

ANTENNA SPECIFICATION

CUS P/N :550MM WIFI 天线

Application Date:Sep,12,2024

Rev: R:A3

ZTX P/N :550MM WIFI 天线

Editor:

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1.Product drawings

(备注：此页请附上物料的实物图片(必须是该料号实物图片)，包括正视图、侧视图)



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2. Mechanical Specification

2-1 Mechanical Configuration(WIFI 天线)

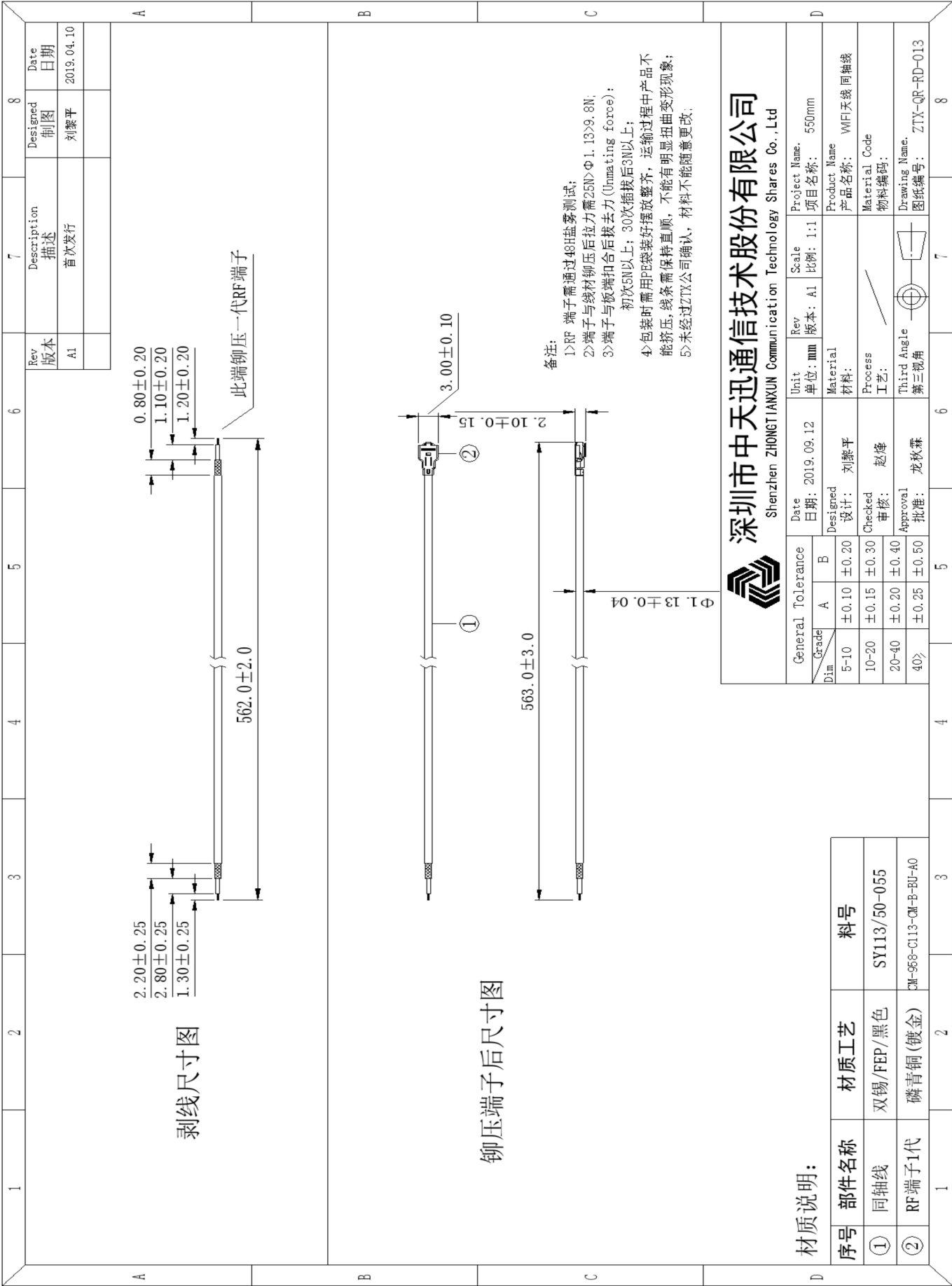
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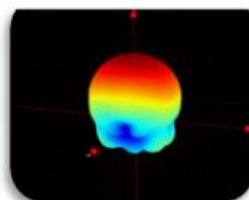
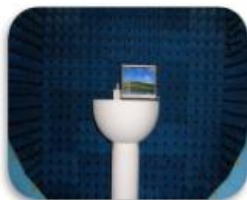
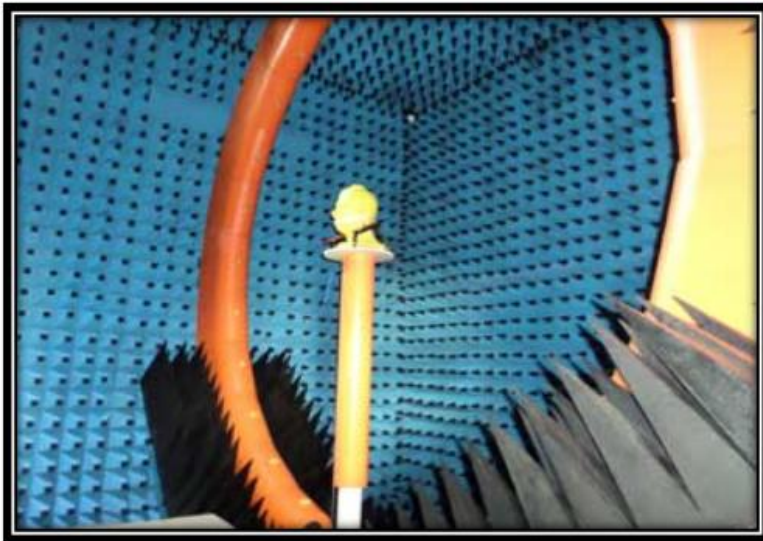
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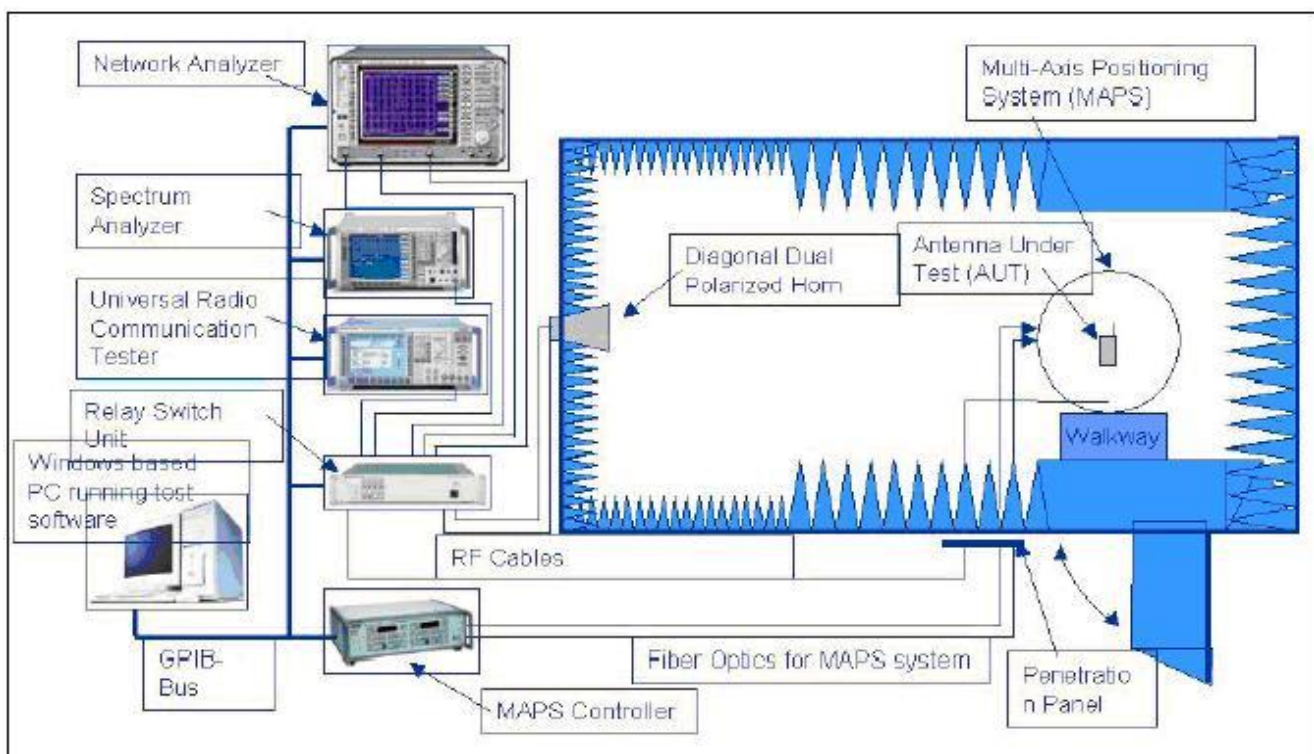
3. Test equipment



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.



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4. Electrical Specifications

4-1 Frequency Band

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

4-2 VSWR And GAIN

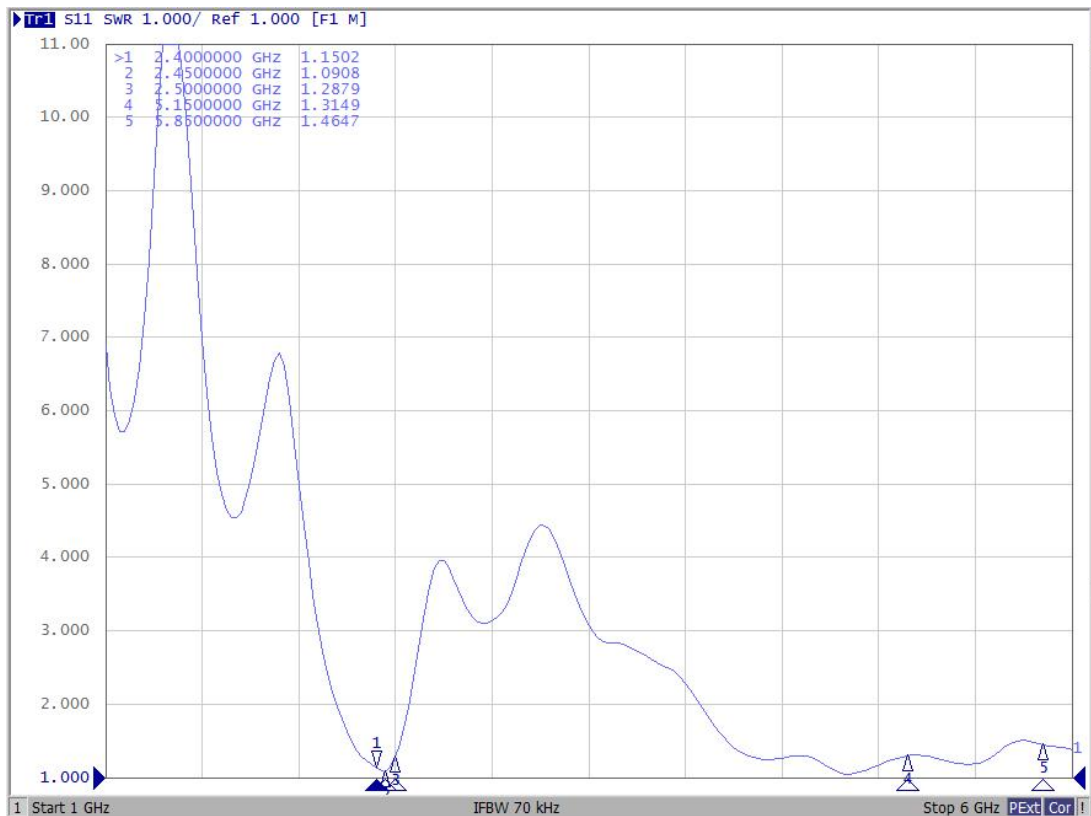
VSWR			GAIN		
Freq. Band	OPEN	SPEC	Band Freq.	OPEN	SPEC
2400MHz		≤ 2.0	2400MHz		$\geq -1.0\text{dBi}$
2500MHz		≤ 2.0	2500MHz		$\geq -1.0\text{dBi}$
5150MHz		≤ 2.0	5150MHz		$\geq -1.0\text{dBi}$
5850MHz		≤ 2.0	5850MHz		$\geq -1.0\text{dBi}$

※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.

5. Antenna test data

5-1 VSWR



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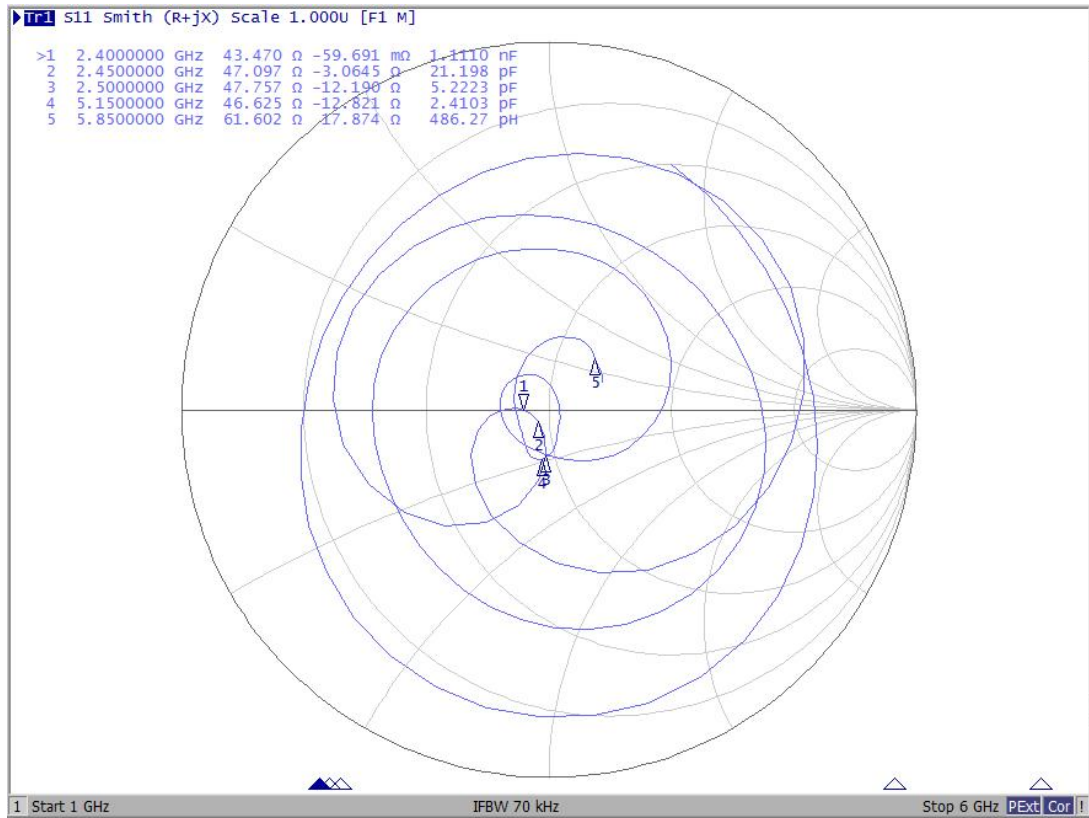
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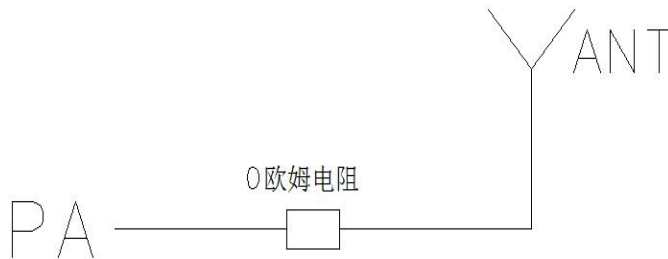
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5-2 Smith Chart



5-3 Matching circuit



5-4 No-source test data

Frequency (MHz)	2400	2450	2500	5150	5850
Average Gain Efficiency (dB)	1.42 (44%)	1.72 (48%)	1.65 (45%)	2.34 (61%)	2.57 (66%)
Peak Gain(dB)	1.62	1.94	1.81	2.63	2.84

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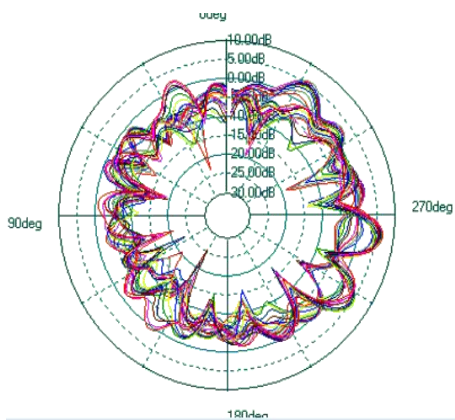
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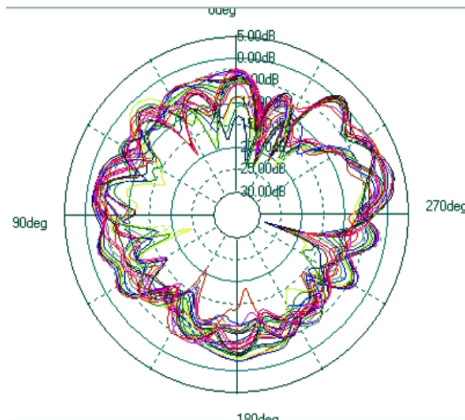
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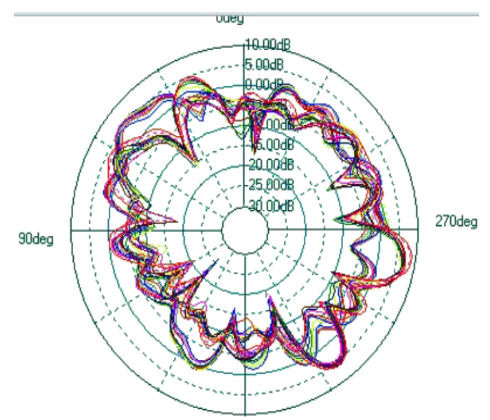
5-5 Directional drawing of horizontal plane of



Theta 90deg



Phi 0deg



Phi 90deg

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6.Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
6-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: +80 ±2℃	No material deformation is allowed.
		2.Humidity: 90~95%RH	
6-2	Low Temperature/Humidity Storage Test(non operating)	3.Time: 48hrs	The VSWR, Gain, Radiation Pattern must be met specifications after these test.
		1.Temperature: -30±2℃	
		2.Humidity: 0%RH	
		3.Time:48hrs	

7.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	SZXEC1802015001	SGS	2018/12/20	有效	PDF
2	泡棉	C190418017001	CPST	2019/01/17	有效	PDF
3	3M 5611	CANEC23017628501	CPST	2024/01/03	有效	PDF
4	3M 9448A	SHAEC1901358201	SGS	2019/01/23	有效	PDF
5	RF 端子 1 代	ANEC1907229906	SGS	2019/05/06	有效	PDF
		A2190000463101002	CTI	2019/01/02	有效	PDF
		A2180247064101001	CTI	2018/12/18	有效	PDF
		A2180247064101002	CTI	2018/12/18	有效	PDF
6	镀锡铜线	A2190138284101E	CTI	2019/06/06	有效	PDF
		A2180259581101003	CTI	2019/1/19	有效	PDF
		A2180259581101001	CTI	2019/1/19	有效	PDF
		SHAEC1904071101	SGS	2019/03/08	有效	PDF

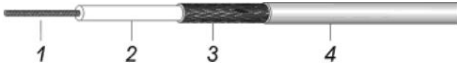
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9.线材规格书

型号 Type		RF-1.13/50	料号 P/N	SY113/50-055(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			镀锡铜线 Tinned copper wire	
	组成:总根数/单根外径(mm) Makeup total / O.D. of every wire(mm)			7/0.08	
	(绞合)标称外径(mm) (Intertwist)NOM.O.D.(mm)			0.24±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)			0.7±0.03	
③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)			0.92±0.05	
	覆盖率(%) Coverage ratio(%)			90±5	
④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)			1.13±0.05	
电性能特性 Electrical characteristics					
项目 Item		标准值 Standard value		项目 Item	标准值 Standard value 单位 Unit: dB/m
电容(pF/m) Capacitance(pF/m)		98		衰减 Attenuation	1GHz
速率(%) Velocity(%)		70			2GHz
阻抗(Ω) Impedance(Ω)		50±2			3GHz
驻波比 Standing wave ratio		≤1.3@0~6GHz			4GHz
最大工作电压(V) Max.operating voltage(V)		1000			5GHz
最大工作频率(GHz) Max.operating frequency(GHz)		6			6GHz
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~+150	
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 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		温度: 30℃以下; 湿度: 20%~65%			
保质期 Quality guarantee period		1年 (上锡效果除外)			
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			
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			
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			
护套窜动 Jacket traverse		加工长度 (护套残留长度) 低于5cm易发生			
其他 Other					
特殊加工工艺, 请与供方协商后使用					