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Fuzhou JieLei Electronic Technology Co.,Ltd.

文档编码：FRKF-0007 版本：1.1

规 格 书

Specification

客户名称：

CUSTOMER：

客户料号：

CUSTOMER P/N:

客户品名：

DESCRIPTION：

捷雷料号：

P/N: C168-JL-3917

捷 雷品名：

PART NO: 5.8G 天线；L=190mm 1.13 黑色 V1.1

核准	审核	编制
Frank	WenSen	Sean
2023.02.24	2023.02.24	2023.02.24

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版本描述

日期	批准	版本	描述
2023-02-24		V1.1	更新测试数据
2019-11-20		V1.0	初版

1. Electrical Performance

A.Electrical Characteristics	
S.W.R	＜=2.0@5150-5850MHz
Frequency Range(MHz)	5150-5850MHz
Impedance	50 Ohm
Gain	MAX：3.27dBi@5150-5850MHz
B.Material	
Connector	IPEX
Cable Length	190MM
Cable	1.13
C.Environmental	
Operation Temperature	-20℃~65℃
Storage Temperature	

2. Measurement Setup

(1)Reflection coefficient Measurement:

(a)Instrument: Network Analyzer

(b)Setup:

(Ⅰ)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

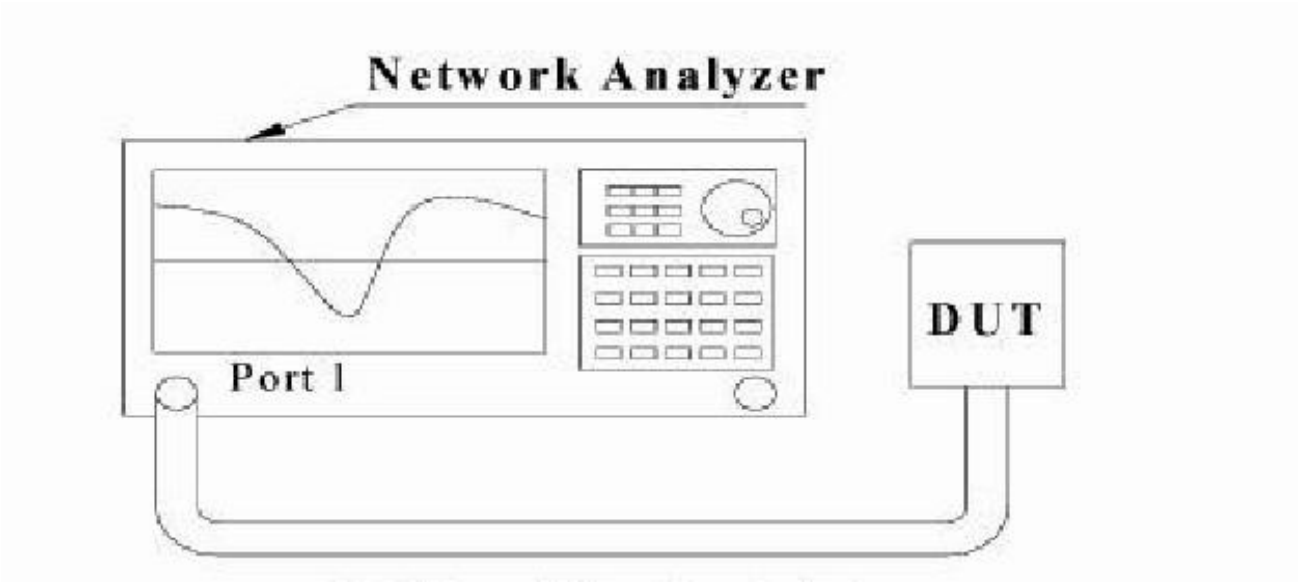


Fig.1 Measure S11 on Network Analyze

2.1测试设备

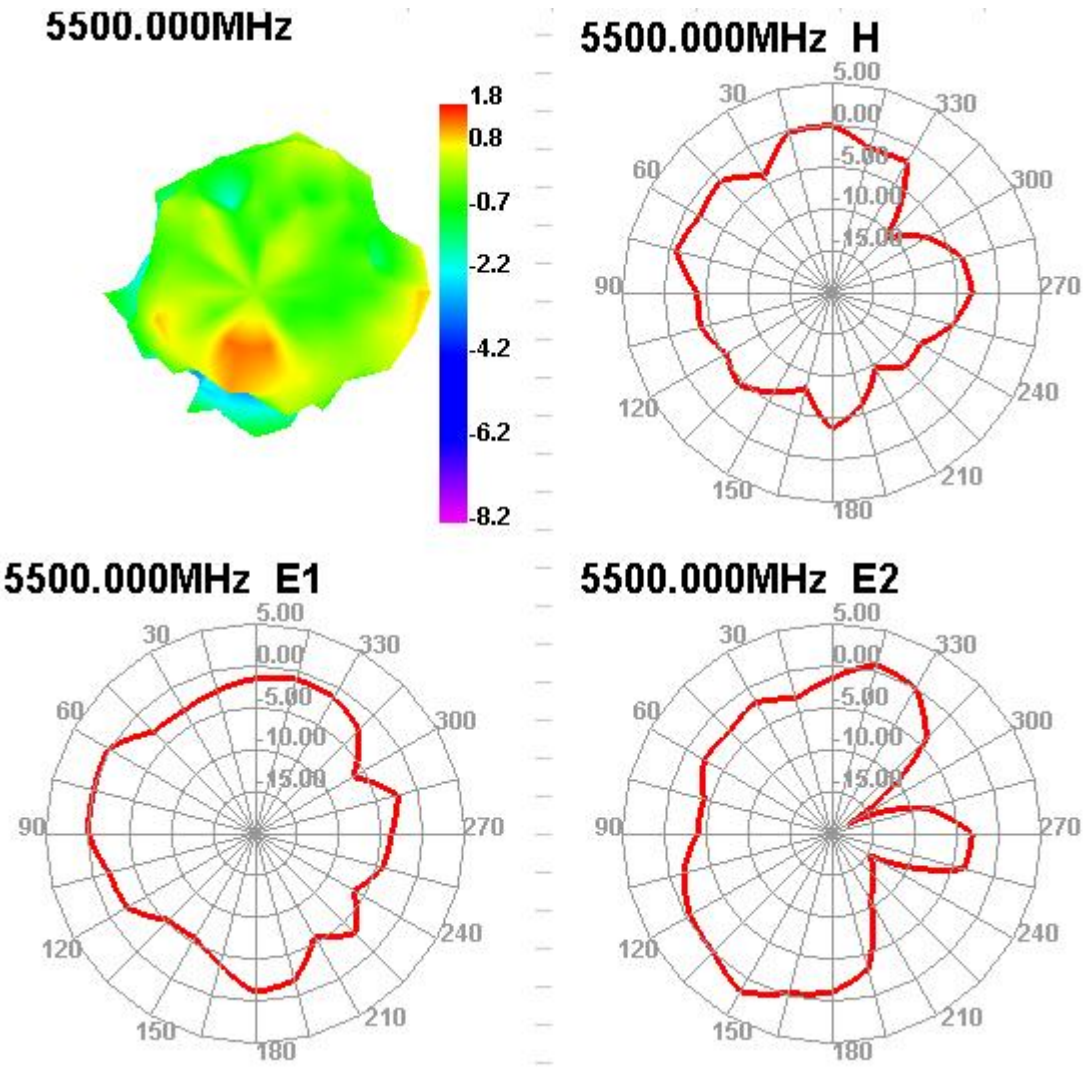
驻波测试设备

VSWR 是用安捷伦失量网络分析仪 E5071C 测试的。被测物平稳地摆放在非导电且介电常数很小的材料上，或者悬空测试。

效率测试设备

效率测试设备是由捷雷公司建立的暗室测试的。包括天线 3D 性能的有源和无源测试，符合 CTIA 标准的 OTA 性能测试（TRP&TIS）。暗室外部结构尺寸 7m×5m×3 m (L×W×H)，可测试从 700MHz-6GHz 频率范围内的天线。测试时，待测试测试稳定的固定在转台上。

天线方向图：5500MHz



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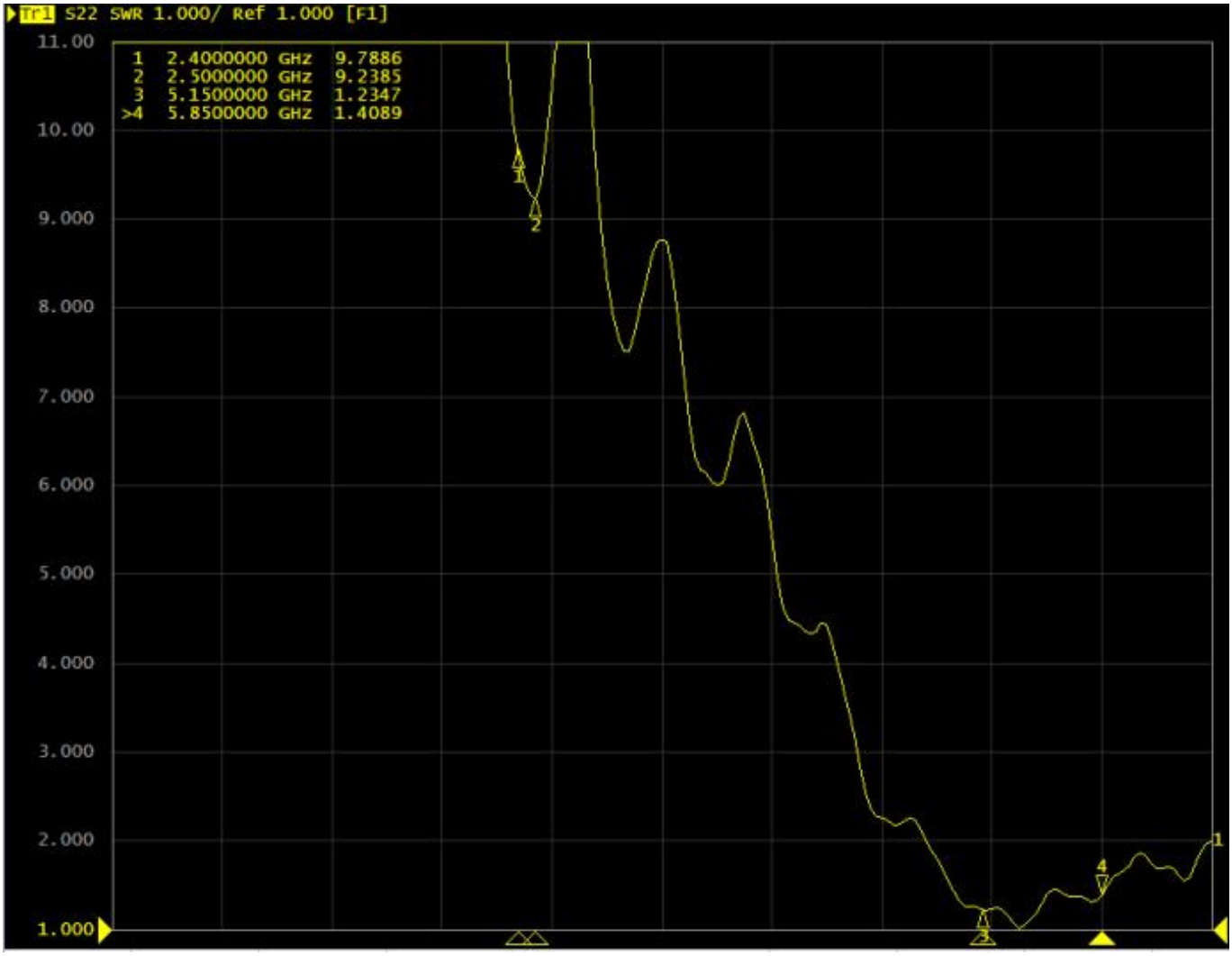
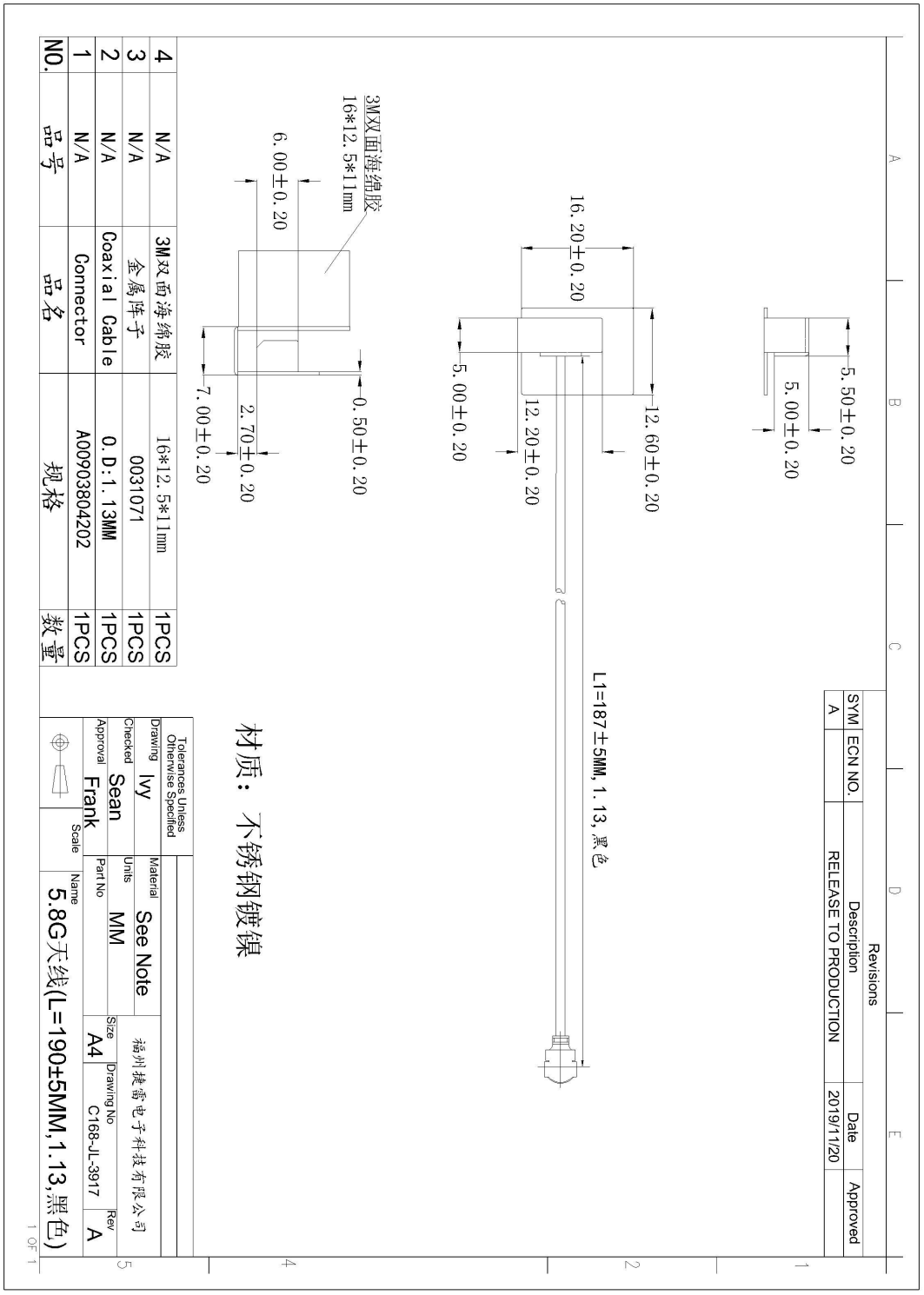
天线驻波：



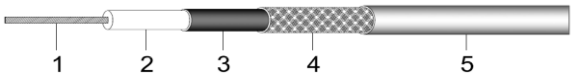
天线效率&增益

Freq (MHz)	Effi (%%)	Max (dB)	Freq (MHz)	Effi (%%)	Max (dB)
5150	56.29	2.94	5510	49.01	1.88
5160	56.15	2.82	5520	49.37	1.9
5170	55.17	2.79	5530	47.97	1.67
5180	56.7	2.69	5540	46.05	1.57
5190	59.66	2.62	5550	46.9	1.59
5200	56.49	2.56	5560	46.15	1.56
5210	52.53	2.31	5570	43.97	1.44
5220	52.21	2.12	5580	43.81	1.45
5230	55.01	2.22	5590	46.67	1.72
5240	51.12	2.02	5600	45.32	1.64
5250	49.76	1.87	5610	42.05	1.15
5260	52.28	2.08	5620	42.94	1.79
5270	50.2	2.09	5630	44.64	1.48
5280	47.01	1.82	5640	44.06	1.34
5290	46.21	1.75	5650	41.21	1.11
5300	49.25	2.14	5660	41.54	0.99
5310	49.17	2.28	5670	43.57	1.18
5320	46.3	2.01	5680	42.94	1.35
5330	45.04	2.12	5690	41.28	0.99
5340	48.7	2.4	5700	42.53	1.19
5350	49.4	2.58	5710	44.23	1.54
5360	46.65	2.27	5720	44.93	1.62
5370	46.03	2.1	5730	44.89	1.87
5380	46.28	1.97	5740	46.37	1.92
5390	45.08	1.59	5750	46.41	2.15
5400	44.61	1.91	5760	46.82	2.29
5410	46.04	1.93	5770	47.48	2.45
5420	47.12	1.94	5780	46.97	2.57
5430	46.66	1.88	5790	48.34	2.59
5440	46.5	1.78	5800	49.39	2.89
5450	47.03	1.75	5810	50.07	3.09
5460	47.17	1.67	5820	49.15	2.88
5470	46.79	1.54	5830	48.49	3.27
5480	48.08	1.51	5840	48.14	3.18
5490	47.99	1.9	5850	47.58	3.21
5500	47.33	1.75			

3. Mechanical Dimension Drawing



NO.	品号	品名	规格	数量
4	N/A	3M双面海绵胶	16*12.5*11mm	1PCS
3	N/A	金属阵子	0031071	1PCS
2	N/A	Coaxial Cable	O.D:1.13MM	1PCS
1	N/A	Connector	A00903804202	1PCS

型号 Type	RF-1.13L/50	料号 P/N	SY113L/50-001(Black) 版本：V2
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)	7/0.083
	(绞合)标称外径(mm) (Intertwist)NOM.O.D.(mm)	0.249±0.02
②绝缘层 Insulation	材料 Material	聚全氟乙丙烯 FEP
	颜色 Color	透明 Clarity
	标称外径(mm) NOM.O.D.(mm)	0.735±0.03
③外导体 Outer conductor	材料 Material	铜塑箔 Cu-plastic composite tape
	组成:厚度(mm)×宽度(mm) Makeup:thickness(mm)×width(mm)	0.012×2.5
	标称外径(mm) NOM.O.D.(mm)	0.759±0.03
	覆盖率(%) Coverage ratio(%)	100
④外导体 Outer conductor	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)	0.96±0.05
	覆盖率(%) Coverage ratio(%)	90±5
⑤护套层 Jacket	材料 Material	聚全氟乙丙烯 FEP
	颜色 Color	黑 Black
	标称外径(mm) NOM.O.D.(mm)	1.15±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	≤1.88
速率(%) Velocity(%)	70		2GHz	≤2.55
阻抗(Ω) @1ns Impedance(Ω)	50±2		3GHz	≤3.05
驻波比 Standing wave ratio	≤1.3@0~6GHz		4GHz	≤3.52
	≤1.4@6~8GHz		5GHz	≤4.05
	≤1.5@8~10GHz		6GHz	≤4.4
最大工作电压(V) Max.operating voltage(V)	1000		7GHz	≤4.88
			8GHz	≤5.22
			9GHz	≤5.62
			10GHz	≤5.95

可靠性 Dependability

项目 Item	单位 Unit	标准值 Standard value
最小弯曲半径(一次/重复) Min.bending radius (static / repeated)	mm	4 / —
工作温度范围 Operating temperature	℃	-55~+125

包装 Packing

项目 Item	单位 Unit	标准值 Standard value
包装方式 Packing mode	/	纸盘 Papery plate
每盘长度 The length of each plate	m	500
每盘接头数/每段最短长度 Each connector plate number/The shortest length of each root	No. / m	≤3 / ≥10

使用提示 Use tips

存储环境 Storage environment	温度：30℃以下；湿度：20%~65% Temperature：Under 30℃；Humidity：20%~65%
最佳保存周期 The best save cycle	2个月；2个月以上作业性下降，如上锡效果变差,但电性能不受影响。夏季高温高湿环境开剥后需尽快流转。 two months；Soldering performance may decline after two months， the tinned effect may become worse, but the electrical characteristics are not affected.The stripped wire must be used as soon as possible in the summer high temperature and high humidity environment.
加工温度 Processing temperature	260℃的极限情况下，可短时间承受；300℃以上分子通常带有的等端基会分解；400℃以上发生显著的热分解。 Under the condition of 260℃ limit, can bear within short time；Molecular with terminal groups will decompose over 300℃ and significantly decompose over 400℃.
铁氟龙收缩 Teflon Shrink	固有材料特性。绝缘：0.2mm以下；护套：0.3mm以下。 The inherent material characteristics。Insulation：<0.2mm ；Jacket：<0.3mm.
护套窜动 Jacket traverse	加工长度（护套残留长度）低于5cm易发生。 The Jacket traverse may happen easily, when the processing length is less than 5cm.