

SPECIFICATION

SHEET FOR APPROVAL

(Revision: R: A3)

	CUSTOMER(客户名称)	Newland	
	CS P/N(客户机种)	N950S	
	PART NAME(品名)	3in1	
	FREQUENCY(频率)	1575MHz, 2400-2500MHz。	
	ZTX NO.(物料编号)	E.03.00972	
	DATE(日期)	2024-4-8	

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED



福州中天迅通信技术有限公司
ZHONGTIAN XUN Communication Technology Co.,Ltd.

Fuzhou Address: Building 45, Unit SC02, 2nd Floor, Jinshan Industrial Zone,
Cangshan District, Fuzhou City, Fujian Province

ANTENNA SPECIFICATION

CUS P/N : N950S 3in1
ZTX P/N : N950S 3in1

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Revision history

版本 version	日期 date	状态 status
A1	2023-11-21	初版。 First issue.
A2	2024-4-8	性能优化; FPC 外形, 线路更新。 Performance optimization, FPC form factor, line update



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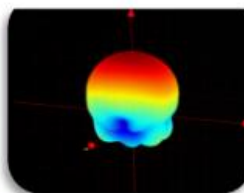
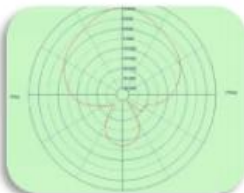
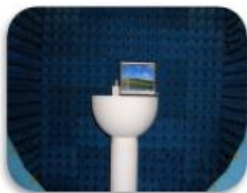
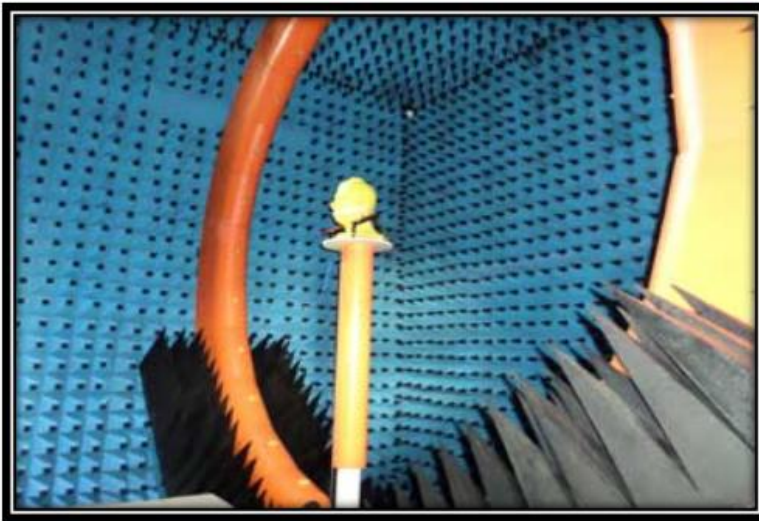
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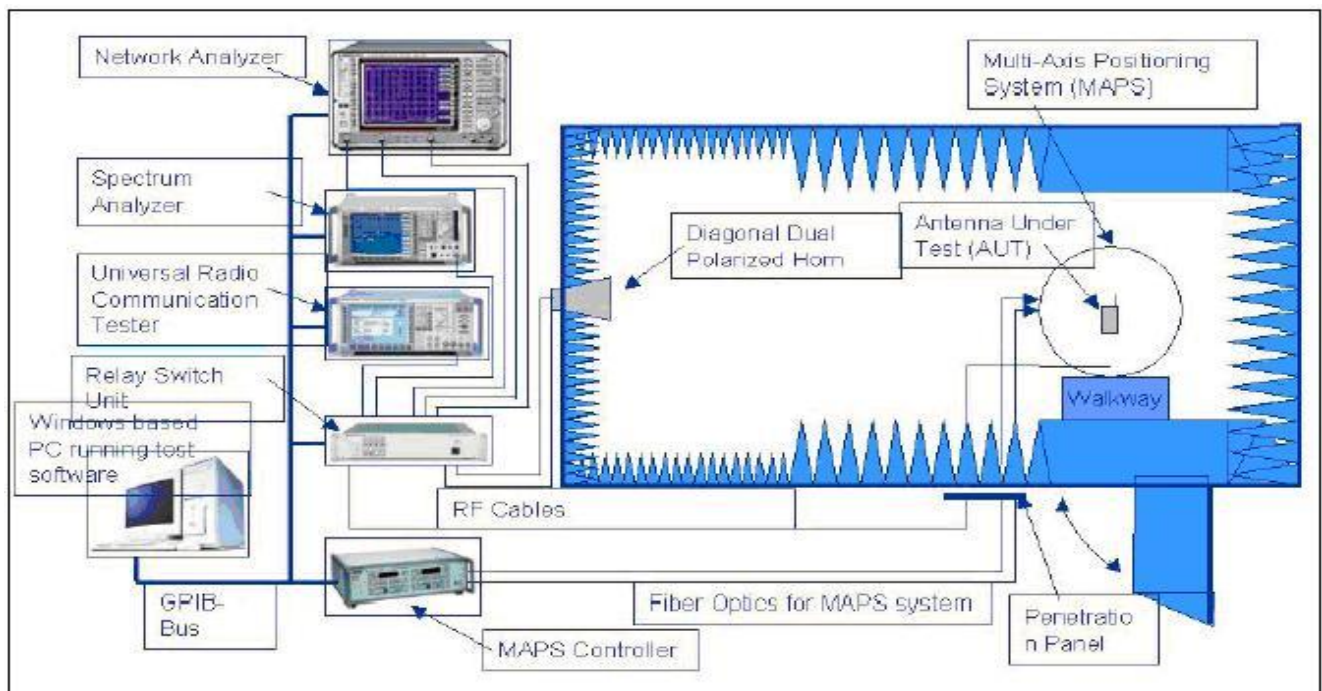
1. Test equipment



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 within0.4-6G.



2. Antenna test data



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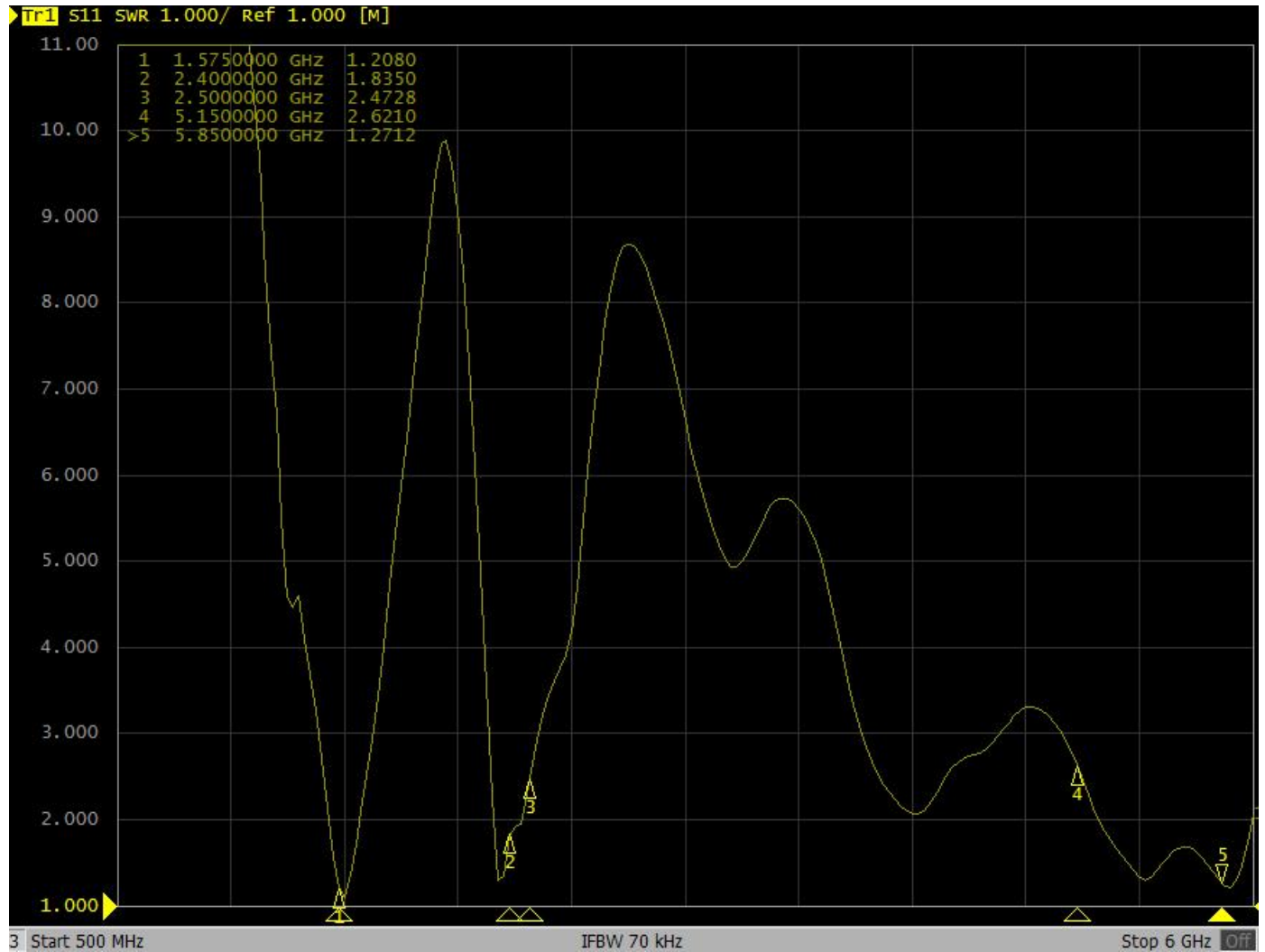
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2-1 VSWR



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2-2 Antenna passive test

Frequency (Mhz)	efficiency (dB)	efficiency (%)	Gain (dBi)
1560	-2.21	60.1	1.63
1570	-2.23	59.84	1.62
1580	-2.38	57.78	1.3
1590	-2.5	56.27	1.14
1600	-2.54	55.77	1.05
1610	-2.84	51.99	0.84
1620	-3.21	47.77	0.54
2400	-4.56	34.98	-0.8
2410	-4.59	34.75	-0.85
2420	-4.49	35.55	-0.65
2430	-4.31	37.08	-0.45
2440	-4.06	39.25	-0.24
2450	-3.77	41.99	-0.11
2460	-3.53	44.36	-0.06
2470	-3.26	47.24	0.06
2480	-3.06	49.43	0.02
2490	-3.01	50	1.06
2500	-3.05	49.49	1.07
5140	-4.59	34.77	0.54
5160	-4.63	34.46	0.63
5180	-4.7	33.9	0.56
5200	-4.36	36.63	0.91
5220	-4.15	38.5	1.18
5240	-4.14	38.53	1.23
5260	-4.18	38.22	1.3



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5280	-4.27	37.45	1.28
5300	-4.12	38.71	1.32
5320	-3.91	40.63	1.42
5340	-3.84	41.31	1.34
5360	-3.69	42.79	1.41
5380	-3.83	41.42	1.21
5400	-3.83	41.43	1.15
5420	-3.92	40.57	1
5440	-4.11	38.83	0.89
5460	-4.09	39.02	1.02
5480	-4.08	39.09	1.08
5500	-4.33	36.9	0.8
5520	-4.26	37.46	0.83
5540	-4.21	37.92	0.78
5560	-4.02	39.6	0.94
5580	-3.97	40.04	1.04
5600	-4.07	39.2	0.92
5620	-4.12	38.68	0.9
5640	-4.21	37.91	0.68
5660	-4.15	38.5	0.65
5680	-4.17	38.29	0.4
5700	-4.14	38.56	0.36
5720	-4.19	38.1	0.43
5740	-4.34	36.78	0.25
5760	-4.55	35.04	0.08
5780	-4.64	34.35	-0.1
5800	-4.5	35.49	-0.12
5820	-4.39	36.4	-0.29



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5840	-4.32	37.02	-0.59
5860	-4.51	35.4	-0.83
5880	-4.84	32.79	-1.23
5900	-4.9	32.4	-1.31



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2-3 Active test data

WIFI	F: 1.8nH, 0.5pF;G:1nH		
	FPC		
	CH	TRP	TIS
WIFI B(11/11)	1	14. 14	-79. 45
	7	12. 72	-78. 14
	13	14. 97	-80. 1
WIFI G(6/54)	1	13. 16	-67. 39
	7	12. 09	-66. 15
	13	13. 7	-67. 96
WIFI GN(MCS0/MCS7)	1	12. 04	-64. 93
	7	11. 21	-62. 75
	13	12. 29	-64. 92



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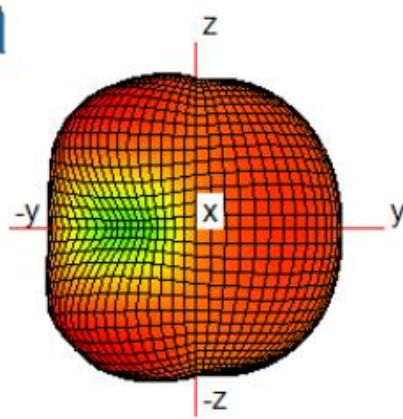
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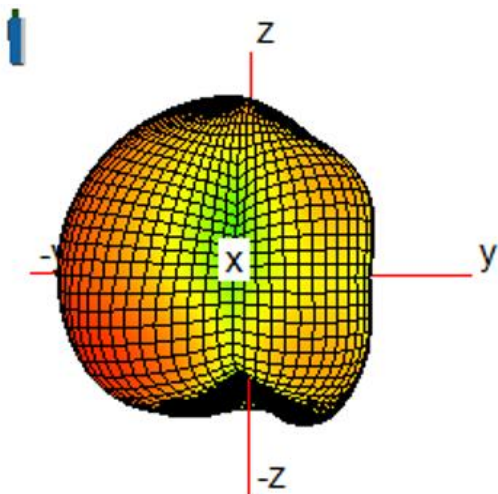
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2-4 3D radiation drawing

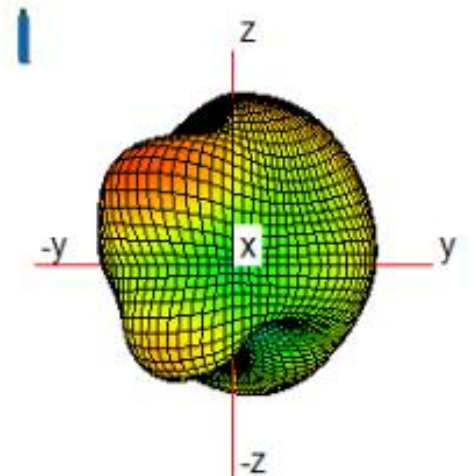
GPS



WIFI 2.4G



WIFI 5G



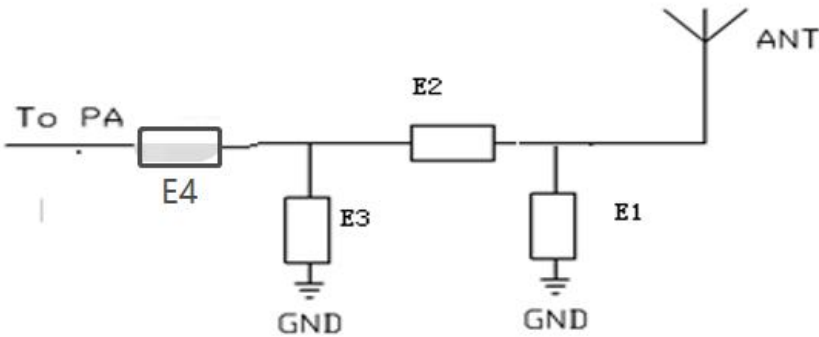
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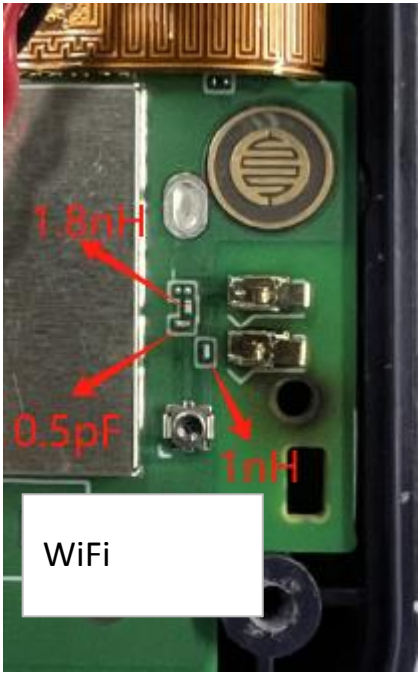
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2-5 Matching circuit



匹配说明 Matching specification	
E1	NC
E2	1.8nh
E3	0.5pF
E4	0 Ω
GND	1nH



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2-6 Environment treatment



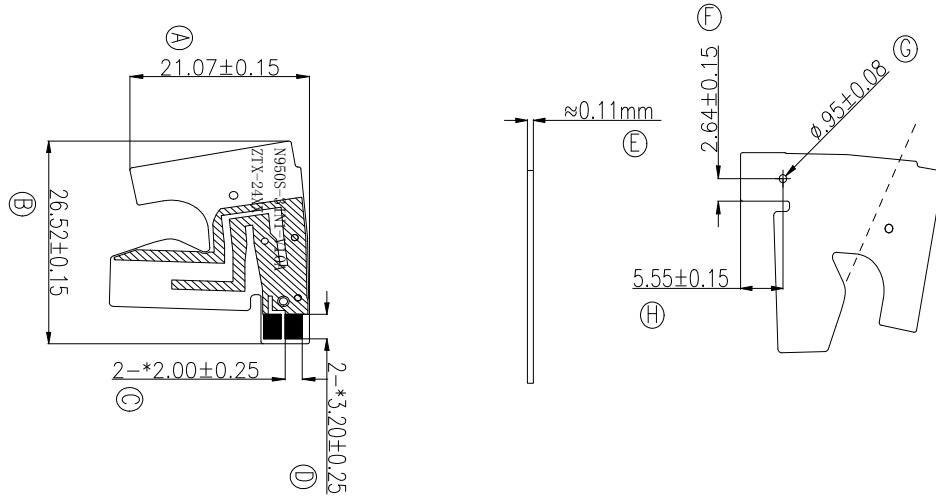
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3. Mechanical Specification



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- 4.Size report
- 5.Salt-Spray test
- 6.Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
4-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: $+70\pm2^{\circ}\text{C}$ 2.Humidity: $90\sim95\%\text{RH}$ 3.Time: 48hrs	No material deformation is allowed.
4-2	Low Temperature/Humidity Storage Test(non operating)	1.Temperature: $-30\pm2^{\circ}\text{C}$ 2.Humidity: $0\%\text{RH}$ 3.Time:48hrs	The VSWR, Gain, Radiation Pattern must be met specifications after these test.

