

Shenzhen Haotiancheng Wireless
Technology Co., Ltd

Name: Sample Approval

Ver: V1.0

date: 2024.12.04

Sample Approval Sheet

Project Name: Q63Sample Name: MAIN+WGB+DIV+WIFI PIFA ANTSample SPEC: FPC material, gold-plated, 3M300 adhesive backing

Customer PN.:

Transfer Date: 2024.12.04

	Project	Engineer	Quality
Supplier Confirm			
date			

Customer confirm	PM	Electron	MD	PD	QE
date					

conclusion	☐ MP	☐ Limits use () K	☐ ROHS
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Supplier name: Shenzhen Haotiancheng Wireless Technology Co., Ltd

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1. Overview of the specification sheet

This specification sheet describes the condition of the built-in MAIN/WGB/DIV antenna in Wanlifeng, with frequency bands of LTE/GSM/WCDMA/WIFI/BT/GPS, manufactured by Shenzhen Haotiancheng Wireless Technology Co., Ltd.

Appearance

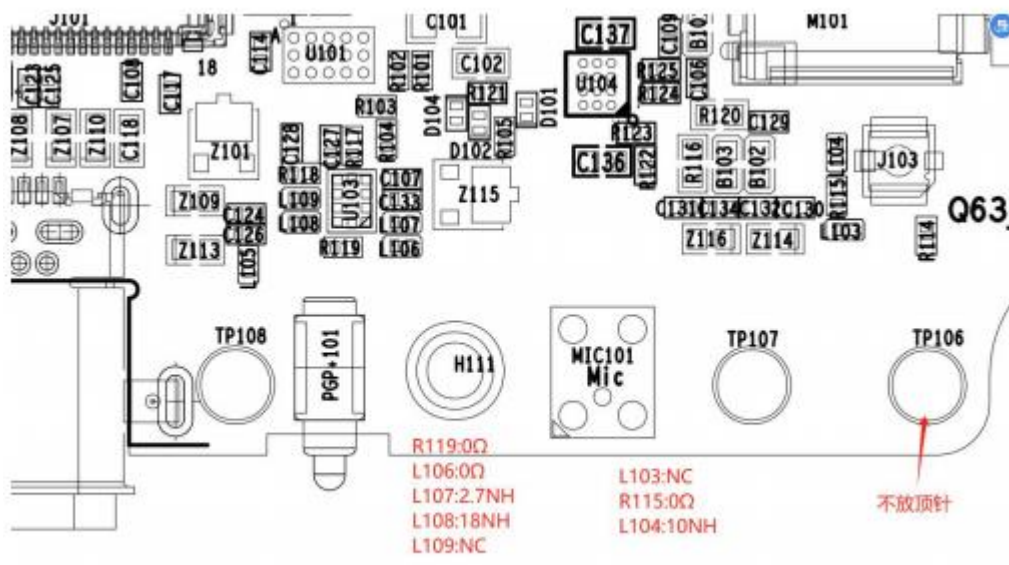


2. Electrical performance

2.1 Antenna Frequency:

	2G/3G/4G	WIFI/BT	5GWIFI	GPS
TX(MHz)	824~2690	2400~2500	5000~5800	
RX(MHz)	894~2690	2400~2500	5000~5800	1575

2.2 Main antenna matching circuit



RF tuning switch logic

RF tuning switch	Control frequency band
RF1 (0Ω)	GSM900DCS1800/PCS1900+WCDMA-B1/2/4/8+LTE-B1/2/3/4/7/8/25/66/34/38/39/40/41
RF2(2.7nH)	GSM850+WCDMA-B5+LTE-B5/19/20/26
RF3(18nH)	LTE-B12/17/28

2.3 Impedance requirements

50 ohm

2.4. Main antenna test data

Band	TRP/TIS	L	M	H	Band	TRP/TIS	L	M	H
GSM850	TRP	25.46	25.62	25.81	LTE-B1	TRP	16.56	16.29	16.07
	TIS			-101.15		TIS			-91.17
GSM900	TRP	26.45	26.58	26.62	LTE-B2	TRP	16.66	16.47	16.35
	TIS			-101.28		TIS			-90.42
DCS1800	TRP	23.76	23.97	24.12	LTE-B3	TRP	16.01	16.25	16.33
	TIS			-103.05		TIS			-91.28
PCS1900	TRP	24.17	23.86	23.73	LTE-B4	TRP	16.17	16.36	16.57
	TIS			-103.08		TIS			-91.36
WCDMA-B1	TRP	17.23	16.84	16.65	LTE-B5	TRP	16.1	16.17	16.26
	TIS			-102.37		TIS			-88.13
WCDMA-B2	TRP	17.54	17.88	18.03	LTE-B7	TRP	16.44	16.28	16.14
	TIS			-103.2		TIS			-90.51
WCDMA-B4	TRP	17.56	17.72	17.94	LTE-B8	TRP	17.43	17.57	17.73
	TIS			-103.38		TIS			-89.09
WCDMA-B5	TRP	16.12	16.34	16.68	LTE-B12	TRP	15.19	15.42	15.7
	TIS			-101.22		TIS			-87.12
WCDMA-B8	TRP	16.39	16.53	16.71					
	TIS			-101.94					

Band	TRP/TIS	L	M	H	Band	TRP/TIS	L	M	H
LTE-B17	TRP	15.3	15.42	15.65	LTE-B34	TRP	17.46	17.19	16.93
	TIS			87.52		TIS			-90.57
LTE-B19	TRP	15.76	16.08	16.37	LTE-B38	TRP	17.34	17.37	17.42
	TIS			-88.06		TIS			-89.13
LTE-B20	TRP	16.61	16.72	16.87	LTE-B39	TRP	16.24	16.15	16.03
	TIS			-88.68		TIS			-88.65
LTE-B25	TRP	16.55	16.34	16.17	LTE-B40	TRP	16.53	16.26	16.12
	TIS			-91.36		TIS			-89.95
LTE-B26	TRP	16.12	16.26	16.39	LTE-B41	TRP	17.64	17.2	16.73
	TIS			-88.69		TIS			-88.58
LTE-B28	TRP	15.1	15.18	15.31					
	TIS			-87.28					
LTE-B66	TRP	16.84	16.93	17.06					
	TIS			-90.84					

2.5. Antenna gain efficiency

Band	Effi (%)	Gain (dBi)
GSM850	33.49	-0.89
GSM900	35.14	-0.59
DCS1800	41.23	0.32
PCS1900	39.45	0.54
WCDMA-B1	38.65	-0.07
WCDMA-B2	40.45	0.54
WCDMA-B4	39.11	0.36
WCDMA-B5	33.49	-0.89
WCDMA-B8	35.14	-0.59
LTE-B1	39.45	0.54
LTE-B2	40.91	0.31
LTE-B3	41.23	0.32
LTE-B4	38.62	0.21
LTE-B5	33.49	-0.89
LTE-B7	39.01	0.57
LTE-B8	35.14	-0.59
LTE-B12	24.29	-2.02
LTE-B17	25.21	-1.95
LTE-B19	30.25	-1.21
LTE-B20	33.49	-0.89
LTE-B25	40.27	0.2
LTE-B26	31.75	-0.74
LTE-B28	25.32	-1.97
LTE-B66	40.23	0.12
LTE-B34	38.85	-0.13
LTE-B38	38.85	0.47
LTE-B39	41.45	0.54
LTE-B40	40.11	1.06
LTE-B41	39.01	0.57
BT	40.83	1.08
GPS	35.4	0.26
WIFI	40.3	0.97

2.6. Test effect of secondary antenna

Test effect of secondary antenna

WIFI	正常上网距离
	25
	在线视频流畅距离
BT	正常通话距离
	15



2.7. environmental treatment



Technical drawing of a rectangular component with the following specifications:

- Overall width: $\varnothing 28,05 \pm 0,15$
- Overall height: $\varnothing 10,41 \pm 0,15$
- Top edge: $4 - \varnothing 0,80$
- Feature: 手撕线 (Hand-tear line)
- Internal features: Q63-DIV, HT-C-V1.0
- Material/Finish: 露铜区域镀黄金 (Gold-plated copper area)
- Color: 丝印天线相应颜色 (Color corresponding to the printed antenna)
- Character: 色字符 (亮色) (Color characters (bright color))
- Model: Q63-DIV-HTC-V1.0

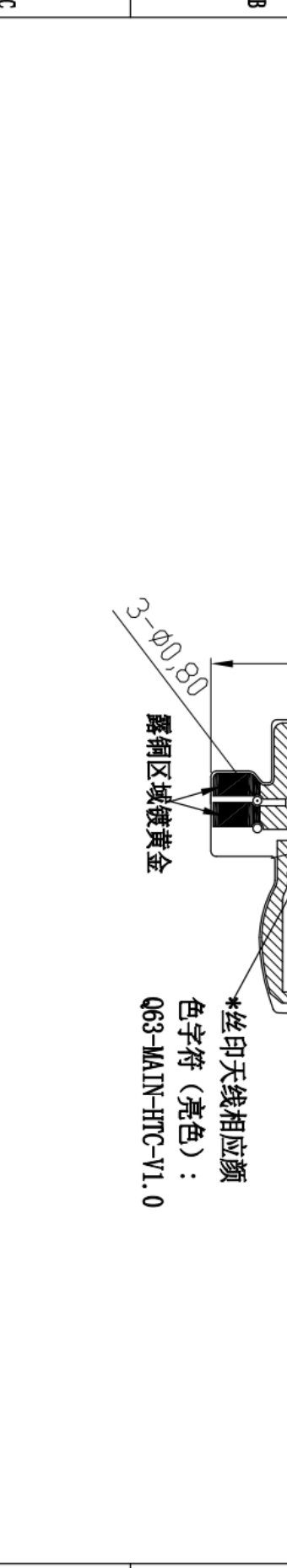
- 1、打※为配合尺寸,打*为重点尺寸,"trim"为后继需调整尺寸;
- 2、打★为必须尺寸,未标尺寸参考3D图纸;其它尺寸以实配为准;
- 3、基材12.5μm,铜箔18μm,镀镍厚度为26
- 4、区域为走线区域;区域为焊盘区域(镀镍)区域为附胶区域(3M300LE,粘性在300MPa以上)
- 5、FPC表面油墨需均匀,不可有起皱镀金不良等现象。

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4、  区域为走线区域，  区域为焊盘区域（镀锡），  区域为附胶区域（3M300LE，粘性在300MP以上）									
5、PPC表面油墨需均匀，不可有起皱镀金不良等现象。									
日期									
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WGB

注:

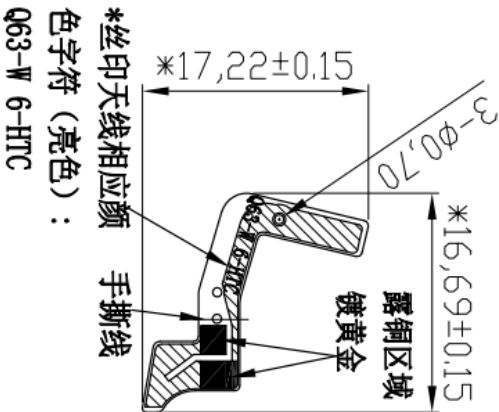
- 打※为配合尺寸,打*为重点尺寸,"triw"为后续需调整尺寸;
- 打★为必测尺寸,未标尺寸参考3D图纸;其它尺寸以实配为准;
- 基材12.5μm,铜泊18μm,电镀厚度为2~6
-  区域为走线区域,  区域为焊盘区域 (电镀)  区域为附胶区域 (3M300LE, 粘性在300MP以上)
- FPC表面油墨需均匀,不可有起皱镀金不良等现象。



深圳市浩天诚无线科技有限公司

第三角法	机种	Q63	日期	2024/11/15	页码	3/4
未注公差参见标准	品名	WGB-PVC	设计	Michael	审核	
10以下 ±0.10	料号		审核		工程	
10~20 ±0.12	材质	PI (聚酰亚胺) 一对半	确认			
20~40 ±0.15	表面处理	哑黑				
40以上 ±0.20	外观处理	黑色	单位		比例	1:1
请勿实测图纸						

WIFI-6



电解铜 一对半 哑黑

- 注:
- 1、打※为配合尺寸,打*为重点尺寸,"Trim"为后整需调整尺寸;
 - 2、打★为必测尺寸,未标尺寸参考3D图纸;其它尺寸以实配为准;
 - 3、基材12.5μm,铜泊18μm,镀镍厚度为2~6
 - 4、 区域为走线区域, 区域为焊盘区域 (镀镍) , 区域为附胶区域(3M300L,粘性在300MP以上)
 - 5、FPC表面油墨需均匀,不可有起皱镀金不良等现象。

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修改内容									
版本									
备注									
日期									
1	2	3	4	5	6	7	8	9	10

深圳市浩天诚无线科技有限公司									
第三角法									
未注公差参见标准									
10以下									
10~20									
20~40									
40以上									
请勿实测图纸									
机种									
品名									
料号									
材质									
表面处理									
外观处理									
日期									
设计									
审核									
确认									
单位									
比例									
FIT									
版本									
T:A									