



Fuzhou Jielei Electronic Technology Co., Ltd.
Fuzhou JieLei Electronic Technology Co.,Ltd.

Document code: FRKF-0007 Version: 1.1

Specifications

Specification

client's name:

CUSTOMER: Ruijie Networks Co., Ltd.

Customer Part Number:

CUSTOMER P/N:

Customer product name:

DESCRIPTION:

JieLei material number:

P/N: C168-JL-3917

JieLei product name:

PART NOÿ 5.8G antenna; L=190mm 1.13 black V1.1

approve	Review	prepared by
Frank	WenSen	Sean
2019.11.20	2019.11.20	2019.11.20

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Version description

date	Approval version	description
2019-11-20		V1.0 first version



1. Electrical Performance

A.Electrical Characteristics	
SWR	$\dot{\gamma}=2.0@5150-5850\text{MHz}$
Frequency Range(MHz)	5150-5850MHz
Impedance	50 Ohms
Gain	MAX: 4.67dBi@5150-5850MHz
B.Material	
Connector	IPEX
Cable length	190MM
Cable	1.13
C.Environmental	
Operation Temperature	-20 $\dot{\gamma}$ ~65 $\dot{\gamma}$
Storage Temperature	



2. Measurement Setup

(1) Reflection coefficient Measurement:

(a) **Instrument:** Network Analyzer

(b) **Setup:**

(y) Calibrate the Network Analyzer by one port calibration using Agilent calibration kits.

(II) Connect the antenna under test to the Network Analyzer

(III) Measure the S11 (reflection coefficient) shown in Fig.1

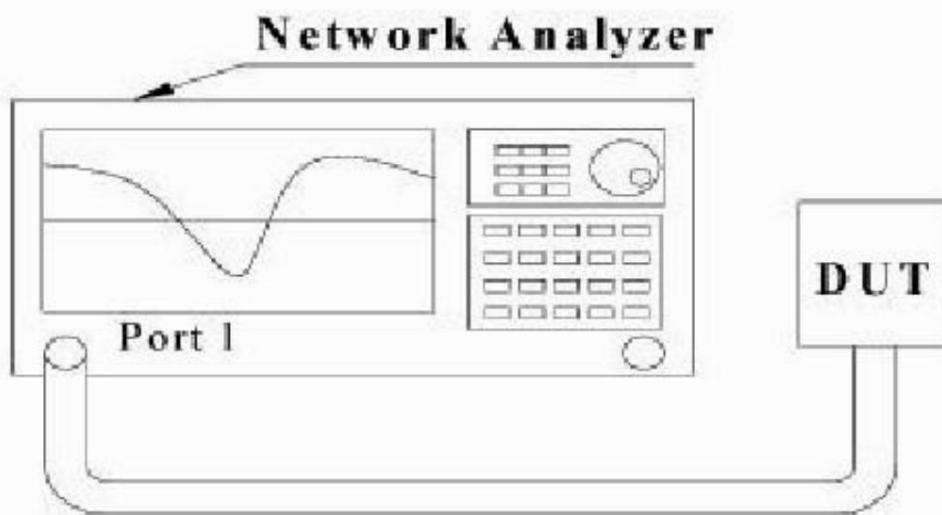


Fig.1 Measure S11 on Network Analyze



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2.1 Test equipment

Standing wave test equipment

VSWR was tested using an Agilent variable network analyzer E5071C. The measured object is placed smoothly on a non-conductive material with a small dielectric constant, on, or hanging test.

Efficiency testing equipment

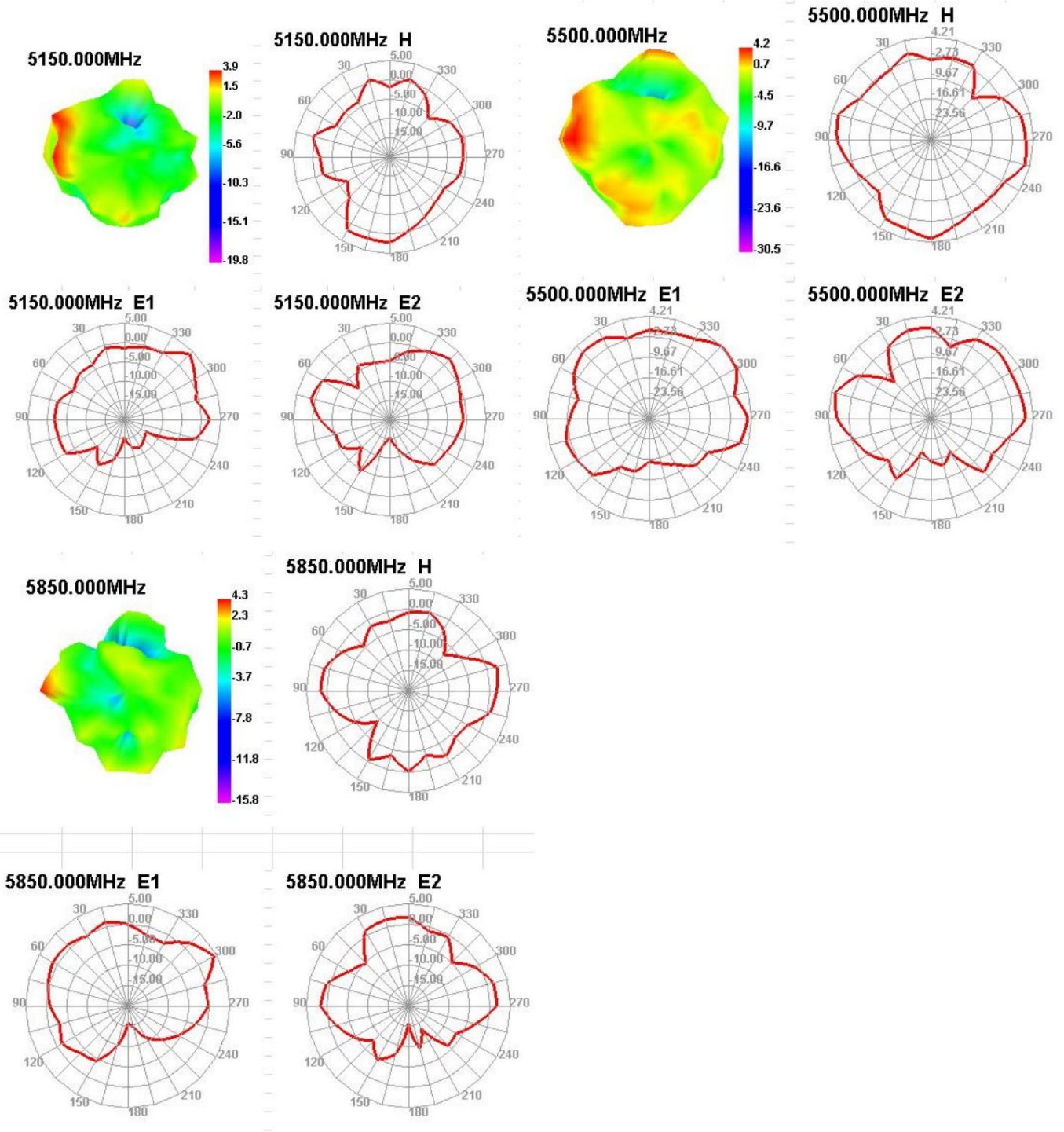
The efficiency test equipment is tested in a darkroom established by Jie Lei Company. Including active and passive testing of antenna 3D performance, OTA performance testing (TRP&TIS) in compliance with CTIA standards. The external structure size of the anechoic chamber is 7m×5m×3 m (L×W×H), which can test antennas in the frequency range from 700MHz to 6GHz. During testing, the test to be tested is stably fixed on the turntable.

Freq (MHz)	Effi (%)	Max (dB)	Freq (MHz)	Effi (%)	Max (dB)	Freq (MHz)	Effi (%)	Max (dB)
5150	58.4	3.92	5390	57.05	3.84	5630	63.18	3.46
5160	56.59	3.93	5400	67.68	4.54	5640	62.79	3.26
5170	58.54	4.1	5410	65.46	4.43	5650	63.82	3.17
5180	58.9	4.03	5420	66.24	4.38	5660	64.42	3.09
5190	57.28	3.95	5430	67.24	4.32	5670	63.4	3.27
5200	56.15	3.92	5440	64	4.17	5680	62.85	3.2
5210	60.01	4.28	5450	64.66	4.2	5690	63.77	3.52
5220	59.07	4.3	5460	67.18	4.26	5700	64.25	3.68
5230	63.33	4.65	5470	66.29	4.4	5710	64.45	3.79
5240	59.9	4.41	5480	65.06	4.4	5720	64.3	3.92
5250	58.1	4.34	5490	64.47	4.43	5730	65.44	4.1
5260	58.23	4.35	5500	63.72	4.21	5740	67.98	4.27
5270	59.95	4.6	5510	63.41	4.34	5750	65.94	4.21
5280	59.98	4.51	5520	63.82	4.41	5760	65.1	4.15
5290	60.11	4.36	5530	64.47	4.47	5770	65.72	4.28
5300	57.1	4.24	5540	63.54	4.46	5780	67.54	4.26
5310	58.69	4.25	5550	63.76	4.44	5790	66.04	4.16
5320	60.68	4.39	5560	64.57	4.3	5800	64.9	4.39
5330	59.22	4.2	5570	63.29	4.01	5810	65.79	4.33
5340	61.9	4.35	5580	63.96	4	5820	67.99	4.67
5350	63.31	4.37	5590	62.54	3.58	5830	66.82	4.45
5360	60.32	4.37	5600	62.5	3.79	5840	65.1	4.26
5370	60.02	4.23	5610	62.52	3.48	5850	64.44	4.31
5380	60.65	4.22	5620	63.72	3.48			



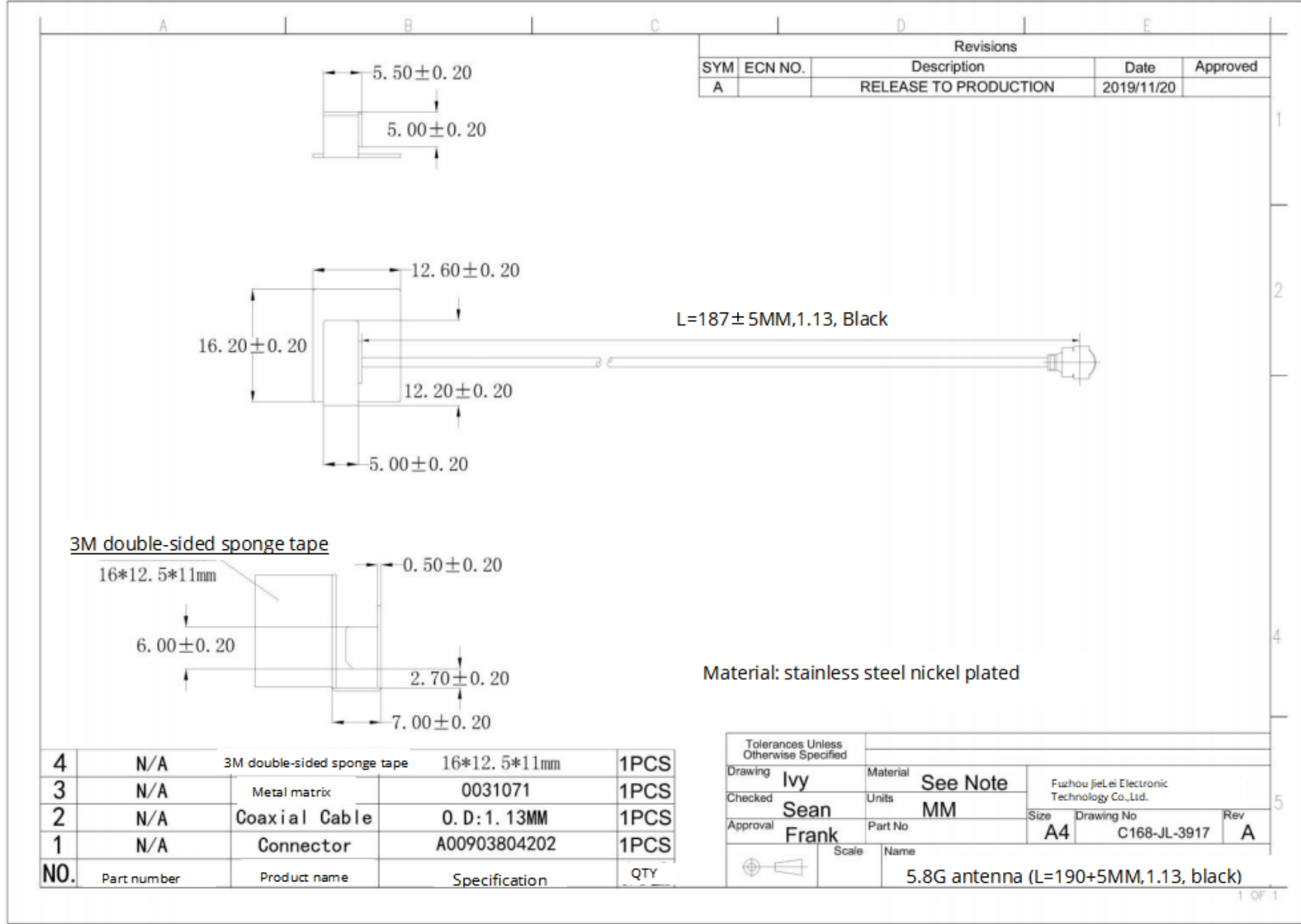
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3. Mechanical Dimension Drawing





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型号 Type	RF-1.13/50	料号 P/N	SY113/50-001(Black)	
结构图 Structure drawing				
结构特性 Structure characteristics				
结构 Structure	项目 Item	标准值 Standard value		
①内导体 Inner conductor	材料 Material	镀银铜线 Silverplated copper wire		
	组成:总根数/单根外径(mm) Makeup:total / O.D. of every wire(mm)	7/0.08		
②绝缘层 Insulation	(绞合)标称外径(mm) (Interwist)NOM.O.D.(mm)	0.24±0.02		
	材料 Material	聚全氯乙烯 FEP		
	颜色 Color	透明 Clarity		
③外导体 Outer conductor	标称外径(mm) NOM.O.D.(mm)	0.7±0.03		
	材料 Material	镀锡铜线 Tinned copper wire		
	组成:总根数/单根外径(mm) Makeup:total / O.D. of every wire(mm)	4/0.05		
	标称外径(mm) NOM.O.D.(mm)	0.92±0.05		
④护套层 Jacket	覆盖率(%) Coverage ratio(%)	90±5		
	材料 Material	聚全氯乙烯 FEP		
	颜色 Color	黑 Black		
标称外径(mm) NOM.O.D.(mm)	1.13±0.05			
电性能特性 Electrical characteristics				
项目 Item	标准值 Standard value	项目 Item	频率 Frequency	标准值 Standard value 单位 Unit: dB/m
电容(pF/m) Capacitance(pF/m)	98	衰减 Attenuation	1GHz	≤2.2
速率(%) Velocity(%)	70		2GHz	≤3.1
阻抗(Ω) Impedance(Ω)	50±2		3GHz	≤3.8
驻波比 Standing wave ratio	≤1.3@0-6GHz		4GHz	≤4.4
最大工作电压(V) Max.operating voltage(V)	1000		5GHz	≤4.9
最大工作频率(GHz) Max.operating frequency(GHz)	6		6GHz	≤5.4
可靠性 Dependability				
项目 Item	单位 Unit	标准值 Standard value		
最小弯曲半径(一次) Min.bending radius static	mm	4		
最小弯曲半径(重复) Min.bending radius repeated	mm	—		
工作温度范围 Operating temperature	℃	-55→+200		
包装 Packing				
项目 Item	单位 Unit	标准值 Standard value		
包装方式 Packing mode	/	纸盘 Paper plate		
每盘长度 The length of each plate	m	500		
每盘接头数 Each connector plate number	/	≤3		
每段最短长度 The shortest length of each root	m	≥10		
使用提示 Use tips				
存储环境 Storage environment	Below 30° C: Temperature :20%-65%			
最佳保存周期 The best save cycle	2 months: More than 2 months of workability decline, the effect of the above tin is worse, but the electrical performance is not affected. It is necessary to circulate as soon as possible after peeling in a warm and humid environment.			
加工温度 Processing temperature	The limit of 260° C can be sustained for a short time; above 300° C the isothermal groups normally carried by molecules decompose; above 400° C significant thermal decomposition occurs.			
氟氟龙收缩 Teflon Shrink	Because of material properties. Insulation: below 0.2mm; Sheath: below 0.3mm			
护套穿动 Jacket traverse	Processing length (sheath residual length) less than 5cm is easy to occur			
其他 Other				
特殊加工工艺, 请与供方协商后使用				