

SPEED

TECHNOLOGY

SPEED Communication Technology Limited

Approval Sheet of

ZTE N762

Internal Antenna

Customer/Project	ZTE/N762	Band	CDMA850/CDMA1900
SCT P/N		Version	A
Check	Liyong	Design	Zhang changlu
Date	2011/09/13	Confirm by	Liyong
Speed Communication Technology			

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Owner	Zhang changlu	Reviewed by	Zhang changlu	

1. General information

This report indicates the RF report of N762, this project is Bar phone, the antenna is a two-band internal antenna, covers CDMA850, CDMA1900
Antenna concept is PIFA antenna.

2. Test information

2.1 Test picture

The antenna was evaluated using the customer provided prototype phone. Figure 1 show the antenna mounted on the test fixture.



Figure.1 The Main antenna mounted on the fixture

2.2 Matching circuit

Matching circuit please refer to the following graphic.

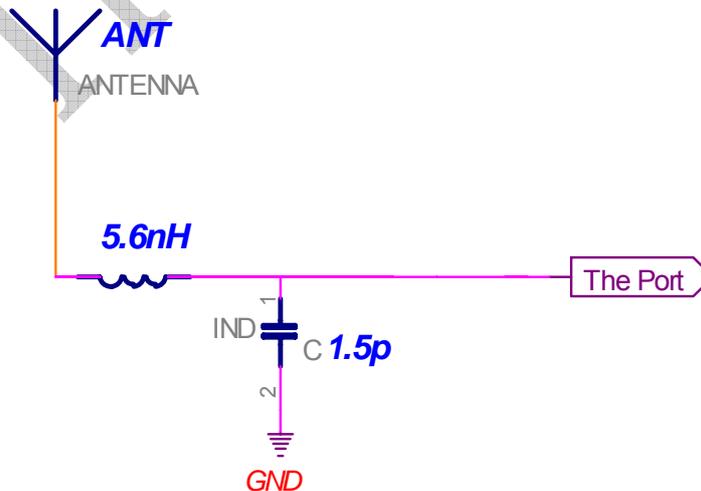


Figure.2 Main antenna matching circuit

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3. Set up

3.1 Return Loss, VSWR

Return Loss, VSWR were performed using Agilent E5071C Network Analyzer and the previously described test fixture. A ferrite-loaded coaxial cable was used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.



Figure.3 Network Analyzer

3.2 Efficiency

The efficiency of the antenna was measured in the Speed Communication Technology anechoic chamber. The chamber provides less than -40 dB reflectivity from 700MHz through 67GHz . The measurement results are calibrated using both dipole and leaky wave horn standards.

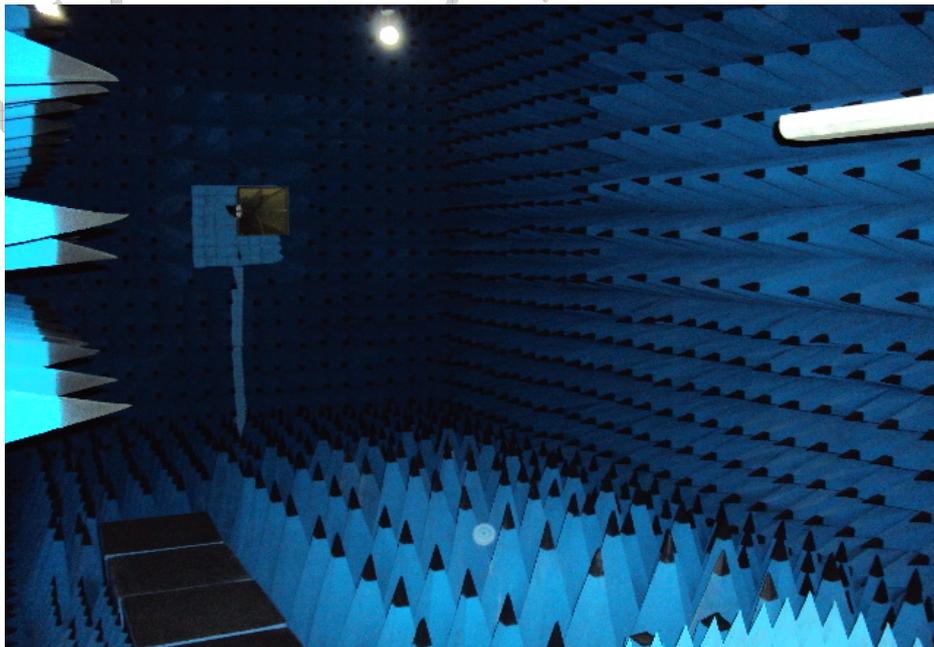


Figure 4 XI'AN speed chamber system

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3.3 TRP Measurement Procedure and Settings

The following procedure shall be applied:

- Establish a call to the mobile, set maximum RF output power.
- Execute a full three dimensional (3D) measurement as described and Using:

$$\Delta\varphi \leq 22.5^\circ$$

$$\Delta\theta \leq 15^\circ$$

And at three TX frequencies according to: low, mid and high.

(Note: CTIA asks for: 15° and 15°)

- Measure both vertical and horizontal polarization's.
- Calculate one TRP value for the appropriate band as described in 2.

3.4 TIS Measurement Procedure and Settings

The following procedure shall be applied:

- Establish a call to the mobile, set maximum RF output power.
- Execute a full three dimensional (3D) measurement as described Using:

$$\Delta\varphi \leq 30^\circ$$

$$\Delta\theta \leq 30^\circ$$

- Measure both vertical and horizontal polarizations.
- An estimation of the additional uncertainty caused by the "pattern is equal" assumption shall be provided

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4. Measurement Data

4.1 Main antenna Return Loss

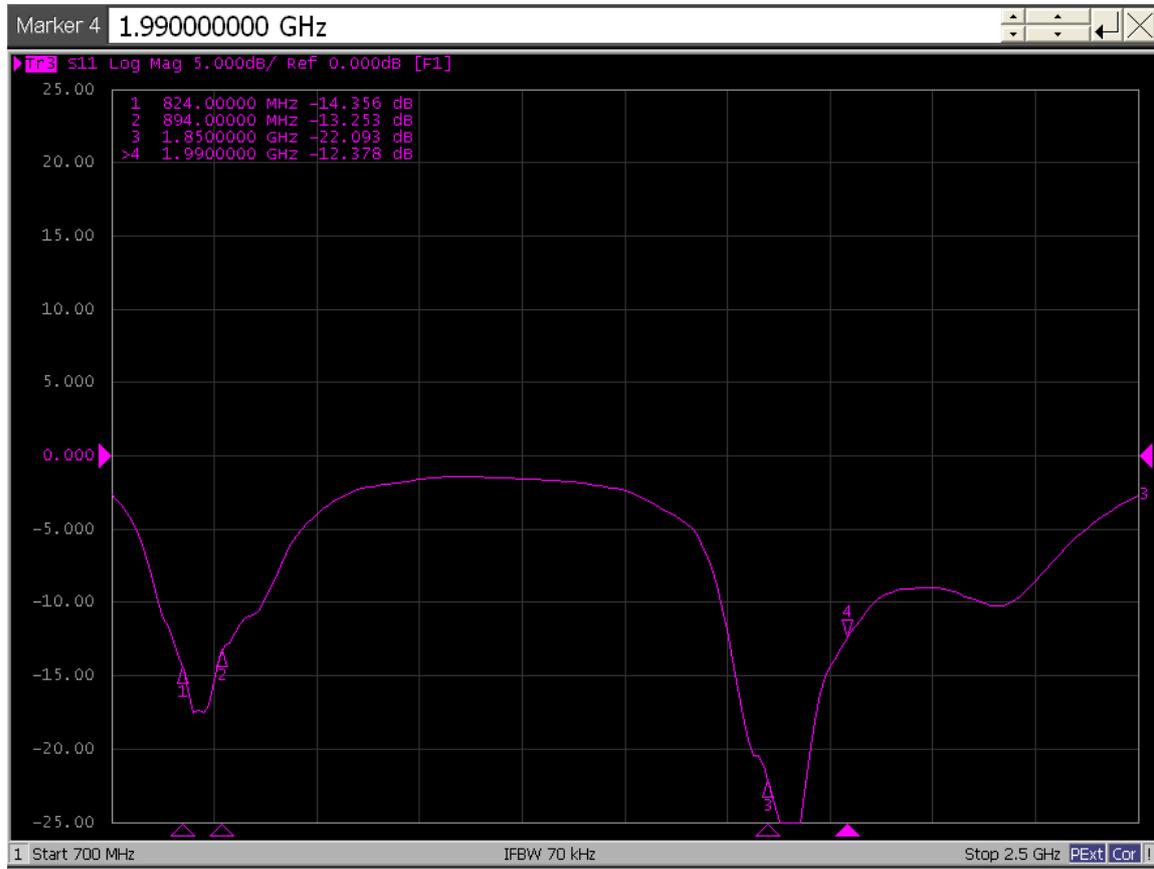


Figure.5 Main antenna Return Loss

4.2 Main antenna OTA test result

Channel	TRP		TIS	
CDMA850	1013 Ch.	21.24	1013Ch.	-106.30
	384 Ch.	21.31	384Ch.	-106.20
	777Ch.	21.08	691Ch.	-104.29
CDMA1900	25 Ch.	20.44	25Ch.	-103.80
	600 Ch.	20.02	600Ch.	-104.09
	1175Ch.	20.66	1175Ch.	-105.39

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4.3 GPS antenna Return Loss

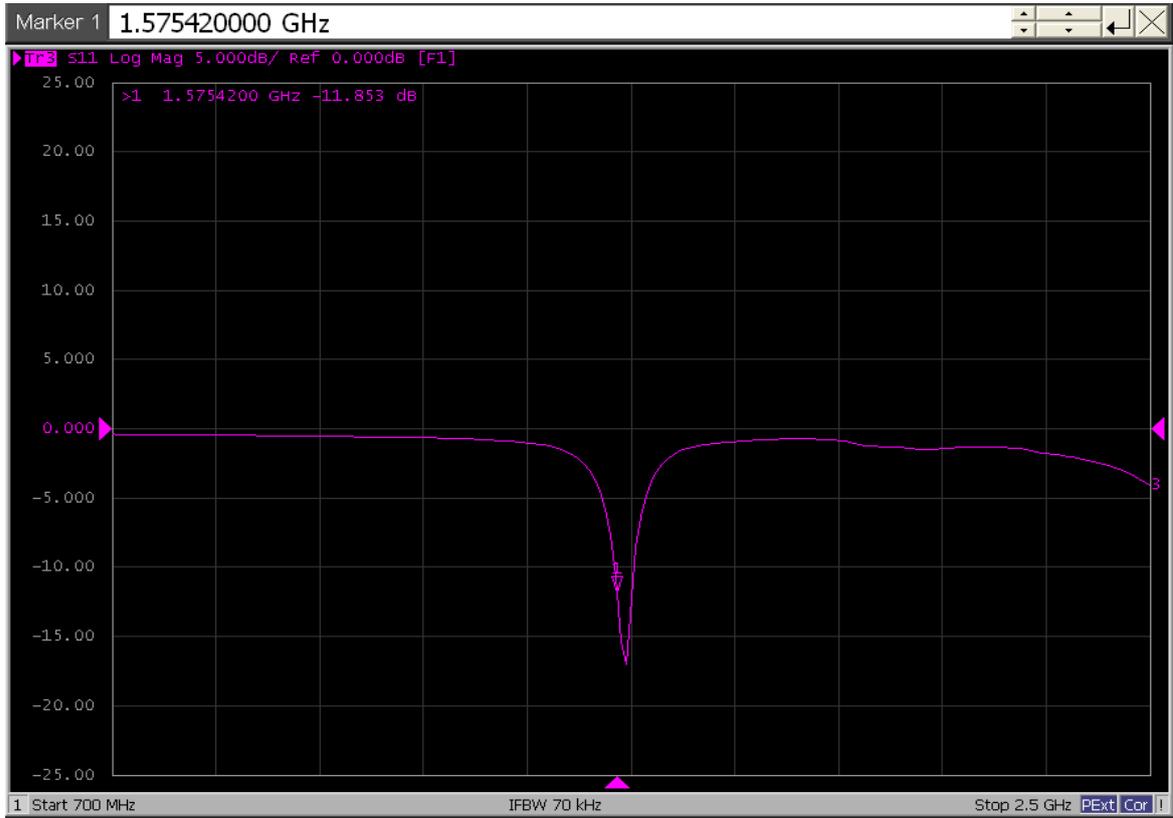


Figure.6 GPS antenna Return Loss

4.4 GPS antenna efficiency

Frequency	Efficiency
1570.000000 MHz	25.6 %
1573.000000 MHz	23.5 %
1575.420000 MHz	36.2 %
1577.000000 MHz	37.3 %

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4.5 BT antenna Return Loss

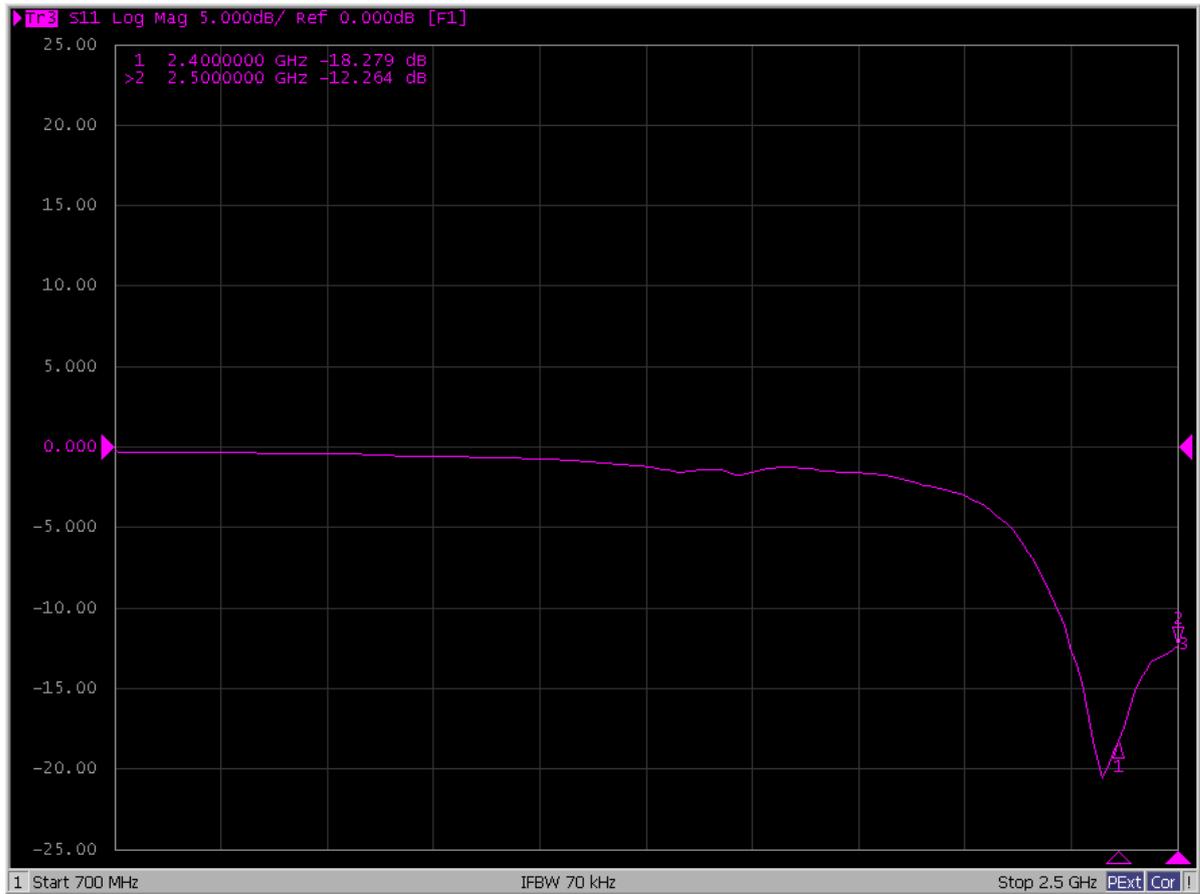


Figure.7 GPS antenna Return Loss

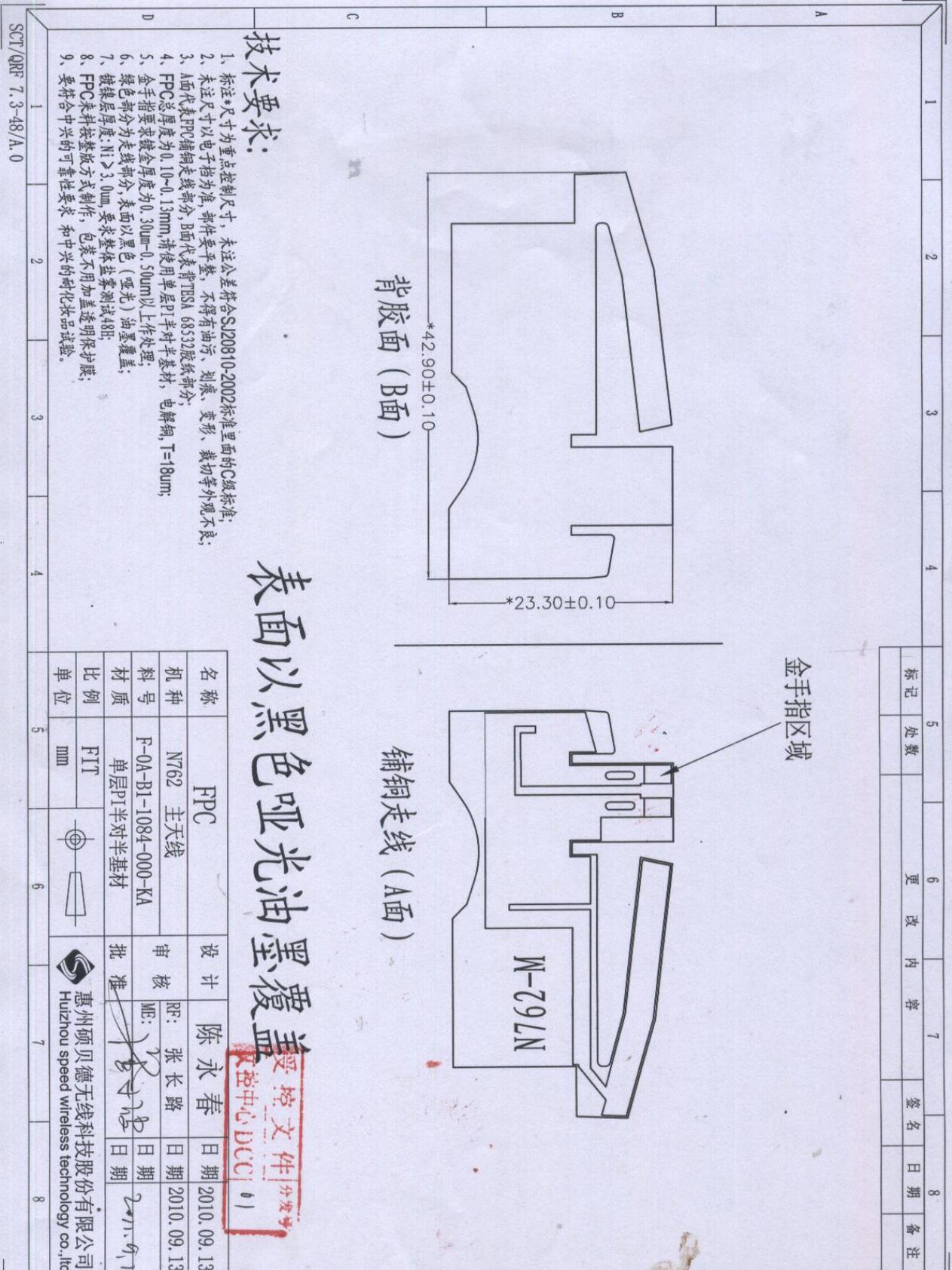
4.6 BT antenna efficiency

Frequency	Efficiency
2400.000000 MHz	65.6 %
2410.000000 MHz	59.5 %
2420.000000 MHz	69.2 %
2430.000000 MHz	58.8 %
2440.000000 MHz	54.6 %
2450.000000 MHz	60.9 %
2460.000000 MHz	68.9 %
2470.000000 MHz	60.0 %
2480.000000 MHz	60.6 %
2490.000000 MHz	55.2 %
2500.000000 MHz	57.1 %

5. Conclusion and comments

5.1 Main antenna drawing and emphases-size test report

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5.2 GPS antenna drawing and emphases-size test report

SCT/QR7 7-3-48/A.0

标记	5	更改内容	7	签名	8
处数					
日期					
备注					

技术要求:

- 1、标注*尺寸为重点控制尺寸, 未注公差符合SJ20810-2002标准里面的C级标准;
- 2、未注尺寸以电子档为准, 零件要平整, 不得有油污、划痕、变形、裁切等外观不良;
- 3、A面代表FPC铺铜走线部分, B面代表背铜TSA 68532胶纸部分;
- 4、FPC总厚度为0.10~0.13mm, 请使用单层PI半对半基材, 电焊铜, T=18um;
- 5、金手指要求镀金厚度为0.30um~0.50um以上作处理;
- 6、绿色部分为走线部分, 表面以黑色(哑光)油墨覆盖;
- 7、镀锌层厚度: Ni > 3.0um, 要求整体盐雾测试48H;
- 8、FPC采用按整版方式制作, 包装不用加盖透明保护膜;
- 9、要符合中兴的可靠性要求, 和中兴的可靠性试验。

表面以黑色哑光油墨覆盖

铺铜走线 (A面)

GPS-79LN

背胶面 (B面)

金手指区域

受控文件

文控中心 DCC 01

名称	FPC	设计	陈永春	日期	2010.09.13
机种	N762 GPS天线	审核	张长路	日期	2010.09.13
料号	F-0A-B1-1085-000-KA	批准		日期	2011.09.17
材质	单层PI半对半基材				
比例	1:1				
单位	mm				

惠州硕贝德无线科技股份有限公司
Huizhou speed wireless technology co., ltd

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5.3 BT antenna drawing and emphases-size test report

1	2	3	4	5	6	7	8
标记	处数	更改内容	签名	日期	备注		

*25.99±0.10

*14.00±0.10

N762-BT

背胶面 (B面)

铺铜走线 (A面)

金手指区域

技术要求:

- 标注*尺寸为重点控制尺寸, 未注公差符合SJ20810-2002标准里面的C级标准;
- 未注尺寸以电子档为准, 部件要平整, 不得有油污、划痕、变形、裁切等外观不良;
- A面代表FPC铺铜走线部分, B面代表背TESA 68532胶纸部分;
- FPC总厚度为0.10~0.13mm, 请使用单层PI半衬半基材, 电解铜, T=18um;
- 金手指要求镀金厚度为0.30Mm~0.50um以上作处理;
- 绿色部分为走线部分, 表面以黑色(哑光)油墨覆盖;
- 镀锌层厚度: Ni > 3.0um, 要求整体盐雾测试48H;
- FPC来料按整版方式制作, 包装不用加盖透明保护膜;
- 要符合中兴的可靠性要求 和中兴的耐化妆品试验。

受控文件 分发号
文控中心 DCC 01

名称	FPC	设计	陈永春	日期	2010.09.13
机种	N762 BT天线	审核	张长路	日期	2010.09.13
料号	F-0A-B1-1086-000-KA	批准	张长路	日期	2011.09.13
材质	单层PI半衬半基材	惠州硕贝德无线科技股份有限公司 Huizhou speed wireless technology co., ltd.			
比例	FIT				
单位	mm				

CT/QR/ 7.3-48/A.0

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