

Shenzhen Yishengbang Technology Co., LTD

SPECIFICATION FOR APPROVAL

Company name (filled in by customer) :Guangzhou Commercial Science Information Co., LTD

Material code (fill in by customer) :_____

Gauge type number (filled in by customer) : T40PRO-T616 (自研主板)

Acceptance date (for customer): _____

Supplier Name: Shenzhen Yishengbang Technology Co., LTD

Specification: WIFI+GPS:SLK-TD-3713A1 (W/B/G)

4G AUX:SLK-TD-2004-L-345IV-B 4G MAIN:SLK-TD-6113A1

WIFI+GPS 小板: SLK-TD-WBG-R-85IV-G 4G 小板: SLK-TD-4G-R-165IV-B (T616)

APPROVAL SIGNATURE

COMPANY Name			Guangzhou Commercial Science Information Co., LTD		
ENGINEER	QUALITY	ME	ENGINEER	CHECK	APPROVAL
Chenshilian	Chenjiexing	Liucailiang			
APPROVAL		Lin Cai	SIGNATURE		
DATE	2023-4-4		DATE		
REMARK:					

Supplier: Shenzhen Yishengbang Technology Co., LTD

Supplier Address: 101, Building C, Shenzhen Qianwan Hard Technology Industrial Park, Bao 'an District, Shenzhen

Tel: 18525305599 Tel: 18666299104

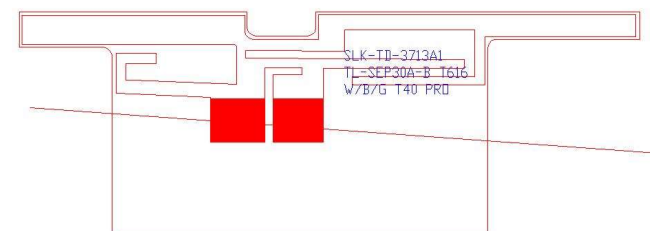
WIFI+GPS Antenna (3713A1)

1. Explanation of Product number :

S L K - T D - 3 7 1 3 A 1 (W / B / G)

1

2



Product Code:

(1) Customer:

TD: 台电

(2) Project:

3713A1: SLK-TD-3713A1(W/B/G) (WIFI+GPS antenna)

备注: 配套SLK-TD-WBG-R-85IV-G小板

2. Features

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

3. Applications

* IEEE852.11 (a/b/g/n/ac/ax)

* Hand-held devices when WIFI (852.11a/b/g/n/ac/ax)GPS functions are needed

4. Description

Holy bond's FPC antenna series are specially designed for WIFI (852.11 a/b/g/n/ac/ax) GPS 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.

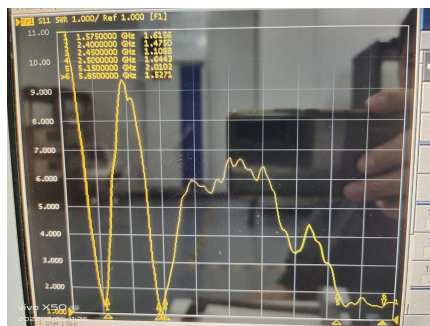
5. Electrical Specifications

5-1

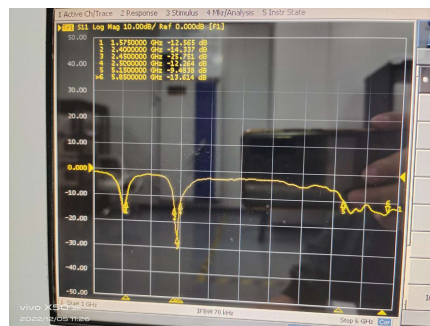
Characteristics	Specifications	Unit
Outline Dimensions	36.97x 13.25x 0.12	mm
Center Frequency	1.585+2.4-2.5+5.15-5.85	GHz
VSWR	3max	

5-2.

VSWR



S11



5-3.WIFI +GPS Antenna Gain/Efficiency/Radiation Pattern of 3D

Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
1570.0	-4.56	0.80	34.98
1575.0	-4.31	0.84	37.11
1580.0	-4.48	0.66	35.68
2400.0	-4.33	0.14	36.86
2410.0	-4.34	0.12	36.78
2420.0	-4.38	-0.03	36.47
2430.0	-4.10	0.20	38.91
2440.0	-4.08	0.14	39.10
2450.0	-4.25	0.00	37.56
2460.0	-4.47	-0.56	35.73
2470.0	-4.43	0.01	36.03
2480.0	-4.29	0.02	37.20
2490.0	-4.22	0.08	37.81
2500.0	-4.41	-0.05	36.26
5150.0	-4.54	1.34	35.16
5350.0	-4.17	1.95	38.32
5550.0	-4.33	1.30	36.89
5750.0	-4.23	1.79	37.76
5850.0	-3.95	1.91	40.26

WIFI 有源测试

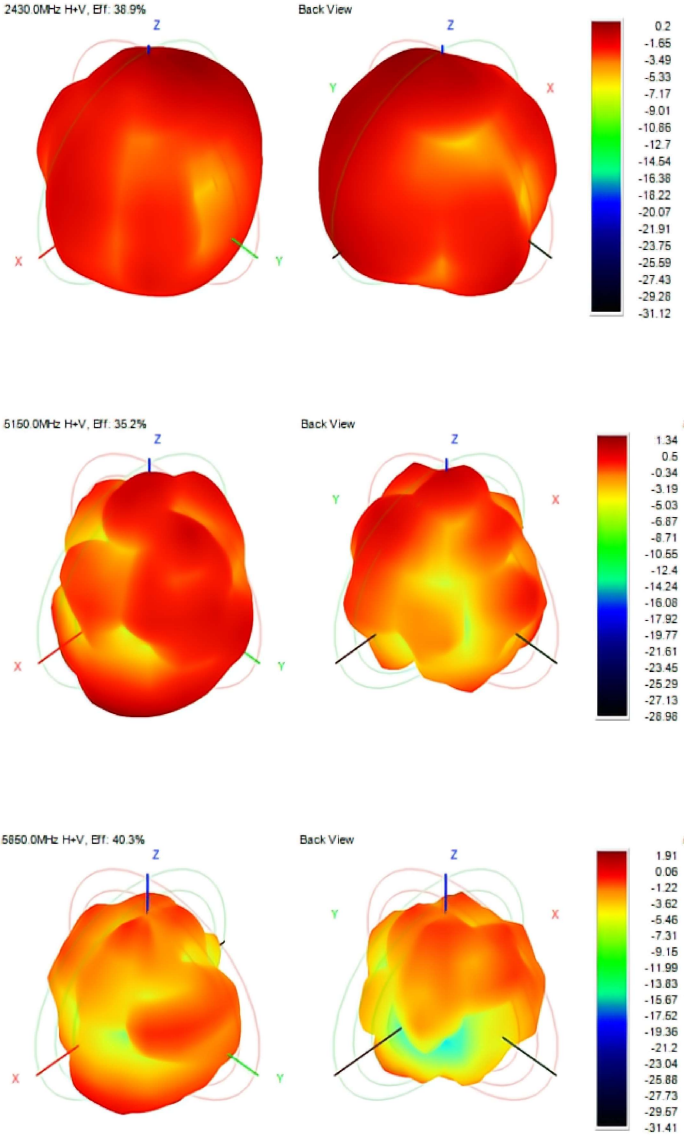
频段	1	6	11
B-TRP-11MBps	13.56	12.51	12.91
B-TIS-11MBps	-80.79	-80.99	-79.72
G-TRP-54MBps	11.39	11.07	11.35
G-TIS-54MBps	-71.25	-71.17	-69.77
N-TRP-MCS7	11.41	11.06	11.44
N-TIS-MCS7	-65.94	-64.46	-64.01
频段	36	149	165
A-TRP-54MBps	8.77	9.13	9.04
A-TIS-54MBps	-71.25	-71.36	-70.71

传导测试没加线损

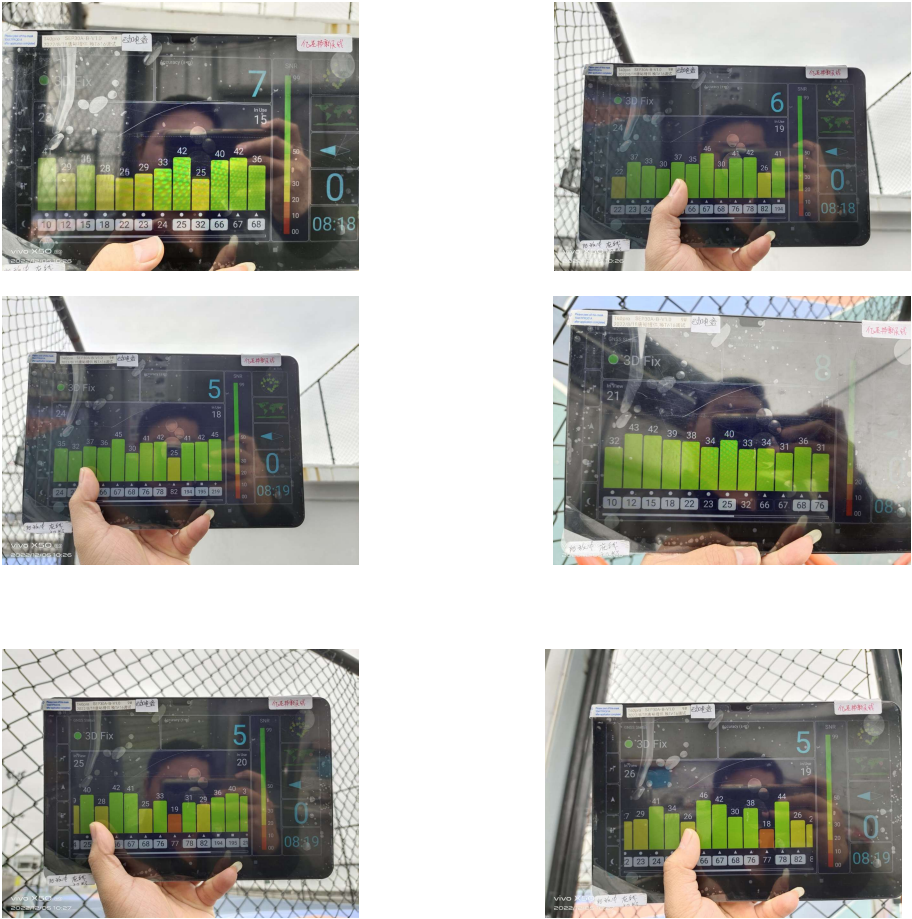
WIFI 有源传导测试

频段	1	6	11
B-TRP-11MBps	16.41	15.7	16.03
G-TRP-54MBps	14.18	13.69	13.58
N-TRP-MCS7	14.17	13.68	13.47
频段	36	149	165
A-TRP-54MBps	13.17	13.53	13.13

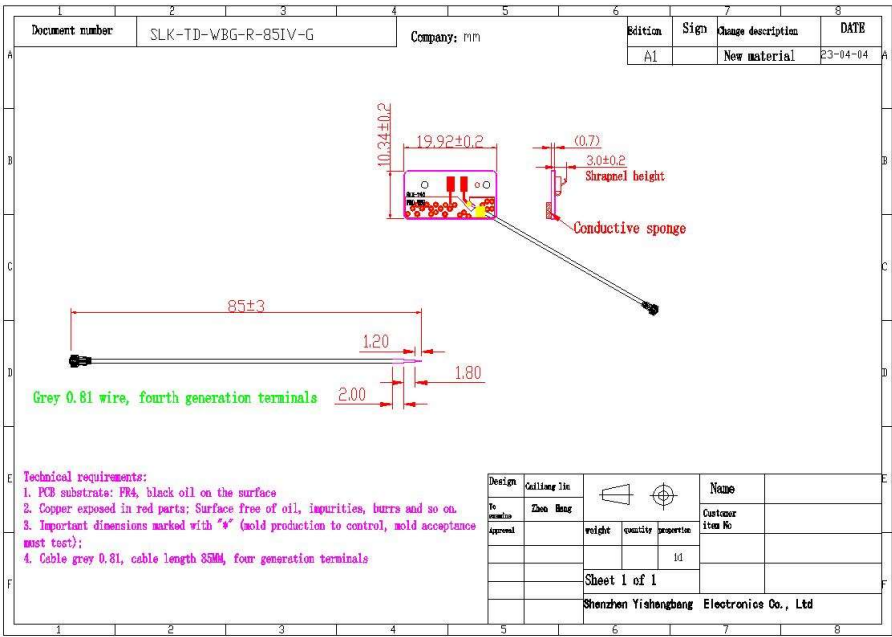
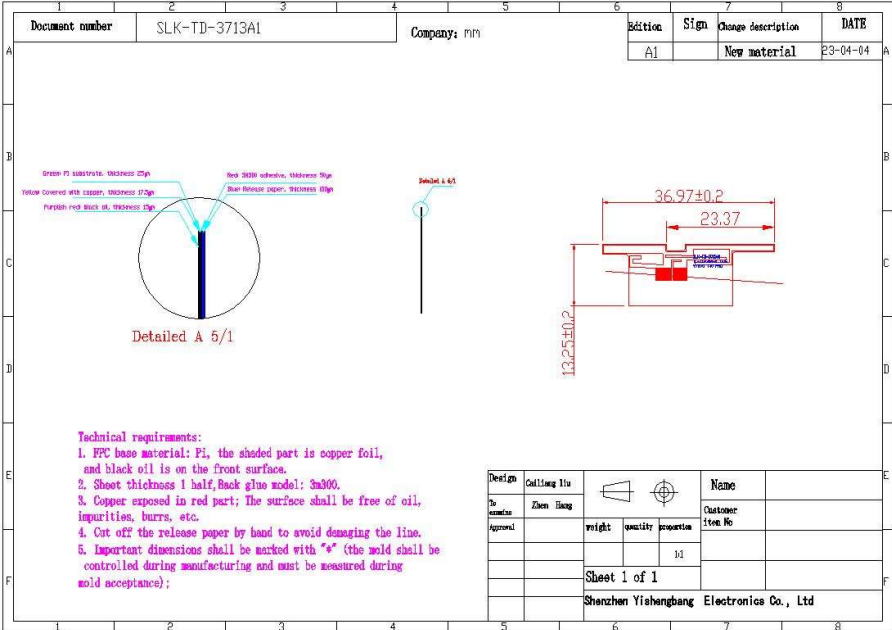
5-4.WIFI +GPS Antenna 2D



5.5 GPS Actual effec



6. Antenna Dimensions (unit: mm)

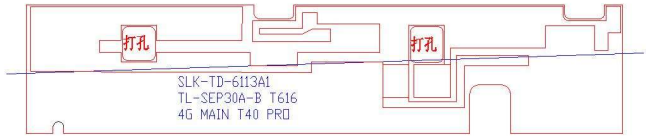


4G MAIN Antenna (6113A1)

1. Explanation of Product number :

SLK - TD - 6113A1

1 2



Product Code:
(1) Customer:
TD:台电
(2) Project:
6113A1: SLK-TD-6113A1 (4G MAIN antenna)
备注: 配套SLK-TD-4G-165IV-B小板(T616)

2. Features

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

3. Description

Holy bond's FPC antenna series are specially designed for 4G 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.

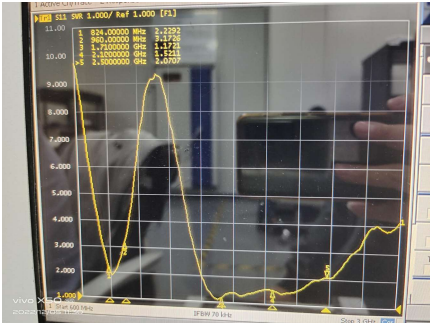
4. Electrical Specifications

4-1

Characteristics	Specifications	Unit
Outline Dimensions	61.24x 13.2 x 0.12	mm
VSWR	5max	
Impedance	50	Ω
Polarization	Linear Polarization	

4-2

VSWR



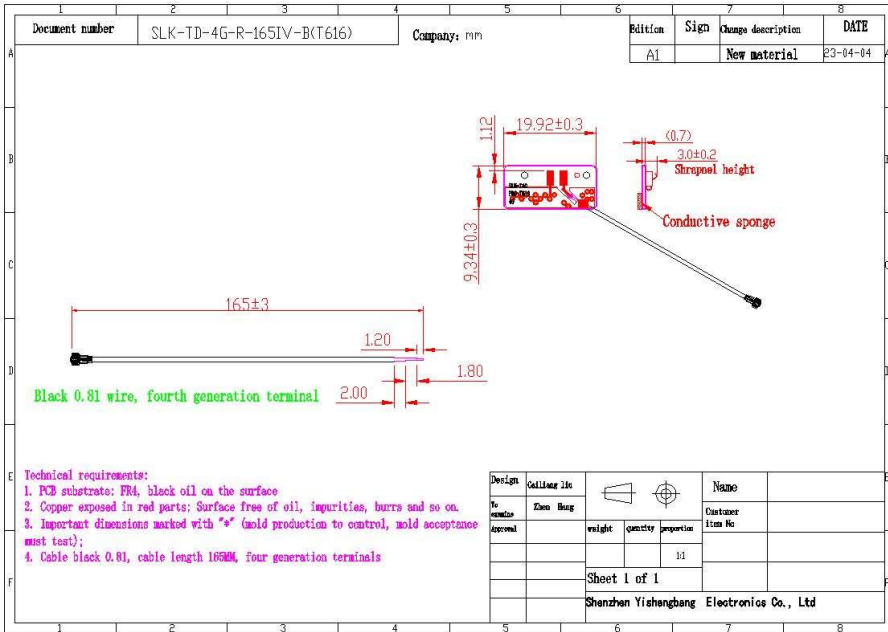
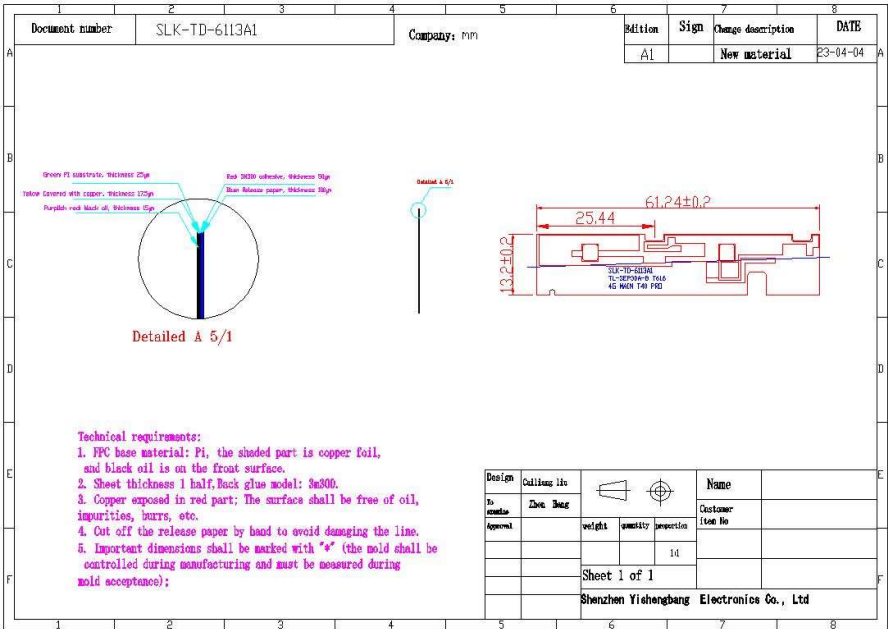
S11



4-3. 2G/3G/4G Antenna TRP/TIS

2G 频段	LTE-L	LTE-M	LTE-R	TIS
GSM850	25.74	26.34	26.69	-102.24
GSM900	26.49	26.28	26.04	-102.18
GSM1800	23.87	24.21	24.45	-102.27
GSM1900	24.32	24.09	23.67	-102.12
3G 频段	LTE-L	LTE-M	LTE-R	TIS
WCDMA-B1	17.13	17.02	17.43	-103.18
WCDMA-B5	16.26	16.64	17.13	-102.48
WCDMA-B8	16.61	16.37	16.24	-102.29
4G 频段	LTE-L	LTE-M	LTE-R	TIS
LTE-1	17.28	17.47	17.61	-92.64
LTE-3	16.48	16.79	16.69	-91.02
LTE-5	16.08	16.34	16.57	-88.18
LTE-7	17.34	17.08	16.89	-88.29
LTE-8	16.23	16.45	16.67	-88.53
LTE-20	16.46	16.57	16.68	-88.22
LTE-34	16.16	16.37	16.54	-91.02
LTE-38	16.09	16.49	16.72	-90.34
LTE-39	17.23	16.79	16.59	-88.25
LTE-40	17.46	16.89	16.55	-90.87
LTE-41	16.49	16.34	16.29	-90.16

5. Antenna Dimensions (unit: mm)

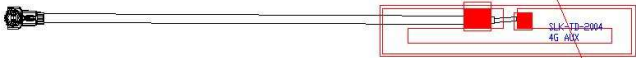


4G AUX Antenna (2004)

1. Explanation of Product number:

SLK - TD - 2004 - L - 345IV - B

1 2 3 4 5



- Product Code:
- (1) Customer:
TD: 台电
- (2) Project:
2004: SLK-2004 (4G AUX antenna)
- (3) Welding Position
L: Left
- (4) Cable Length:
345IV: 345*0.81MM 四代端子
- (5) Cable Color
B: Black

2. Features

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

3. Description

Holy bond’s FPC antenna series are specially designed for 4G 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.

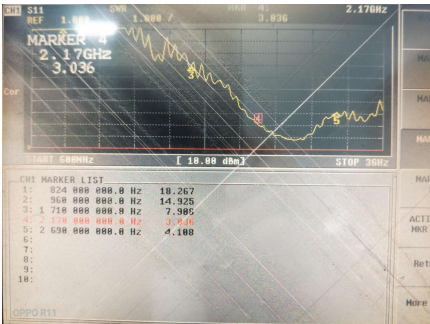
4. Electrical Specifications

4-1

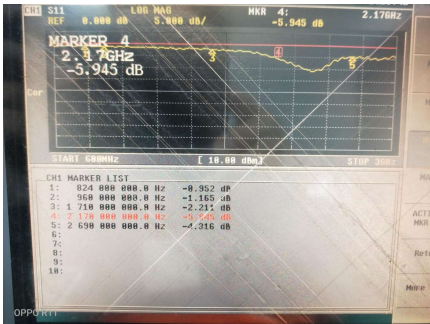
Characteristics	Specifications	Unit
Outline Dimensions	20.02x 4x 0.12	mm
Bandwidth(under-10dB return loss)	130min	MHz
VSWR	5max	

4-2

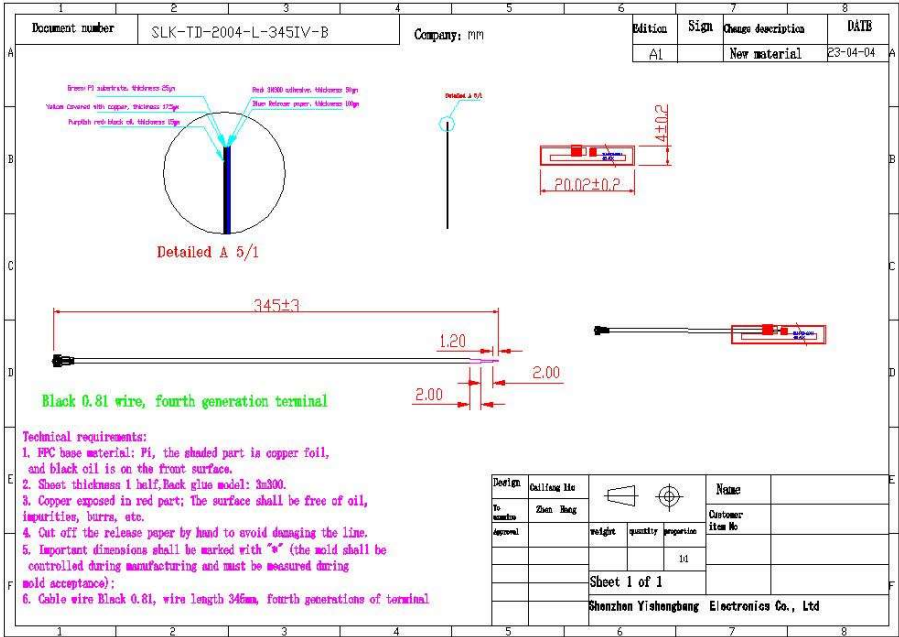
VSWR



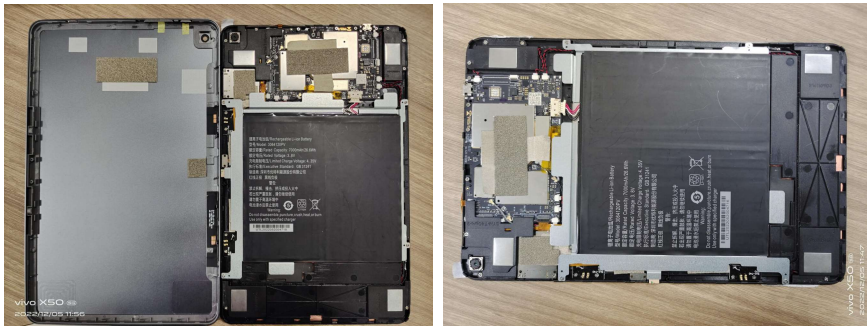
S11



5. Antenna Dimensions (unit: mm)

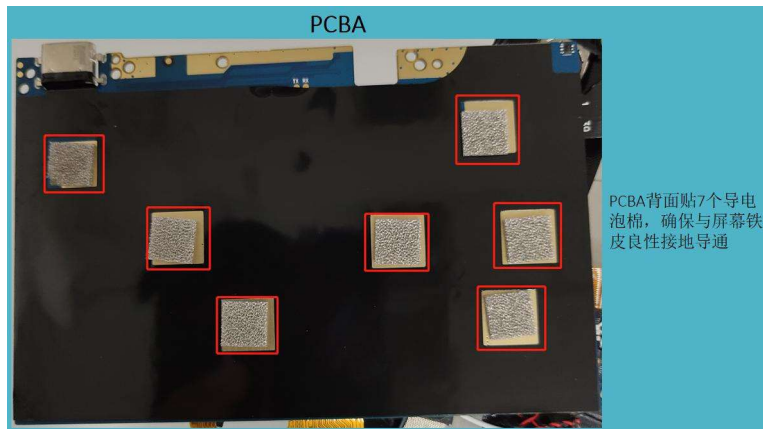


6. Antenna Picture



As shown in the picture:

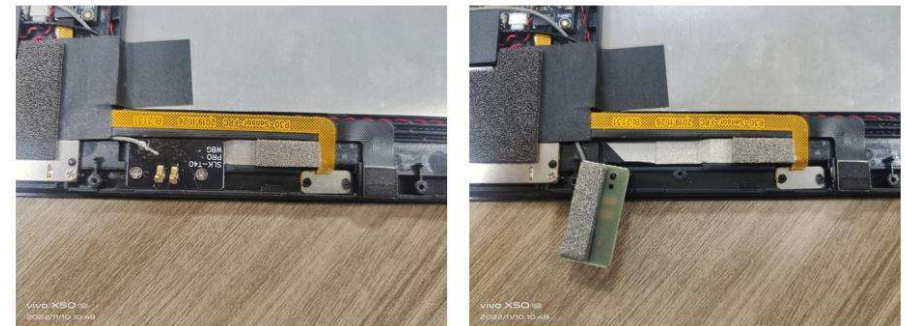
1. Attach a conductive sponge to the copper leakage area of the back cover for contact treatment with the motherboard shield, then attach a conductive cloth to the Cato position for ground treatment of the screen, and then a conductive sponge on the top for contact treatment with the back cover.
2. The copper leakage area at the bottom of the motherboard remains unchanged, and the copper leakage area is treated according to the customer's original environment.



如图所示:

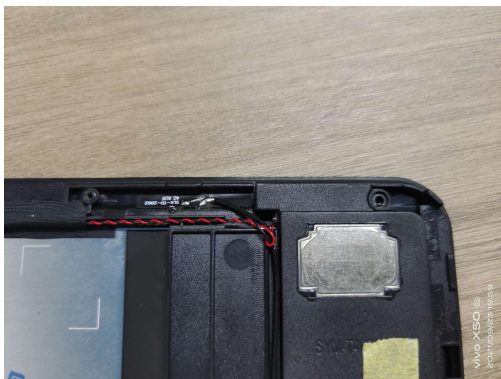
- 1.在4G小板底部漏铜区贴一块导电布再顶一块导电海绵接地处理

Note: The name of 4GPCB small board for sealing sample has been changed. The current one is not added. The name of bulk cargo is T616 with silk screen printing.

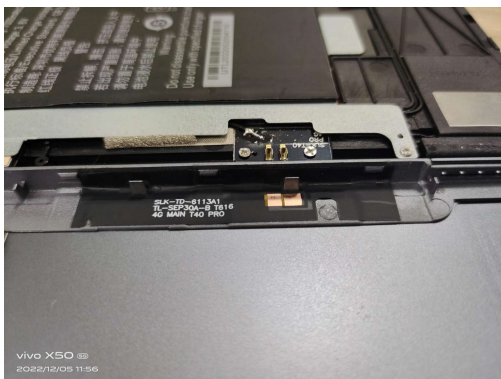


如图所示:

- 1.在WIFI小板底部漏铜区贴一块导电布再顶一块导电海绵接地处理



4G axu antenna



4G main antenna



WIFI/GPS antenna