

SPECIFICATION

SHEET FOR APPROVAL

(Revision: R: A2)

	CUSTOMER(客户名称)	GSD	
	CS P/N(客户机种)	WC0D	
	PART NAME(品名)	WIFI antenna	L=300mm
	FREQUENCY(频率)	2400-2500MHz / 5150-5850 MHz	
	ZTX NO.(物料编号)	2.00001341	
	DATE(日期)	2020-03-28	

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

ZHONG TIAN XUN TECHNOLOGY CO., LTD				
MANAGER CHECKED	MANAGER CHECKED	ME CHECKED	RF CHECKED	LISTER
		邹一麟	刘蒋军	

manufacturer



深圳市中天迅通信科技股份有限公司

SHENZHEN ZHONGTIAN XUN Communication Technology Co.,Ltd.

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Revision history

version	Date	status
A1	2017-08-30	first version
A2	2020-03-28	updated label
A3	2024-8-14	Updated typo average to peak.



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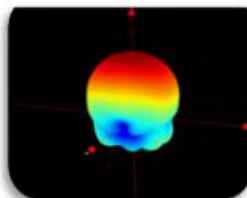
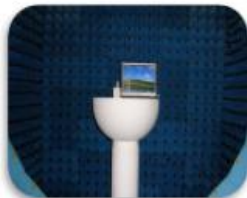
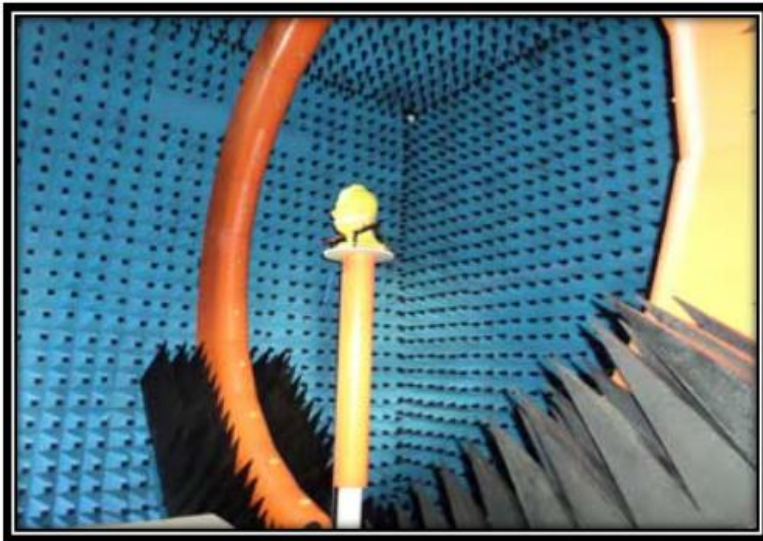
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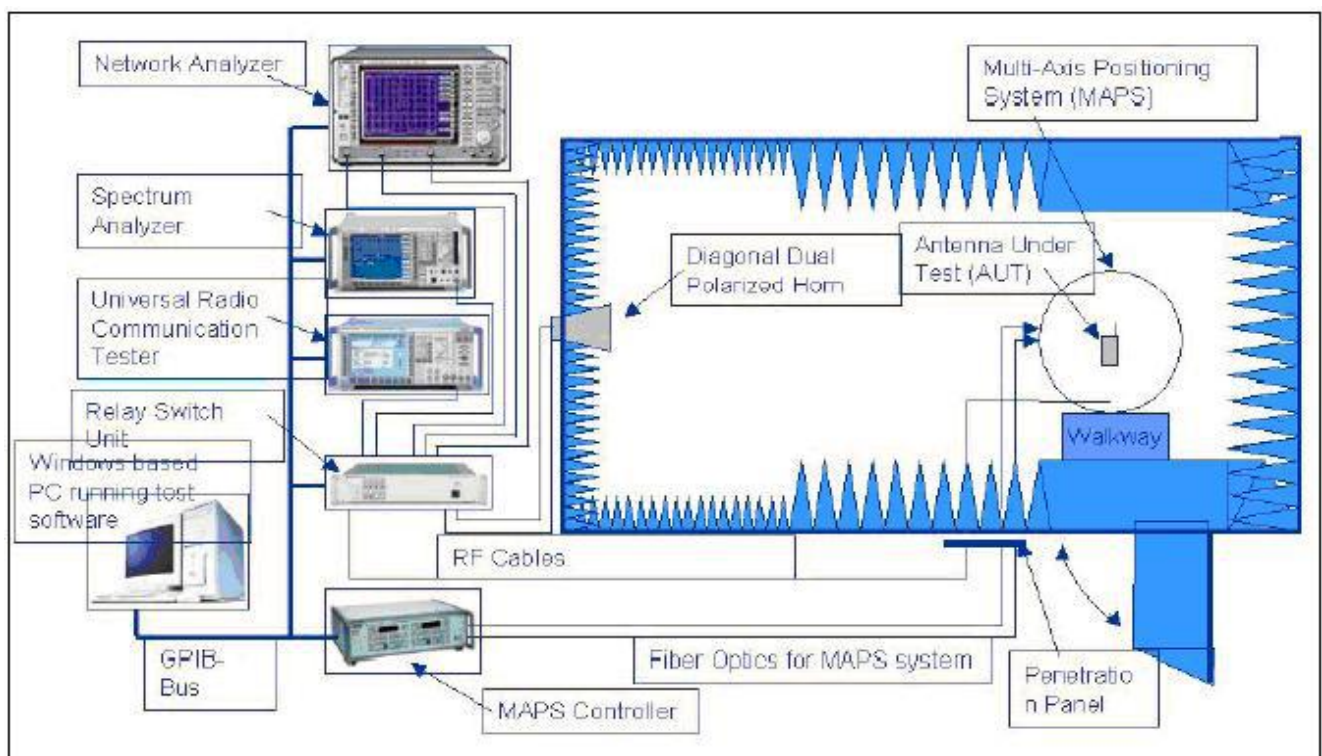
1. Test equipment



Owned 6 microwave dark room, equipped 2 sets world leading France Satimo SG24 OTA certification test systems (one in SHENZHEN, another one in Shanghai), ETS OTA Standard test system, Blue test reverberation test system which is High repeatability, high accuracy and high resolution. It can quickly provide accurate test reports, fully meet the CITA standards.

Testing range:

Support active, passive testing of
GSM/CDMA/WCDMA/TD-
SCDMA/LTE/WIFI/WLAN/WiMax/BT
/GPS/MIMO/UWB within 0.4-6G.



Test standard:

Antenna performance	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-2021
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Equipment list:

Equipment	Manufacturer	Model No.	Last Cal.	Due Date
Network Analyzer	Agilent	E5071C	2023.10.20	2024.10.21

Test Procedure

Test Step Flow

1. Maintain the test ambient temperature of 23±2 C, the instrument is powered on and preheated for more than 30 minutes
2. Turn on the darkroom power supply, connect the test cable, and set up the sample according to the standard
3. Outline sets the test content objectives and conducts calibration tests
4. Run the EMQuest OTA software, the test is complete, export the corresponding test diagram and test data, and save to the corresponding directory

Test Principle

The test principle can be seen in accordance with the standard ANSI/IEEE std 149-2021

Test Conditions

1. The analyte, the network analyzer for testing, the test equipment and the test cable connector should have good reliability, stability, dynamic range and measurement accuracy to ensure the correctness of the measurement accuracy
2. The measuring instrument should have a certificate of conformity and be within the effective calibration period
3. The analyte should be complete and undamaged, and the test environment should be kept clean

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2. Electrical Specifications

2-1 Frequency Band

Frequency Band	Frequency
BT & 2.4G WIFI	2400-2500MHZ
WIFI 5.8G	5150-5850MHZ

2-2 VSWR And GAIN

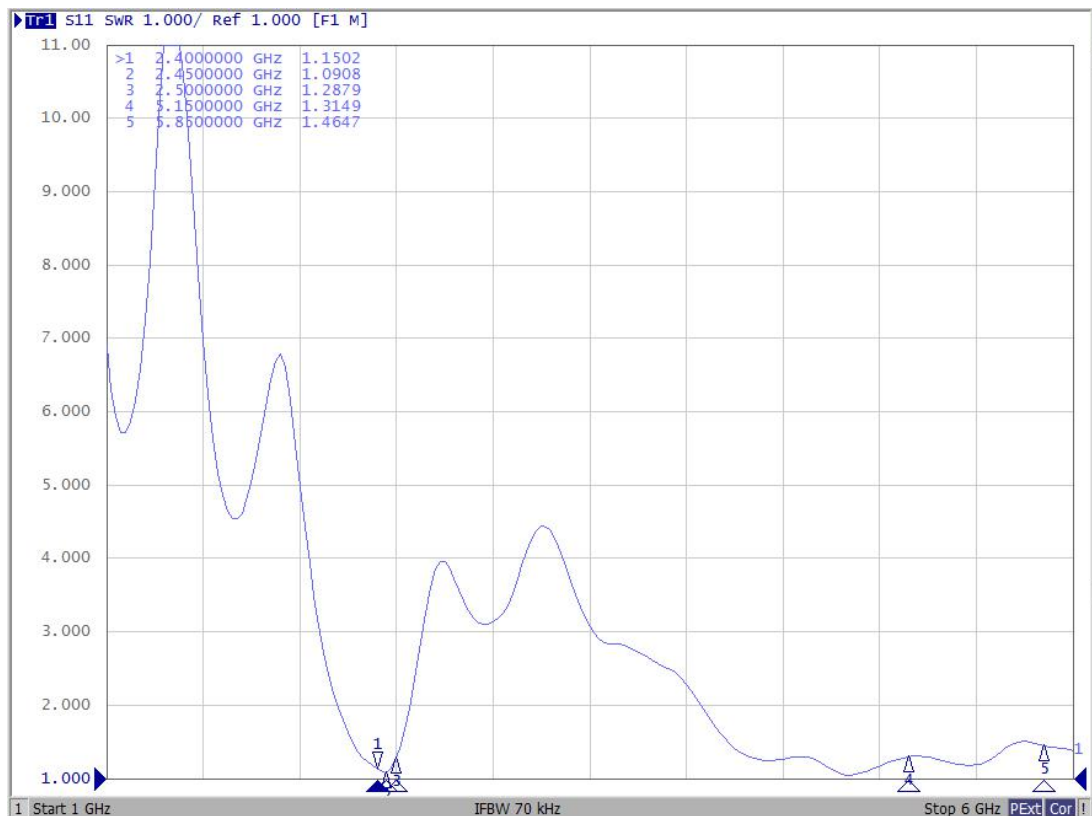
VSWR			GAIN		
Freq. Band	OPEN	SPEC	Band Freq.	OPEN	SPEC
2400MHz	≤ 2.0		2400MHz	$\geq -1.0\text{dBi}$	
2500MHz	≤ 2.0		2500MHz	$\geq -1.0\text{dBi}$	
5150MHz	≤ 2.0		5150MHz	$\geq -1.0\text{dBi}$	
5850MHz	≤ 2.0		5850MHz	$\geq -1.0\text{dBi}$	

※Measuring a 50 Ω test jig is connected to a network analyzer to measure the VSWR.

※※All test value is done in customer approval fixture.

3. Antenna test data

3-1 VSWR



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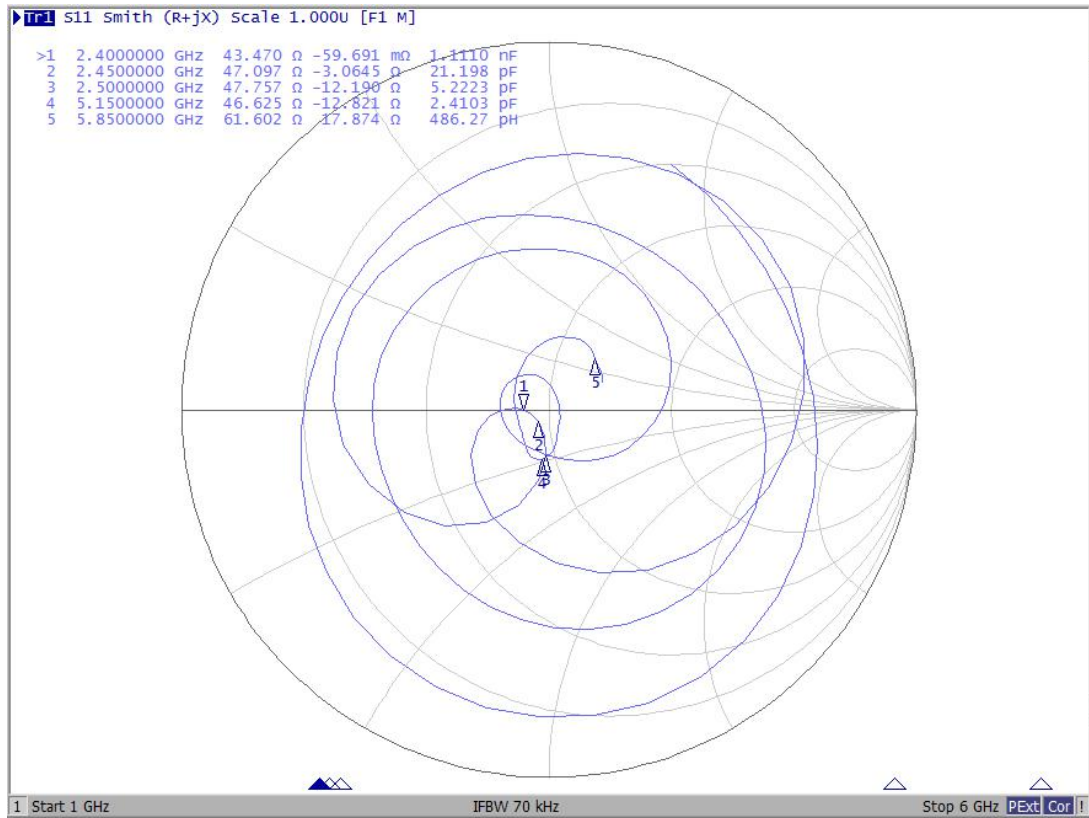
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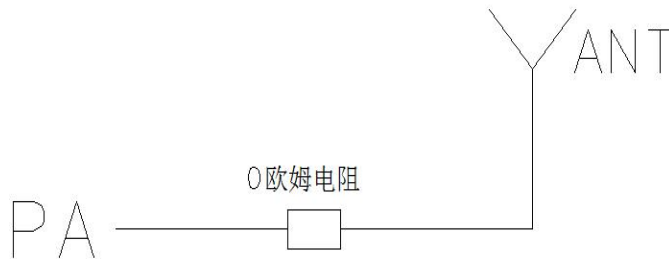
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3-2 Smith Chart



3-3 Matching circuit



3-4 No-source test data

Frequency (MHz)	2400	2450	2500	5150	5850
Peak Gain Efficiency (dB)	1.42 (44%)	1.72 (48%)	1.65 (45%)	2.34 (61%)	2.57 (66%)



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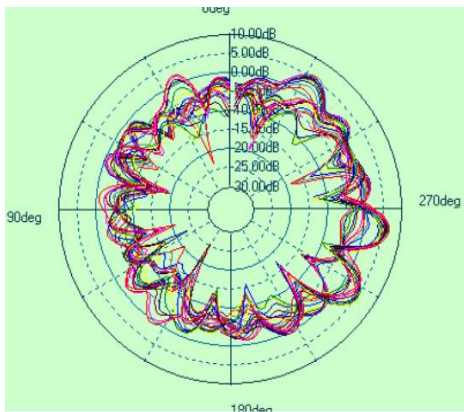
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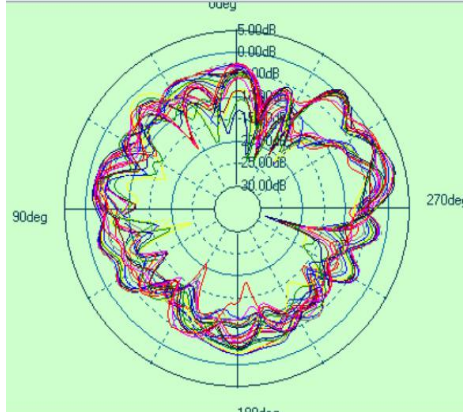
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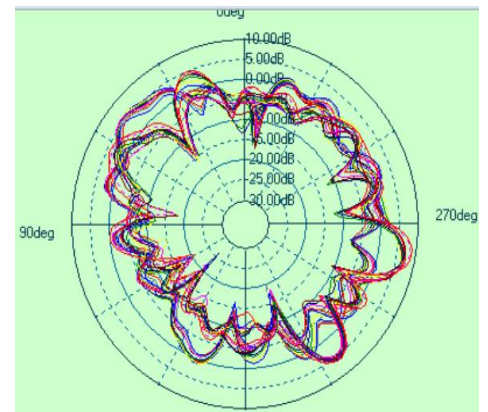
3-5 Directional drawing of horizontal plane of



Theta 90deg



Phi 0deg



Phi 90deg



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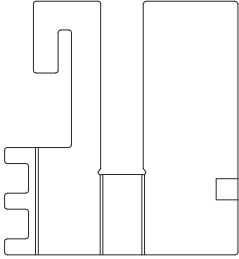
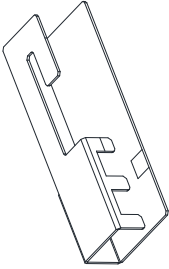
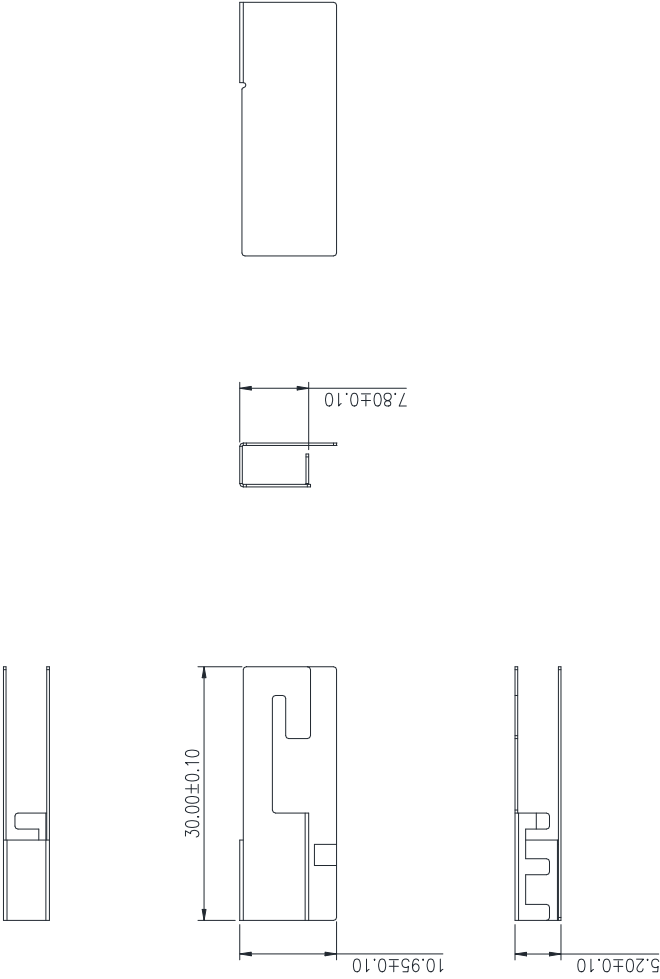
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4. Mechanical Specification

4-1 Mechanical Configuration(WIFI2.4G/5.8G)

版本	说明	审核	日期	批准	日期
					
展开图					
					
立体图					
					
备注:					
1. 角度尺寸模具设计时依图纸尺寸作参照,样品及量产实配即可;					
2. 打“*”为严格控制尺寸(IQC必测等级A);					
3. 字码说明(采用宋体,要求字迹清晰,弹片无变形);					
4. 产品不能有油污、毛刺、利边、缺料、变形、压印过深等不良;					
5. 需通过48小时盐雾测试;					
6. 包装时需用吸塑盒摆放整齐,运输过程中产品不能挤压碰撞等;					
7. 未经过ZTX公司确认,材料不能随意更改;					
环保要求:					
MATTER	RoHs (PPM)	制图	日期	版本	比例
Cd	≤100	邹一麟	2017-07-04	mm	1:1
Pb	≤1000	李方森	2017-07-04	材料	SUS304 T=0.3mm (镀银)
Hg	≤1000	审核	日期	1:2	1/1
C6+	≤1000	批准	日期	产品名称	WC0D (WIFI)
PBB	≤1000	邹一麟	2017-07-04	图区编号	ZTX-Q0-RD-029
PBDE	≤1000				

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5. Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
5-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: $+80 \pm 2^{\circ}\text{C}$ 2.Humidity: $90 \sim 95\% \text{RH}$ 3.Time: 48hrs	No material deformation is allowed.
5-2	Low Temperature/Humidity Storage Test(non operating)	1.Temperature: $-30 \pm 2^{\circ}\text{C}$ 2.Humidity: $0\% \text{RH}$ 3.Time:48hrs	The VSWR, Gain, Radiation Pattern must be met specifications after these test.

6.Material list

序号	材料（原料） 名称	第三方公证化学报 告测试编号	第三方公证化学报 告测试单位	第三方公证化学 报告测试日期	状态	文档
1	SUS304	SZXEC1800784502	SGS	2019/5/23	有效	PDF
2	泡棉	C190319038001	SGS	2019/03/07	有效	PDF
3	3M 背胶	SHAEC1700965201	SGS	2019/3/25	有效	PDF
4	I-PEX	CANEC1907229906	SGS	2020/5/5	有效	PDF
		A2180247064101002	SGS	2019/12/17	有效	PDF
		A2180247064101001	SGS	2019/12/17	有效	PDF
		CE201876126	SGS	2019/8/6	有效	PDF
5	镀锡铜线	A2180105069201	CTI	2019/6/26	有效	PDF
6	热缩套管	CANEC1925862106	CTI	2020/06/02	有效	PDF



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附页：出货标签模板

[1] Y001 TVJ-202003 20-03-28 09:11:48		合格证			
供货厂家 惠州高盛达科技有限公司(18450)					
长虹物料代码 850186575		供方物料代码			
物资名称 R-射频连接线		型号规格		WC0D/PIFA/2.4G+5G/外拉 /300mm\$WC0D/PIFA/2.4G+5G /外拉/300mm/长虹	
订单号 4502587576		订单总数量		95000	
数量 3600		箱号/箱数		第18箱(包),共10箱(包)	
生产日期 供方批次 2020/3/28		净重/毛重		11.12KG / 11.9KG	
检验员 1		备注			
盖检验合格章					

			
PN: G. 5. 13. WC0DXXBXX			
LOT NO:1205-1905060006 Date Code: 200327			
		VENDOR: ZTX	
		QTY: 3600	
REEL NO: 201004420032790000			
PART DESC: WC0D-30(长虹) WIFI天线组件			
深圳市中天迅通信技术股份有限公司			

P/N: 850186575		
QTY: 720		
Part Name: R-Connecting line of RF WC0D/PIFA/2.4G+5G/ /300mm\$WC0D/PIFA/2.4G+5G/ /300mm/		
Supplier: GaoShengDa		

2020/3/27 18450 2664

P/N: 850186575		
QTY: 360		
Part Name: R-Connecting line of RF WC0D/PIFA/2.4G+5G/ /300mm\$WC0D/PIFA/2.4G+5G/ /300mm/		
Supplier: GaoShengDa		

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P/N: 850186575		
QTY: 40		
Part Name: R-Connecting line of RF WC0D/PIFA/2.4G+5G/ /300mm\$WC0D/PIFA/2.4G+5G/ /300mm/		
Supplier: GaoShengDa		

2020/3/27 18450 2662

