



Confidential Information

Shenzhen Yesheng Communication Technology Co.,Ltd

Specification for built-in Antenna

QS1035 Main Antenna/Diversity Antenna/ GWB Antenna/Antenna Coaxial line Product Confirmation

Client	深圳时骏物联科技有限公司 山西时骏物联科技有限责任公司	Freq-Band	GSM 四频 WCDMA/1900/1700/850 LTE-B2/B4/B5/B7/B12/B17/ B66/B71 GPS-WIFI-BT
Product Name	QS1035	Version	YST-V1.0-A
Item Number	YST-20221119-OS1035	Copies	5
Sample type	FPC Antenna	Colour	Black
RF Designer		Structural design	
Department Manager		Date	December 20, 2022

Supplementary notes:

The large goods order shall be produced and made according to the confirmation. If there is any change, the confirmation shall be provided again before production and making.

Client confirms:

Customer Item No:

QS1035 Main Antenna Material code: 910204948

QS1035 Diversity Antenna Material code : 910204949

QS1035 GWB Antenna Material code : 910204950

QS1035 Antenna Coaxial line Material code :910204947

Producer: Ying Jia Bing

address: Room 308, building 64, Jin Long Industrial City (Tianmawei building) , 88 Daxin road, Majarong, Nanshan district, Shenzhen. Tel: 0755-22678821 fax: 0755-22678890

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1. Technical Information

1.1 Testing company

Testing company:	Shenzhen Yesheng Communication Technology Co.,Ltd
Test address:	Room 308, building 64, Jin Long Industrial City (Tianmawei building) , 88 Daxin road, Majarong, Nanshan district, Shenzhen
Test date:	2022-12-20

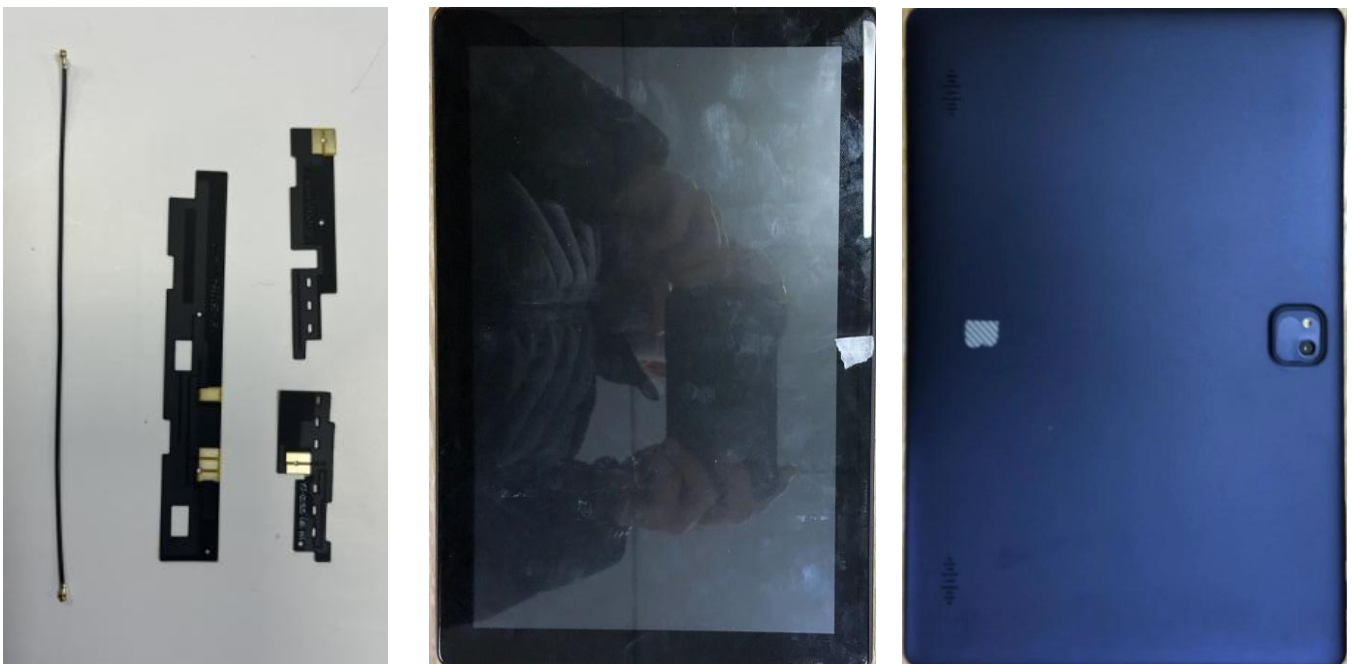
1.2 Test information

WireLess type:	Main antenna/Diversity antenna/ GWB antenna /Antenna Coaxial line
Freq-Band:	GSM 四频 WCDMA/1900/1700/850 LTE-B2/B4/B5/B7/B12/B17/B66/B71 GPS-WIFI-BT
Antenna:	PIFA
Product Name:	QS1035

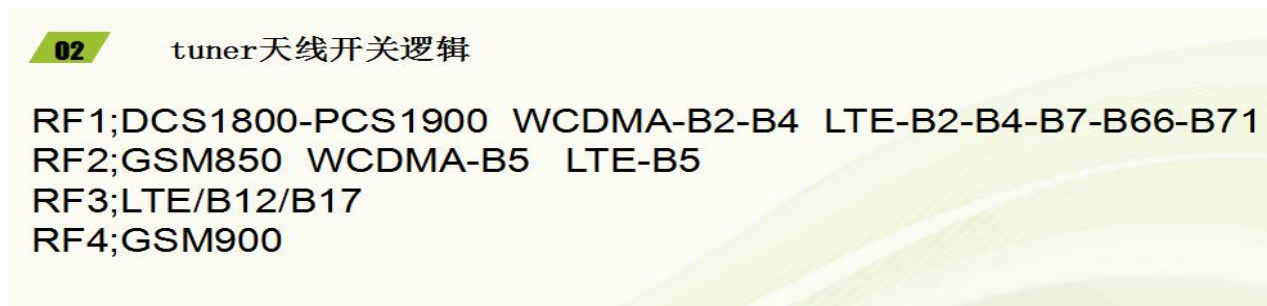
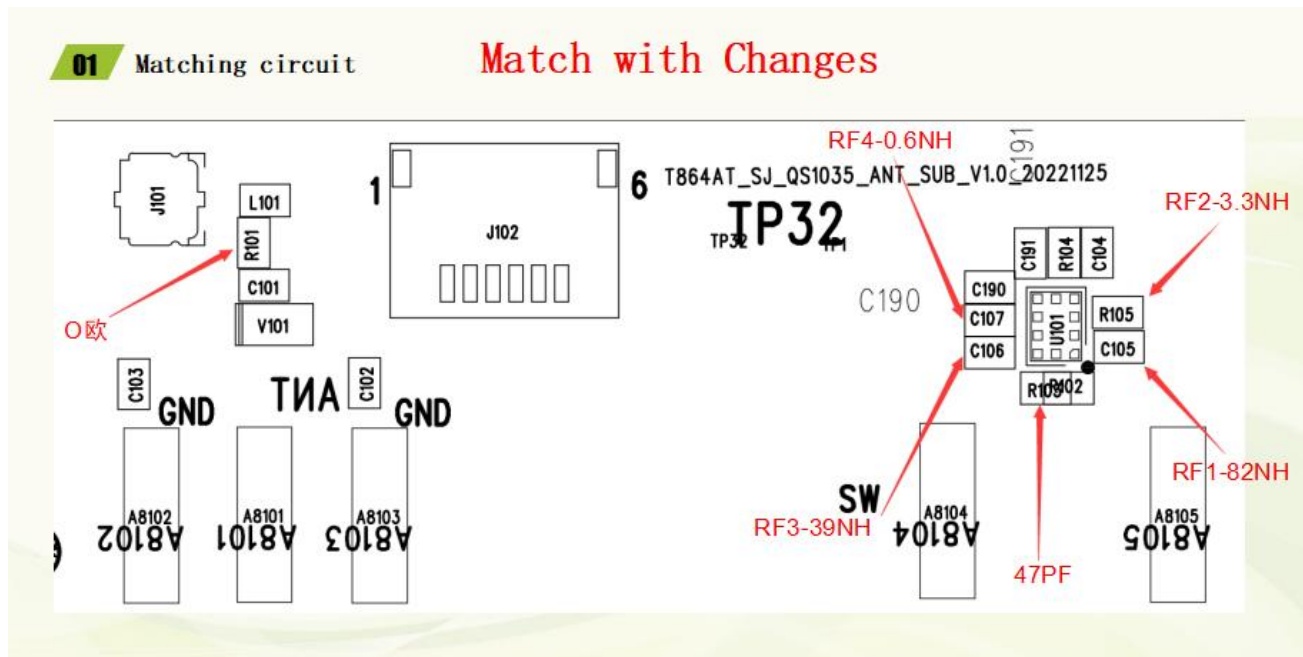
2. Antenna

2.0 Picture of antenna and prototype

Q1035-Antenna Machines Picture



2.1 Matching circuit



2.2 Antenna specifications

1、Antenna Composition:

Main antenna, FPC black, Screen Printing: YST-QS1035-MAIN-ANT
 diversity antenna, FPC black, Screen Printing: YST-QS1035-DIV-ANT
 GWB antenna, FPC black, Screen Printing: YST-QS1035-GWB-ANT
 Antenna Coaxial line , Double head four generation terminal wire
 black, wire diameter 0.81mm, length 115.2mm

2、Packing Method

Main antenna, diversity antenna, GWB antenna, Antenna Coaxial
 line, packaged and shipped.

2.3 Test Conditions

Test Environment Conditions: **Darkroom temperature** (16-25) °C

3. Antenna Test

3.1、Test Environment:

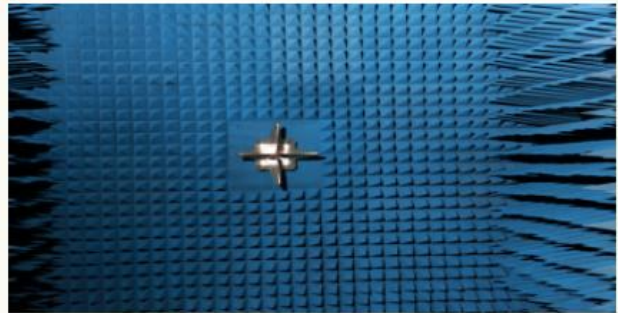
Test was conducted in free space condition (microwave unreflected chamber).

Satimo 3D Chamber 6×4×4(m)
gilent 8960 8753ES CMW500
twork analyzer-R&S ZVL

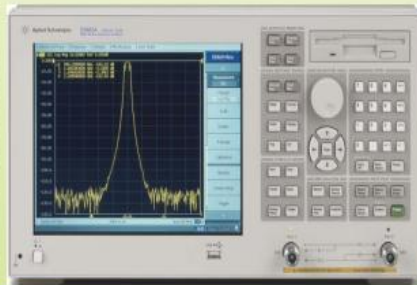
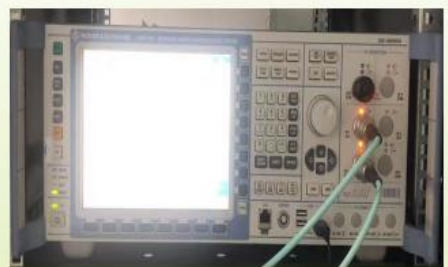
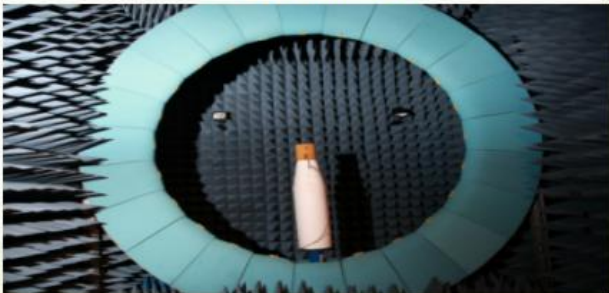
ETS



SATIMO—24



罗德斯瓦茨屏蔽箱



测试系统

有缘测试

无源测试

SATIMO

ETS

支持2G/3G/4G/WIFI

600MHZ-----6G

3.2、 The turn of VSWR test equipment connection is:

R&S ZVLwork analyzer → test line → Test fixture → actual measurement (See figure)。

3.3、 Gain,efficiency,power (TRP) ,sensitivity (TIS) :

microwave unreflected chamber:

test frequency range 400MHz—6GHz, Quiet zone range is 50cm around,

reflectivity less than-50 dB

3.4、 Test instrument

R&S ZVL work analyzer、 Agilent8960 Agilent8753ES CWM500/MT8820C Standard horn antenna etc。

3.5. Points to notea

This antenna is only suitable for debugging prototype, any change of motherboard version or RF MATERIAL, any change of mobile phone accessories such as camera.

4.Test Results lists

In microwave unreflected chamber, the power and sensitivity are listed below:

4.1 3D Test Data

Band	Channel	TRP	TIS	亮屏TIS	Band	Channel	TRP	TIS	亮屏TIS
GSM900	CH1	25.7			WCDMA-1900	CH9662	19.2		
	CH62	25.5				CH9800	18.5		
	CH124	25.0	-101.0			CH9938	18.0	-105.0	
DC S1800	CH512	25.5			WCDMA-1700	CH1537	18.2		
	CH698	26.3				CH1637	18.6		
	CH885	26.7	-103.6			CH1738	19.0	-103.2	
GSM850	CH128	29.0			WCDMA-850	CH4357	18.0		
	CH190	28.2				CH4407	17.8		
	CH251	27.1	-103.1			CH4458	18.2	-103.8	
PCS1900	CH512	26.6							
	CH661	25.7							
	CH810	24.7	-104.0						

4.2 3D Test Data

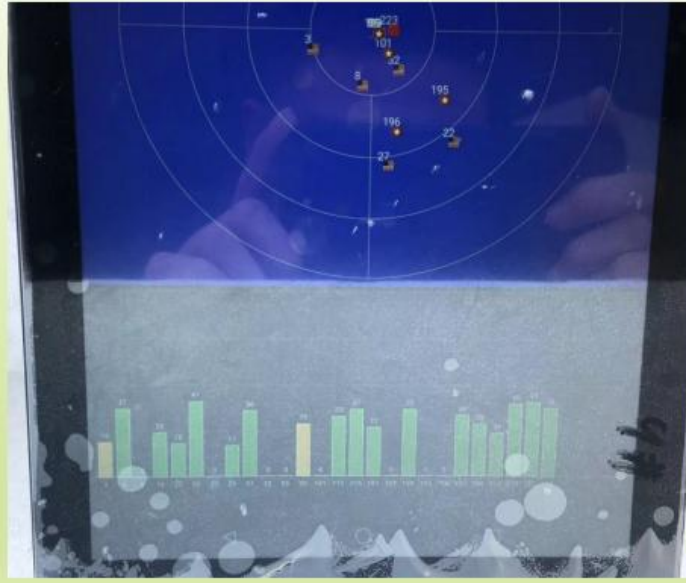
Band	Channel	TRP	TIS	亮屏TIS	Band	Channel	TRP	TIS	亮屏TIS
LTE B2 (10MHz)	CH650	19.3			LTE B12 (10MHz)	CH5060	17.0		
	CH900	18.8				CH5095	17.2		
	CH1150	18.3	-93.5			CH5130	18.0	-93.9	
LTE B4 (10MHz)	CH37850	18.5			LTE B17 (10MHz)	CH5780	17.6		
	CH38000	18.9				CH5790	17.7		
	CH38150	19.2	-93.0			CH5800	18.2	-93.8	
LTE B5 (10MHz)	CH2450	18.0			LTE B66 (10MHz)	CH66436	18.8		
	CH2525	17.9				CH66786	19.3		
	CH2600	17.8	-93.7			CH67135	19.5	-93.1	
LTE B7 (10MHz)	CH2800	18.4			LTE B71 (10MHz)	CH68636	15.5		
	CH3100	18.3				CH68760	16.8		
	CH3400	18.5	-91.9			CH68885	17.6	-92.3	

4.3 WIFI-BT Test Data

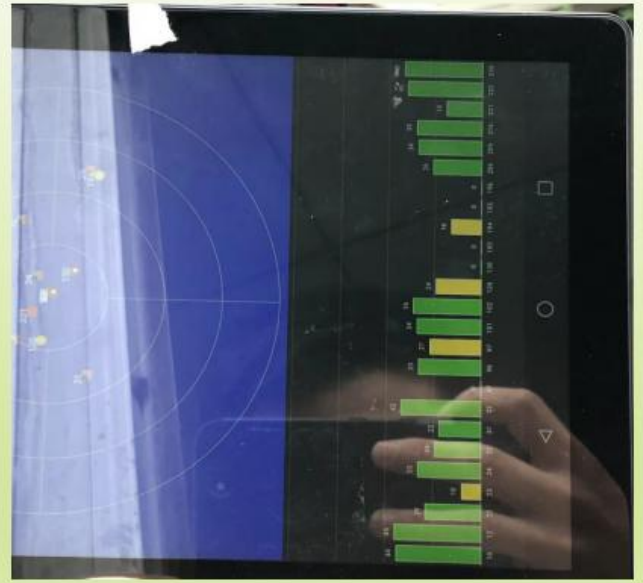
Band	Channel	TRP	TIS
WIFI2.4G-B- 11Mbps	CH1	8.8	-79.5
	CH6	8.0	-78.2
	CH11	9.1	-79.3
WIFI5G-A - 54Mbps	CH36	7.4	-67.9
	CH64	7.3	-67.1
	CH165	7.0	-66.8
BT	实测连接华为蓝牙耳机无障碍清晰听音乐距离		
	15m		

4.4 GPS Window measured Tata

Vertical survey



Cross survey

**4.5** One PIFA antenna for GSM /WCDMA / LTE /WIFI/GPS/BT

Band	Gain
GSM850	Maximum Gain is -0.7dBi
GSM900	Maximum Gain is -0.8dBi
DCS1800	Maximum Gain is 1.2dBi
PCS1900	Maximum Gain is 1.4dBi
WCDMA Band II	Maximum Gain is 1.4dBi
WCDMA Band IV	Maximum Gain is 1.2dBi
WCDMA Band V	Maximum Gain is -0.8dBi
LTE Band 2	Maximum Gain is 1.4dBi
LTE Band 4	Maximum Gain is 1.2dBi
LTE Band 5	Maximum Gain is -0.8dBi
LTE Band 7	Maximum Gain is 1.8dBi
LTE Band 12	Maximum Gain is -0.9dBi
LTE Band 17	Maximum Gain is -0.9dBi
LTE Band 66	Maximum Gain is 1.2dBi
LTE Band 71	Maximum Gain is -1.1dBi.
Band GPS	Maximum Gain is 1.3dBi
Band WIFI2.4G	Maximum Gain is 1.6dBi.
Band WIFI5G	Maximum Gain is 1.4dBi
Band BT	Maximum Gain is 1.6dBi

5. Conclusion

This antenna is designed on the basis of the prototype provided by the customer. The electrical performance parameters and structure have met the customer's technical requirements, please confirm! The original antenna matching has been changed.

6. Environmental treatment

6.1 Environmental treatment matters;

Paste conductive sponge at three places for grounding

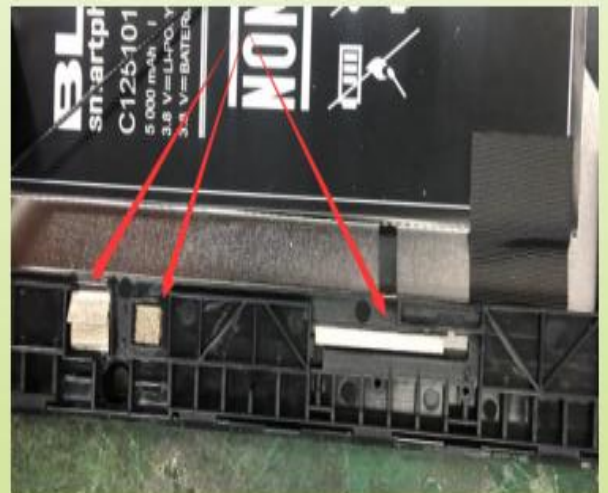


Paste conductive cloth here for grounding



Paste a piece of conductive cloth on the back of the main board

Paste conductive foam at three places to fully ground the small board camera



二、Engineering drawing

1		2		3		4		5		6																																									
第1视角																																																			
单位 mm		比例 1:1																																																	
Note: 1. The base materil is half to half 2. Gum back 3M 300LSE						<table><tr><td></td><td>0~10</td><td>10~30</td><td>30~50</td><td>50~</td><td>角度</td><td>○</td><td>◎</td><td>⊥</td><td>∠</td></tr><tr><td>A</td><td>0.05</td><td>0.10</td><td>0.15</td><td>0.20</td><td>1°</td><td>0.02</td><td>0.02</td><td>0.03</td><td>0.05</td></tr><tr><td>B</td><td>0.08</td><td>0.12</td><td>0.18</td><td>0.25</td><td>2°</td><td>0.03</td><td>0.05</td><td>0.05</td><td>0.08</td></tr><tr><td>C</td><td>0.10</td><td>0.15</td><td>0.20</td><td>0.30</td><td>3°</td><td>0.05</td><td>0.08</td><td>0.08</td><td>0.10</td></tr></table>							0~10	10~30	30~50	50~	角度	○	◎	⊥	∠	A	0.05	0.10	0.15	0.20	1°	0.02	0.02	0.03	0.05	B	0.08	0.12	0.18	0.25	2°	0.03	0.05	0.05	0.08	C	0.10	0.15	0.20	0.30	3°	0.05	0.08	0.08	0.10
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YST QS1035 MAIN-ANT						Break line of release paper																																													
Note: 1. “*” for the key dimensions ; 2. FPC Material thickness 0.1 (including thickness of adhesive ; 3. Non-standard tolerance Dimension die punching dimension tolerance is plus or minus 0.1, copper foil line dimension tolerance is plus or minus 0.05, standard Key hole tolerance is Plus or minus 0.05 4. The area is gold plated Copper Foil area, For the back blue area 5. It's covered in black ink 6. Pb、Hg、Cr+6、PBBs、PBDEs 各项小 T500PPM, Cd/小 T50PPM.						Shenzhen Yesheng Communication Technology Co., Ltd <table><tr><td>Model</td><td>QS1035</td><td>Colour</td><td>Black</td><td>Date</td><td colspan="2">2022-12-20</td></tr><tr><td>PN</td><td></td><td>ST</td><td></td><td>RD</td><td colspan="2"></td></tr><tr><td>Name</td><td>Main Antenna</td><td></td><td></td><td>RP</td><td colspan="2"></td></tr><tr><td>Code</td><td>YST-20221119-QS1035</td><td></td><td>B</td><td>Auditing</td><td colspan="2"></td></tr><tr><td>Material</td><td>PI</td><td></td><td></td><td></td><td colspan="2"></td></tr></table>						Model	QS1035	Colour	Black	Date	2022-12-20		PN		ST		RD			Name	Main Antenna			RP			Code	YST-20221119-QS1035		B	Auditing			Material	PI										
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1		2		3		4		5		6																																									
Describe		Date								RC A																																									

第三视角		1	2	3	4		5		6		
单位	mm	比例	1:1								

Note:

1. The base materil is half to half
2. Gum back 3M 300LSE

	0~10	10~30	30~50	50~	角度	○	⊗	⊥	∠
A	0.05	0.10	0.15	0.20	1°	0.02	0.02	0.03	0.05
B	0.08	0.12	0.18	0.25	2°	0.03	0.05	0.05	0.08
C	0.10	0.15	0.20	0.30	3°	0.05	0.08	0.08	0.10

Silk screen
black characters

Brekk line of release
paper

Note:

1. *For the key dimensions ;
2. HPC Material thickness0.1 (including thickness of adhesive ;
3. Non-standard Tolerance Dimension die Punching dimension tolerance is plus or minus 0.1, copper foil line dimension tolerance is plus orminus 0.05, standard Key hole tolerance is Plus or minus 0.05
4. The area is gold plated Copper foil area, For the back glue area
5. It's covered in black ink
6. Pb, Hg, Cr+6, PBBs, PBDEs各项小于500PPM, Cd小于50PPM.

REV	Describe	Date	
1			
2			
3			

Model	QS1035	Colour	Black	Date	2022-12-20
PY		ST		RD	
Name	University Antenne			RF	
Code	YST-20221119-QS1035		B	Auditing	
Material	PI				

Shenzhen Yesheng Communication Technology Co.,Ltd

1	2	3	4	5	6

RC	A

第三视角		比例 1:1	
单位	mm		

1

2

3

4

5

6

Note: 1. The base materil is half to half
2. Gum back 3M 300LSE

Silk screen black characters

C

B

A

Note:
1. "For the key dimensions ;
2.PVC Material thickness0.1 (including thickness of adhesive ;
3.Non-standard Tolerance Dimension die Punching dimension tolerance is plus or minus 0.1,copper foil line dimension tolerance is plus orminus 0.05, standard Key hole tolerance is Plus or minus 0.05
4. ■ The area is gold plated ■ Copper foil area, ■ for the back glue area
5.Let's covered in black ink
6. Pb、Hg、Cr+6、PBBs、PBDEs各项小于50PPM，Cd小于50PPM.

Describe

Date

Shenzhen Yesheng Communication Technology Co., Ltd

Model QS1035

PV

Name 导线

Code YST-20221119 QS1035

Material PL

Colour ST

Black

Date 2022-12-20

RD

RF

Modiling

NC

A

1		2		3		4		5		6	
第三视角											
单位	mm	比例	1:1								

A

B

C

D

四代端子

115.2±0.3

端子线Φ0.81mm (Black)

总长115.2mm

四代端子

Technical requirements:

1. Material: the fourth generation of socket, with wire diameter of 0.81mm and black color.
2. The length tolerance shall be ± 0.3mm;
3. The maximum rotation angle of the top plane of two connectors shall not exceed 30 ° ;
4. Product materials must meet RoHS environmental protection requirements;

Shenzhen Yesheng Communication Technology Co., Ltd											
Model	QS1035		Colour	Black		Date	2022-12-20				
PV			ST			RD					
Name	Antenna Coaxial Line				B	RF					
Code	YST-20221119-051035					Assembling					
Material	PI										
Rev	Describe		Date				RC	A			
1		2		3		4		5		6	