

深圳市亿圣邦科技有限公司

The Holy bond Electronics Co., Ltd. Antenna Test Report

Customer: k e j i n g m i n g

Address: Floor 1-6, Building B7, Yintian Industrial Zone, Yantian Community, Xixiang Street, Baoan District, Shenzhen, Guangdong Province, China.

WIFI 0: SLK-KJM-2813C-M-290I-B WIFI 1: SLK-KJM-3212D6-L-160I-G BT: SLK-KJM-3212D5-R-260I-W

Product: WIFI Antenna—FPC

Report date: 2024.04.29

深圳市亿圣邦科技有限公司

Prepared by : 范新竹

Checked by : Eason Huang

Approved by :



Purpose

This report is to measure the performance of SLK for Master Antenna on 科金明. All measure data are showed below.

Content

1. Product Overview

2. Test Result

2.1 VSWR/S11

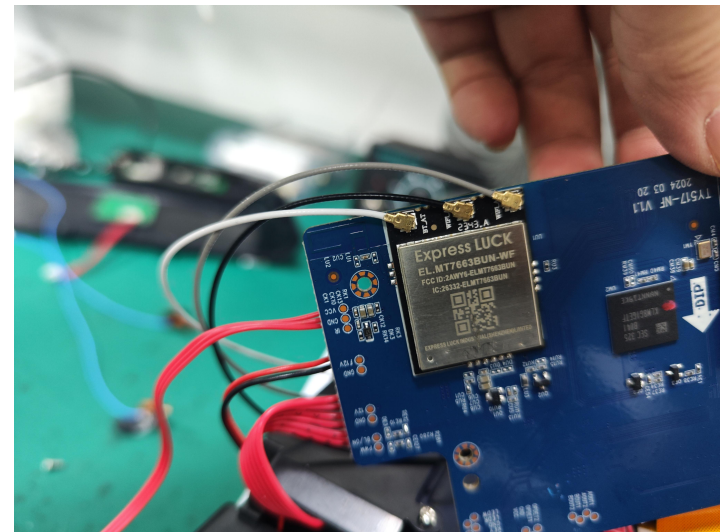
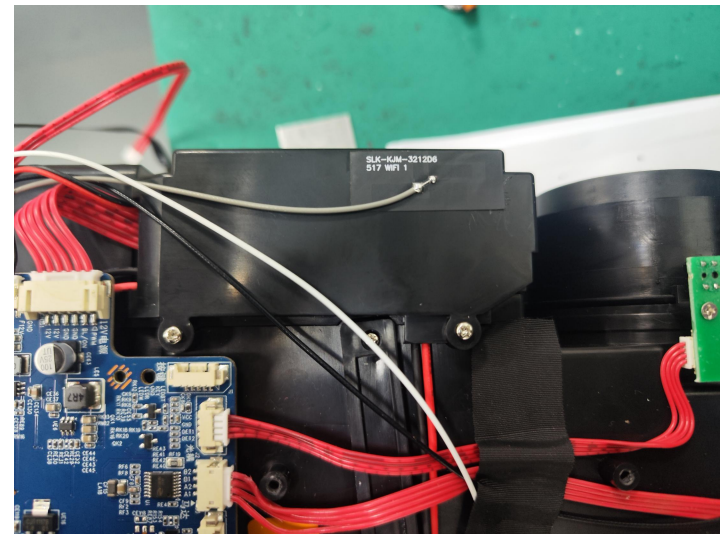
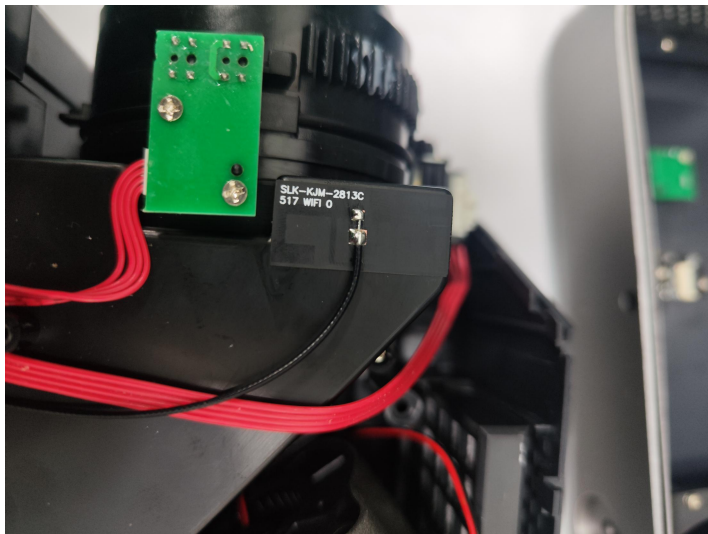
2.2 Antenna Parameters

2.3 WIFI Antenna TRP/TIS

2.4 WIFI Antenna Gain/Efficiency/3D DATA

3. Conclusions

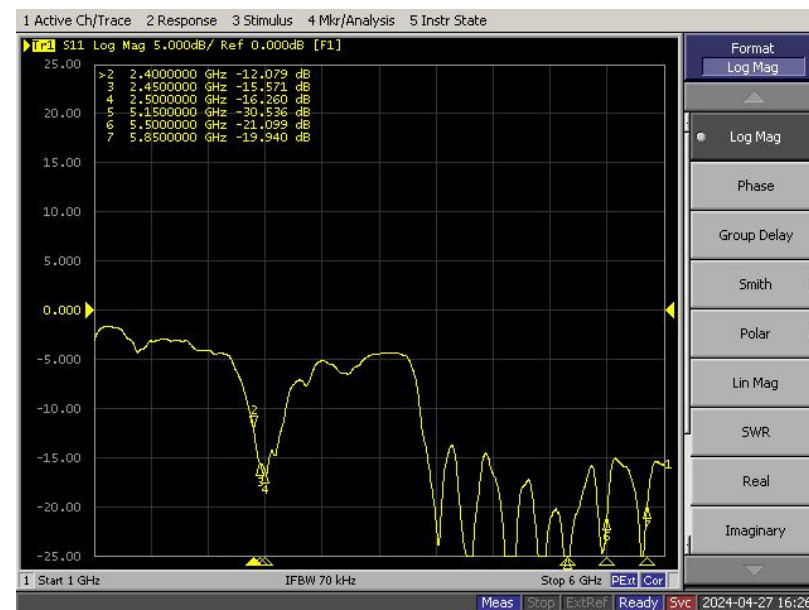
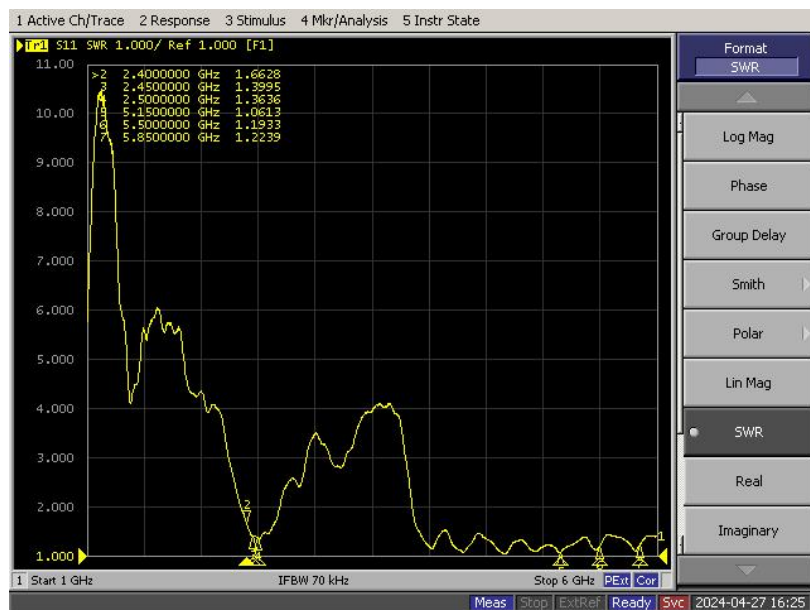
1. Product Overview



2. Test Result

2.1 VSWR/S11

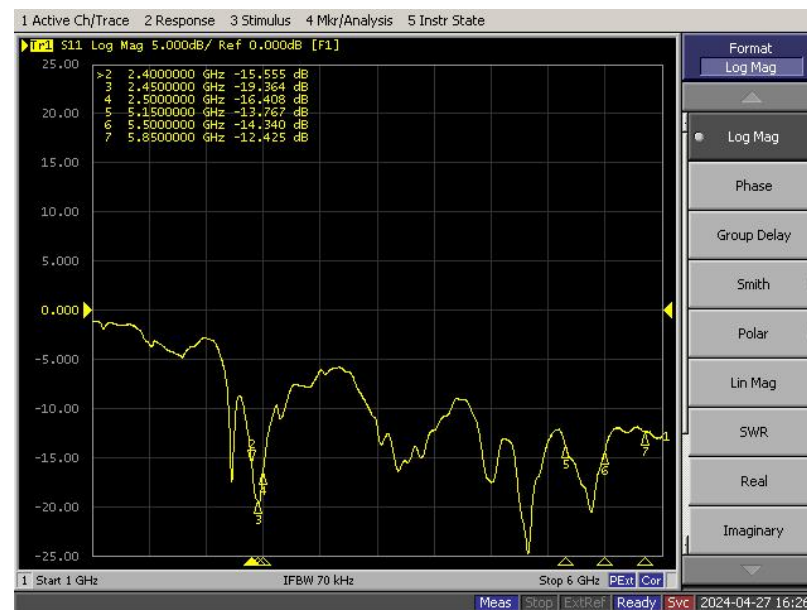
WIFI 0



2. Test Result

2.1 VSWR/S11

WIFI 1



2. Test Result

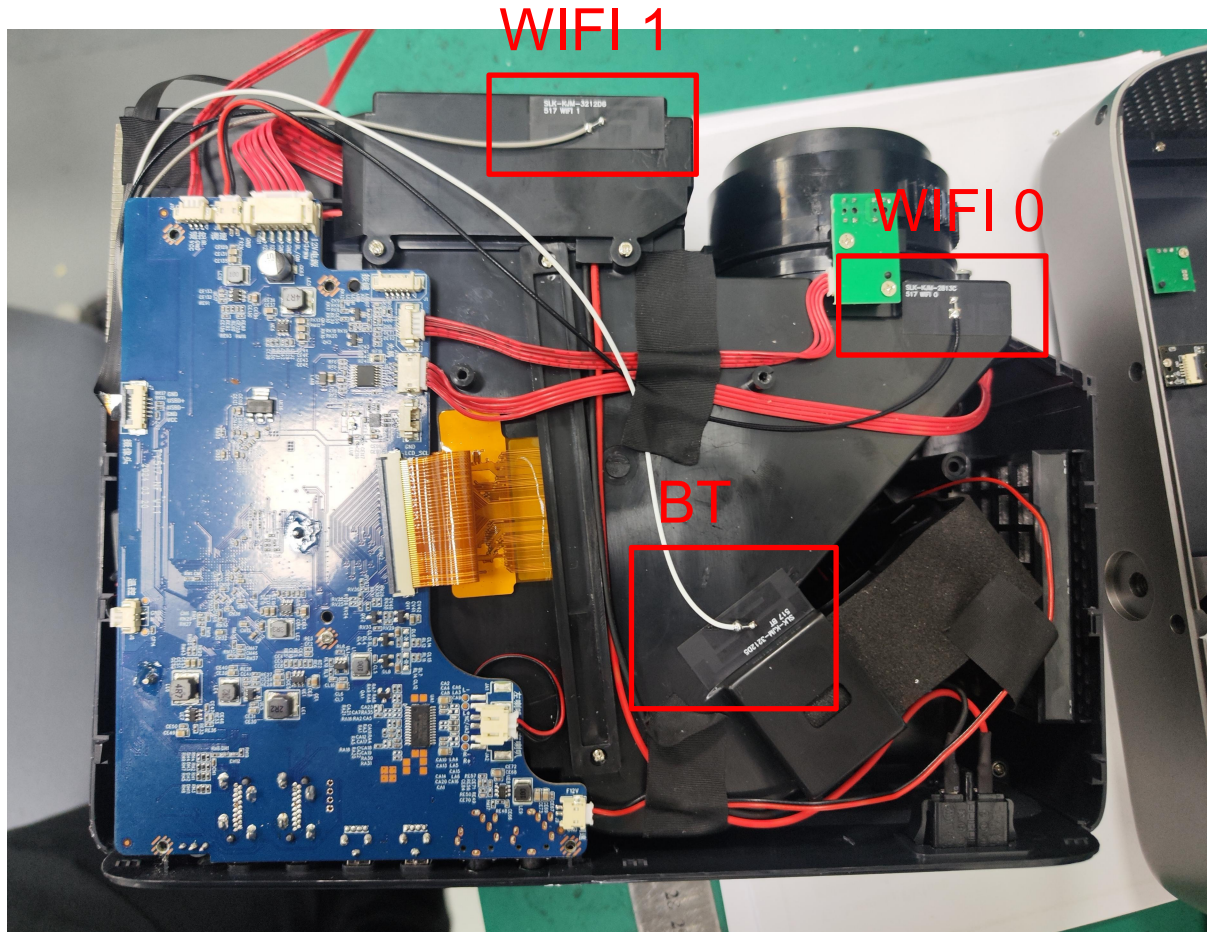
2.1 VSWR/S11

BT



2. Test Result

2.2 Antenna Parameters



2. Test Result

2.3 WIFI Antenna TRP/TIS

WIFI	CH	功率(54M)	灵敏度(54M)	WIFI	CH	功率(54M)	灵敏度(54M)
802.11a	36	15.18	-75.06	802.11g	1	15.7	-70.15
	149	16.73	-76.12		6	16.12	-70.65
	165	16.75	-76.6		11	16.89	-71.57
WIFI	CH	功率(11M)	灵敏度(11M)	WIFI	CH	功率(MCS7)	灵敏度(MCS7)
802.11b	1	15.52	-78.05	802.11n	1	15.69	-67.46
	6	16.33	-78.33		6	16.14	-68.13
	11	15.42	-79.81		11	16.89	-68.39

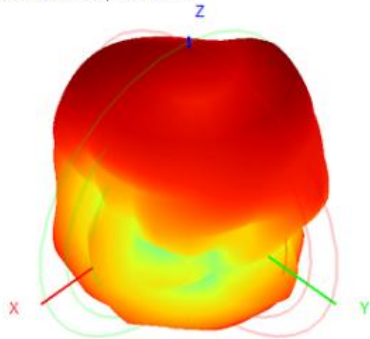
2. Test Result

2.4 WIFI Antenna Gain/Efficiency/3D DATA

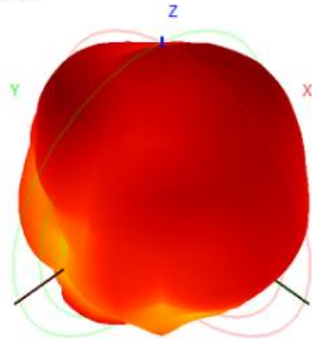
WIFI 0

Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	5150	5350	5500	5650	5850
Efficiency (dBi)	-3.00	-2.98	-2.78	-2.84	-2.89	-2.99	-2.76	-2.99	-2.95	-2.87	-2.81	-3.98	-3.71	-3.48	-3.50	-3.04
Gain (dBi)	2.24	1.95	1.87	1.60	1.28	0.88	0.90	1.19	1.59	1.90	2.18	2.03	2.26	2.24	2.19	2.72
Efficiency (%)	50.11	50.32	52.73	52.01	51.36	50.26	53.01	50.23	50.67	51.67	52.32	40.00	42.56	44.86	44.66	49.71

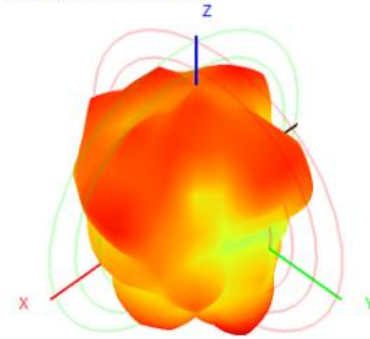
2450.0MHz H+V, Eff: 50.3%



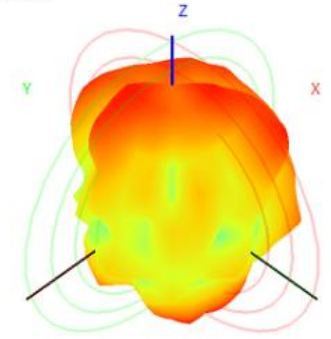
Back View



5850.0MHz H+V, Eff: 49.7%



Back View



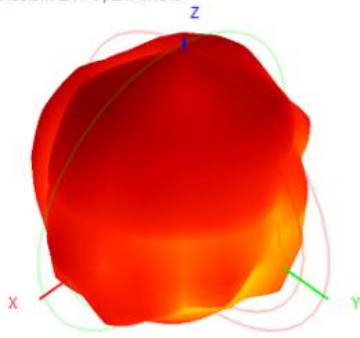
2. Test Result

2.4 WIFI Antenna Gain/Efficiency/3D DATA

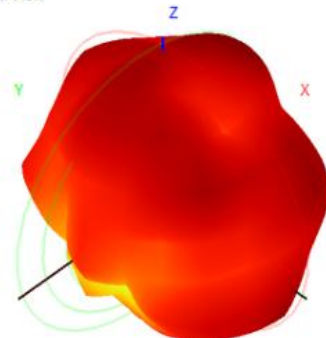
WIFI 1

Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	5150	5350	5500	5650	5850
Efficiency (dBi)	-3.48	-3.45	-3.06	-3.18	-3.08	-3.22	-3.00	-3.38	-3.48	-3.29	-3.27	-3.81	-3.73	-3.69	-3.83	-3.49
Gain (dBi)	0.77	0.70	1.06	1.07	1.46	1.52	1.84	1.51	1.08	1.38	1.75	1.84	2.07	2.21	2.26	2.52
Efficiency (%)	44.79	45.09	49.35	48.07	49.17	47.61	50.11	45.89	44.86	46.85	47.05	41.51	42.29	42.66	41.31	44.69

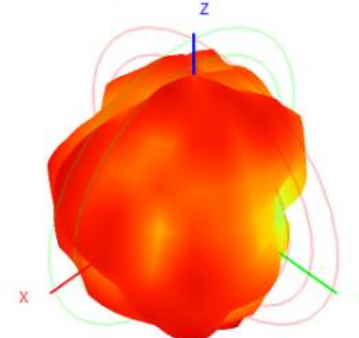
2450.0MHz H+V, Eff: 47.6%



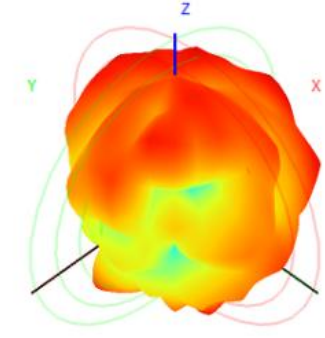
Back View



5850.0MHz H+V, Eff: 44.7%



Back View



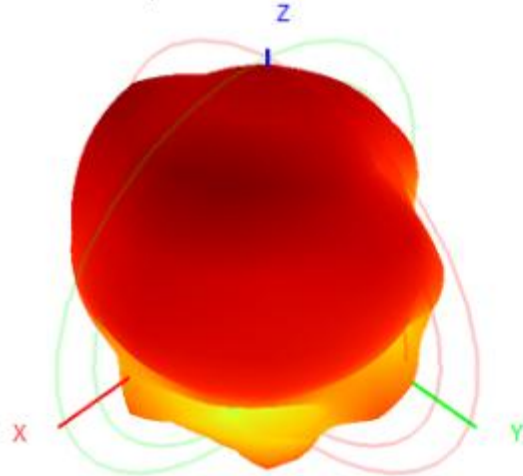
2. Test Result

2.4 WIFI Antenna Gain/Efficiency/3D DATA

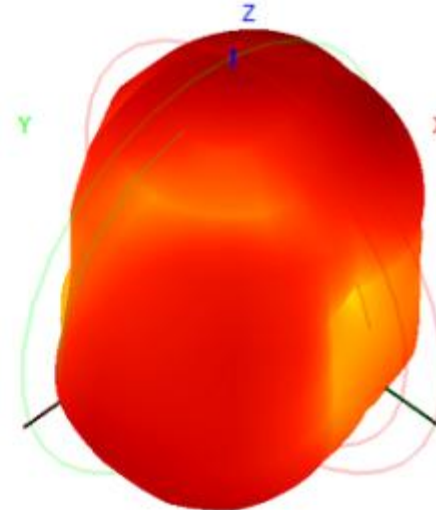
BT

Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Efficiency (dBi)	-3.51	-3.53	-3.43	-3.34	-3.43	-3.42	-3.23	-3.34	-3.26	-3.27	-3.19
Gain (dBi)	2.23	2.18	2.32	2.57	2.60	2.55	2.65	2.62	2.93	2.81	2.77
Efficiency (%)	44.52	44.34	45.32	46.28	45.39	45.47	47.46	46.27	47.14	47.04	47.90

2450.0MHz H+V, Eff: 45.5%



Back View



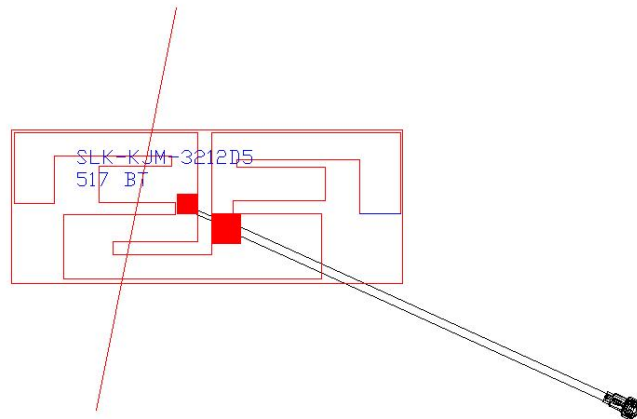


3. Conclusions

Thank you

BT

1. Explanation of Product number :



Product Code:

- (1) Customer:科金明
- (2) Antenna Name:BT 天线 (BT Antenna)
- (3) Connector:1.13白色线, 总长260mm, 1代端子

2. Features

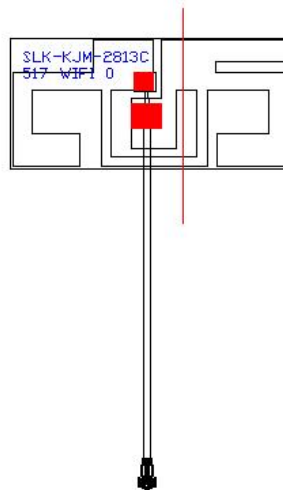
- *Stable and reliable in performances
- *Compact size
- *RoHS compliance

3. Description

Holy bond's FPC antenna series are specially designed for BT applications. Based on Holy bond's proprietary design and processes, this FPC antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

WIFI 0

1. Explanation of Product number :



Product Code:

- (1) Customer:科金明
- (2) Antenna Name:WIFI 天线（WIFI Antenna）
- (3) Connector:1.13黑色线，总长290mm，1代端子

2. Features

- *Stable and reliable in performances
- *Compact size
- *RoHS compliance

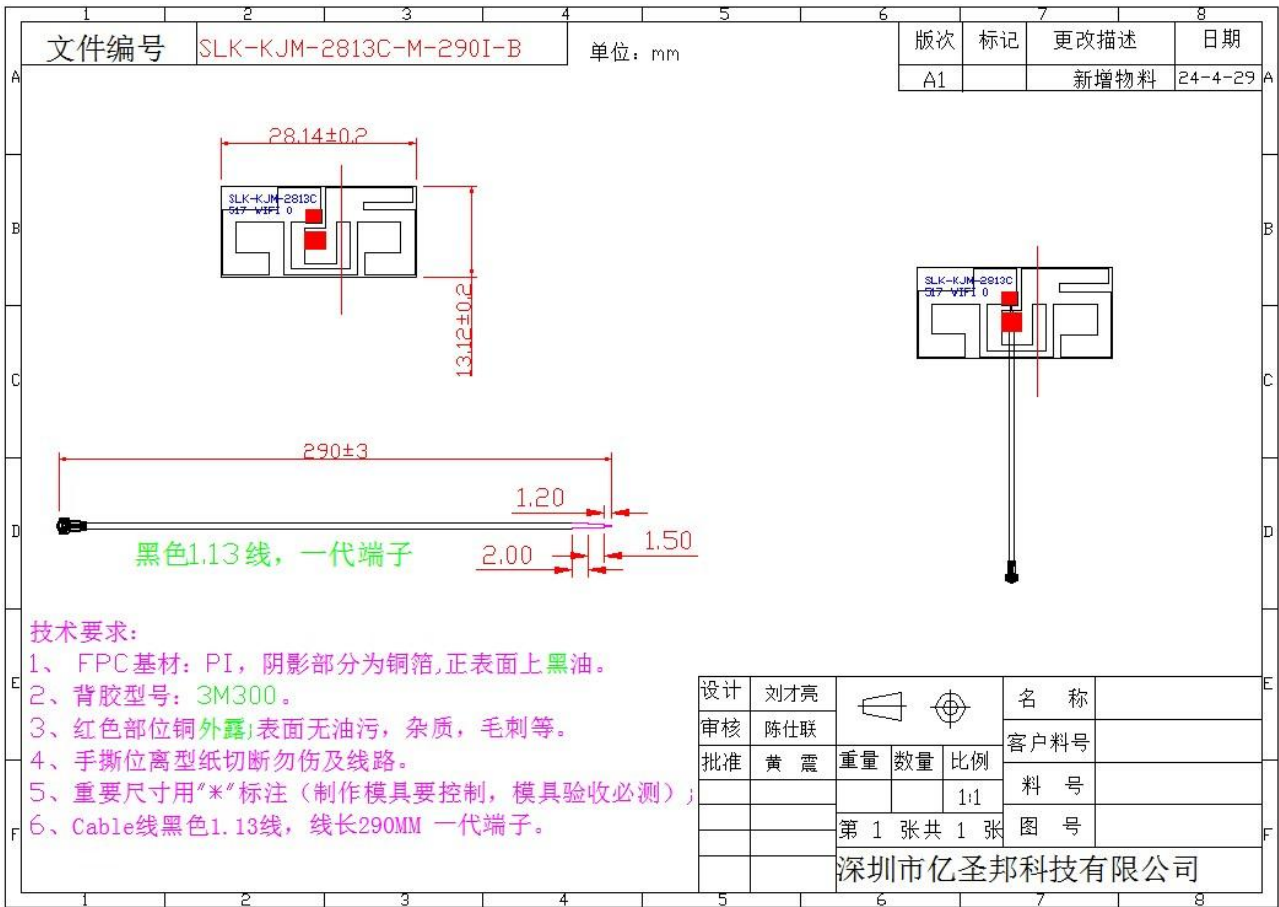
3. Applications

- * IEEE802.11 (b/g/n/a)
- * Hand-held devices when WIFI (802.11b/g/n/a) functions are needed

4. Description

Holy bond's FPC antenna series are specially designed for WIFI (802.11b/g/n/a) applications. Based on Holy bond's proprietary design and processes, this FPC antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

6. Antenna Dimensions (unit: mm)



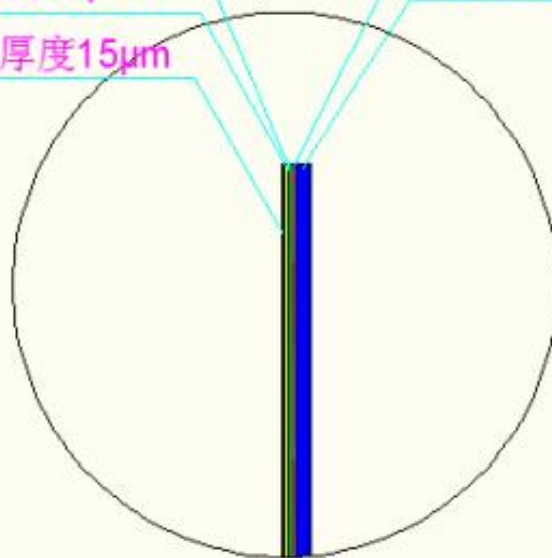
绿色: PI基材, 厚度25 μm

红色: 3M300胶, 厚度50μm

黄色: 覆铜, 厚度35μm

蓝色: 离型纸, 厚度100μm

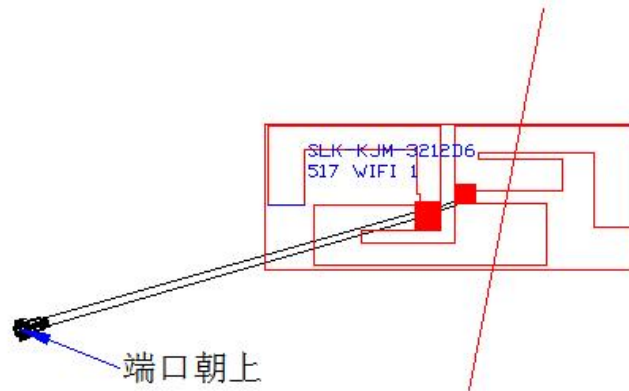
紫红色: 黑油, 厚度15μm



详细A 5/1

WIFI 1

1. Explanation of Product number :



Product Code:

- (1) Customer:科金明
- (2) Antenna Name:WIFI 天线 (WIFI Antenna)
- (3) Connector:1.13灰色线, 总长160mm, 1代端子

2. Features

- *Stable and reliable in performances
- *Compact size
- *RoHS compliance

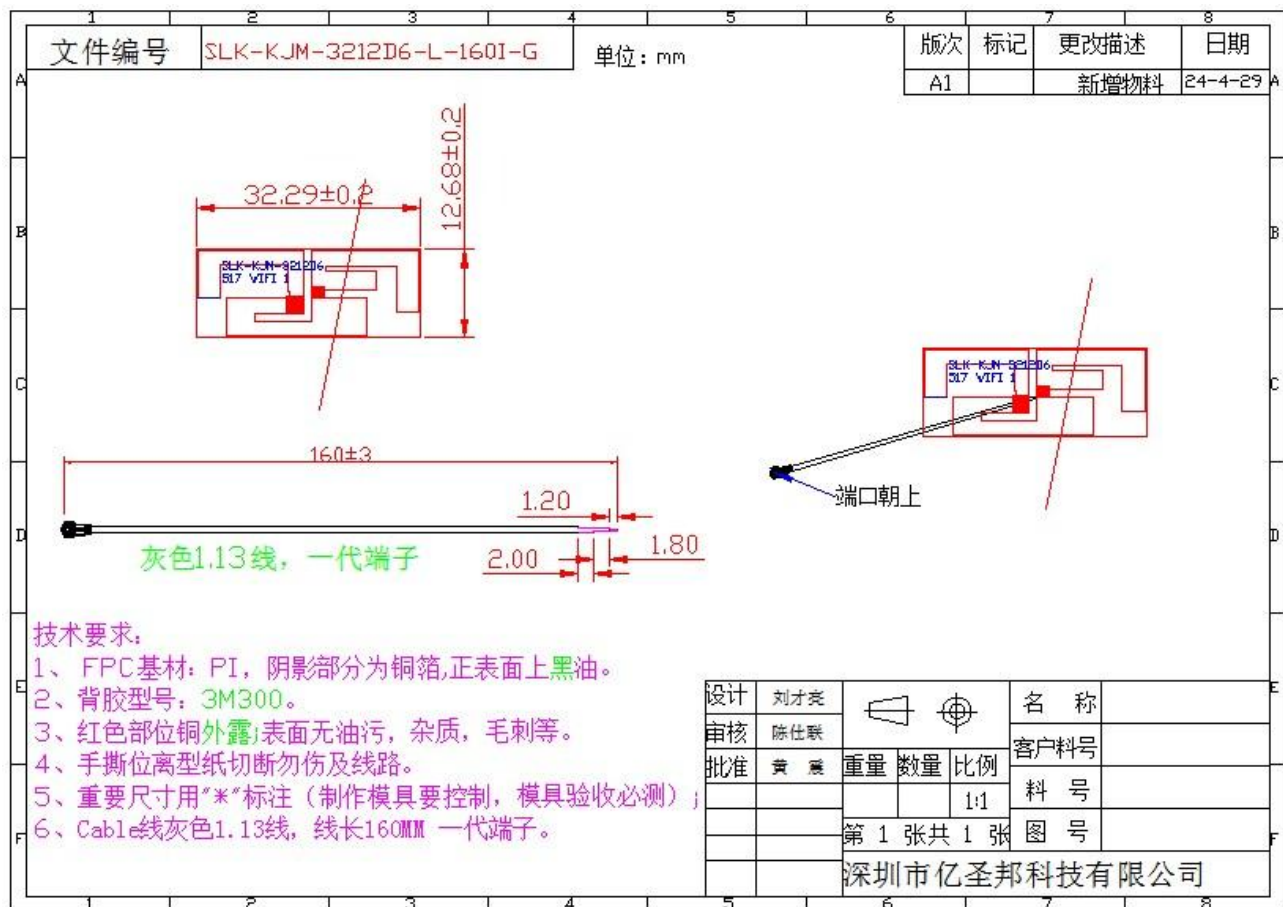
3. Applications

- * IEEE802.11 (b/g/n/a)
- * Hand-held devices when WIFI (802.11b/g/n/a) functions are needed

4. Description

Holy bond's FPC antenna series are specially designed for WIFI (802.11b/g/n/a) applications. Based on Holy bond's proprietary design and processes, this FPC antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

6. Antenna Dimensions (unit: mm)



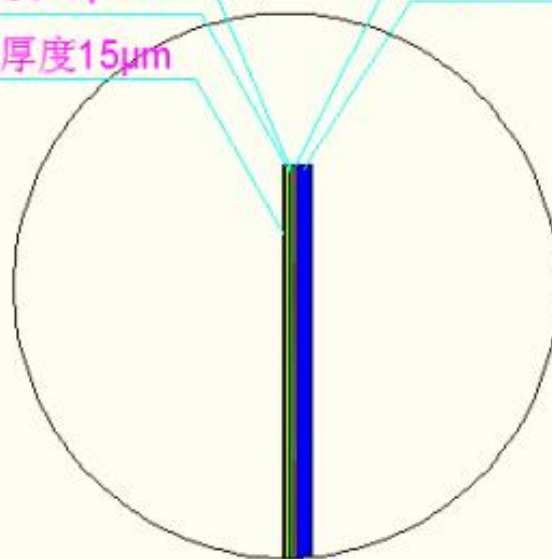
绿色: PI基材, 厚度 $25\mu\text{m}$

黄色: 覆铜, 厚度 $35\mu\text{m}$

紫红色: 黑油, 厚度 $15\mu\text{m}$

红色: 3M300胶, 厚度 $50\mu\text{m}$

蓝色: 离型纸, 厚度 $100\mu\text{m}$



详细A 5/1