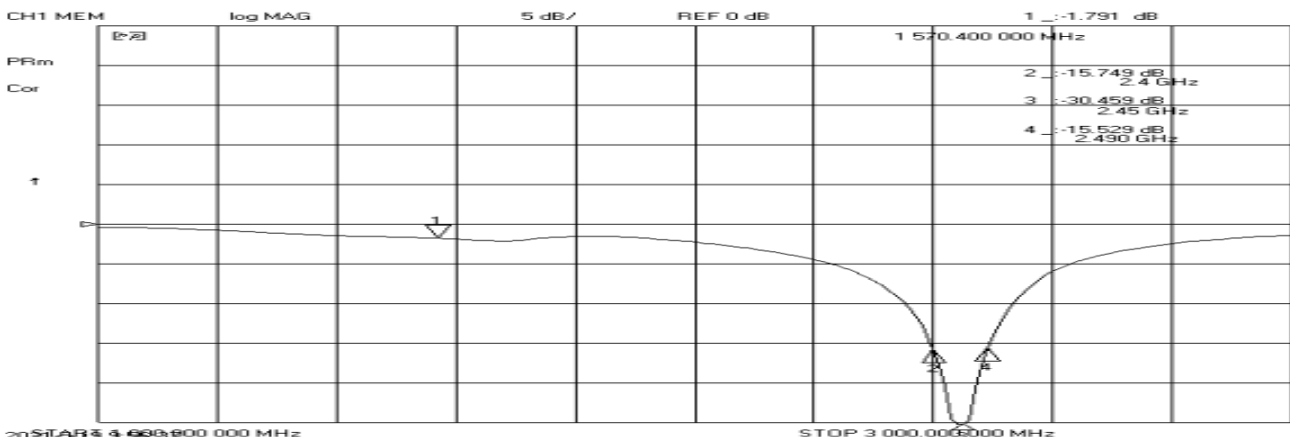
- Scope of use: customer supplied machines
- Antenna frequency: 2402-2480MHz
- Antenna impedance: 50  $\Omega$
- Antenna standing wave: < 1.5DBM
- Return loss: < -10DB
- Polarization method: vertical/horizontal
- Power capacity: > 5W
- Installation method: Welding the motherboard

## 3. Antenna S11 value (S11)

### 3.1: VSWR

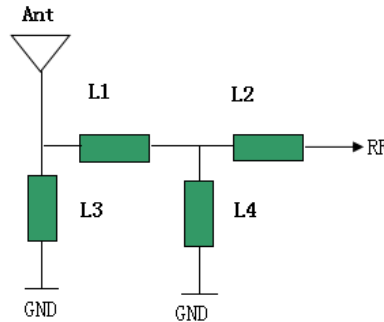


### 3.2: Antenna return loss value



### 4. Antenna performance (OTA)

- 4.1: Antenna matching recommendations  
Vector impedance modulation can be performed.

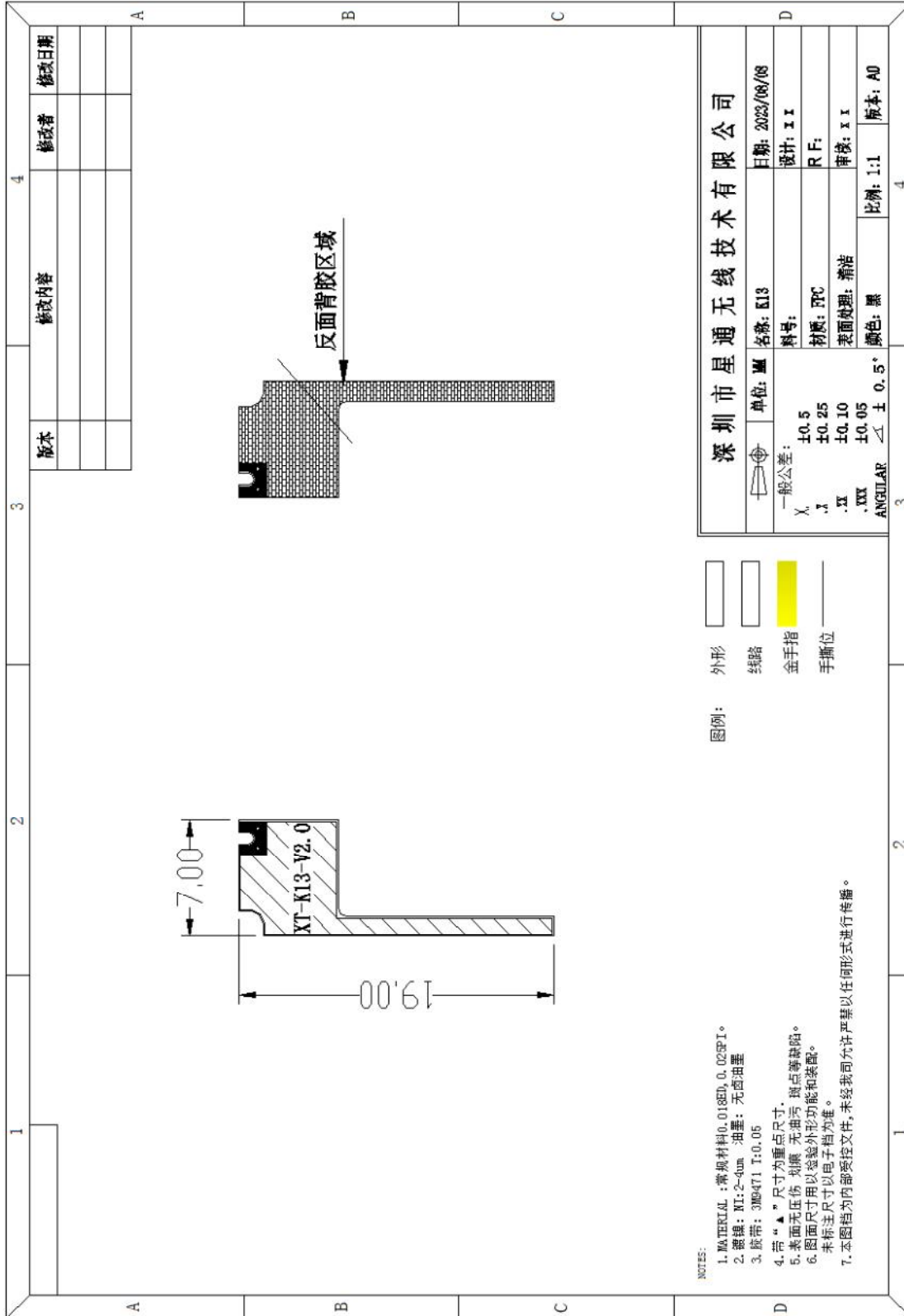



- 4.2: Antenna OTA/ efficiency/gain (test instruments: network analyzer, oscilloscope, customer engineering prototype, various standard cards, etc.)

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-4.97	-5.07	-4.97	-5.10	-5.37	-5.13	-5.27	-5.51	-5.23	-5.54	-5.73
Peak EIRP (dBm)	1.42	1.36	1.49	1.36	1.06	1.35	1.05	0.78	1.21	0.98	0.73
Directivity (dBi)	6.39	6.43	6.46	6.45	6.43	6.48	6.32	6.30	6.44	6.52	6.45
Efficiency (dB)	-4.97	-5.07	-4.97	-5.10	-5.37	-5.13	-5.27	-5.51	-5.23	-5.54	-5.73
Efficiency (%)	31.80	31.10	31.80	30.90	29.00	30.70	29.70	28.10	30.00	27.90	26.80
Gain (dBi)	1.42	1.36	1.49	1.36	1.06	1.35	1.05	0.78	1.21	0.98	0.73
NHPRP ±Pi/4 (dBm)	-6.27	-6.32	-6.19	-6.28	-6.53	-6.25	-6.35	-6.58	-6.27	-6.55	-6.73
NHPRP ±Pi/6 (dBm)	-8.43	-8.44	-8.26	-8.34	-8.55	-8.23	-8.31	-8.51	-8.16	-8.41	-8.58
NHPRP ±Pi/8 (dBm)	-10.76	-10.74	-10.53	-10.59	-10.78	-10.43	-10.50	-10.70	-10.32	-10.54	-10.69
Upper Hem. PRP (dBm)	-7.17	-7.28	-7.20	-7.32	-7.59	-7.34	-7.49	-7.76	-7.48	-7.80	-7.99
Lower Hem. PRP (dBm)	-8.99	-9.05	-8.94	-9.07	-9.36	-9.13	-9.24	-9.46	-9.15	-9.44	-9.63
Upper Hem. PRP (%)	19.19	18.69	19.04	18.53	17.42	18.45	17.83	16.76	17.85	16.58	15.88
Lower Hem. PRP (%)	12.61	12.44	12.76	12.40	11.59	12.22	11.91	11.33	12.15	11.37	10.88

### 5. Attached figure:

#### 5.1: Finished antenna drawing



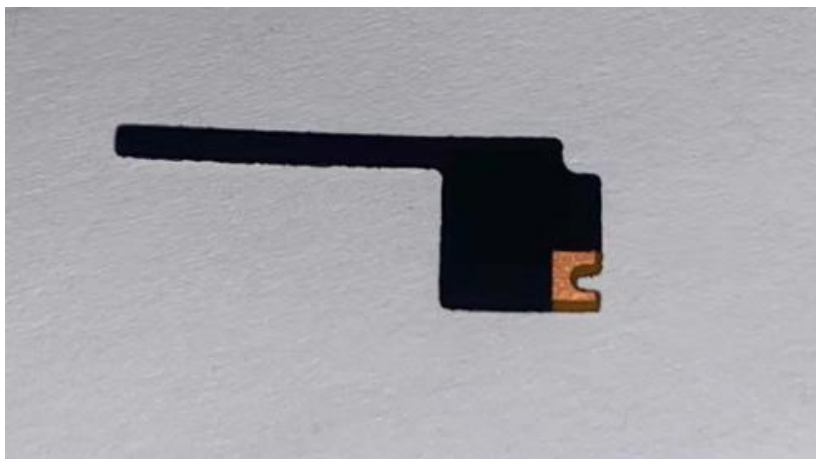
 Shenzhen Xingtong Wieress Technology Co., Ltd	Date	2023-08-08	
	Version	A0	
	File number	XT-YF-004	
Product model	K13-BT-ANT	Product number	K13-APP-RA

## 6. Reliability test:

Serialnumber	test item	Test requirements	testing tool	test result
1	Resistance to tin melting	288℃, 10S, no delamination, no foaming	Tin furnace	Ok
2	weldability	245℃, 5s, smooth tin surface, solder surface积 $\geq$ 95%	Tin furnace	Ok
3	Pulling force	N/A	tautness meter	Ok
4	Reverse pulling force	N/A	tautness meter	Ok
5	Peel strength (covering film)	$\geq$ 0.35kg/cm	peel strength tester	Ok
6	Peel strength (copper foil)	$\geq$ 0.8kg/cm	peel strength tester	Ok
7	Hot melt adhesive	0.1~0.15	/	Ok

## 7. Matters needing attention:

Product image:



After opening, please carefully check whether the goods are complete. If there is any damage, please contact us immediately.