

Shenzhen Yunding Communication Electronics

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E-mail:ws@szydtx.com

APPROVAL

DESCRIPTION: **3DB black-male-WIFI**

PART NO.:

CUS PART NO.:

日 期
D A T E: 2022-3-9

ENGINEERING DEPARTMENT	Q C DEPARTMENT	SALES DEPARTMENT

ENGINEERING DEPARTMENT	Q C DEPARTMENT	PURCHASING DEPARTMENT

Contact number: 0755 23073599

Approval in duplicate, please signed by your company.

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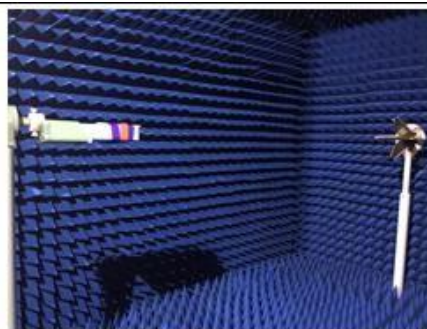
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Test items and equipment

	Test Item	Equipment
1. S11 (S-parameter)	1. (Return Loss) 2. (VSWR)	Network analyzer: Agilent E5071B HP 8753D
2. (Active)	1. Transmitting power (TRP) 2. Receiving sensitivity (TIS)	1. Darkroom: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2.Integrated Tester: Agilent 8960 E5515B ×2 StarPoint SP6011
3. Passive testing (Passive)	1.Antenna gain (Gain) 2.Antenna efficiency (Efficiency)	1. Darkroom: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2.Integrated Tester:Agilent E5071B HP 8753D



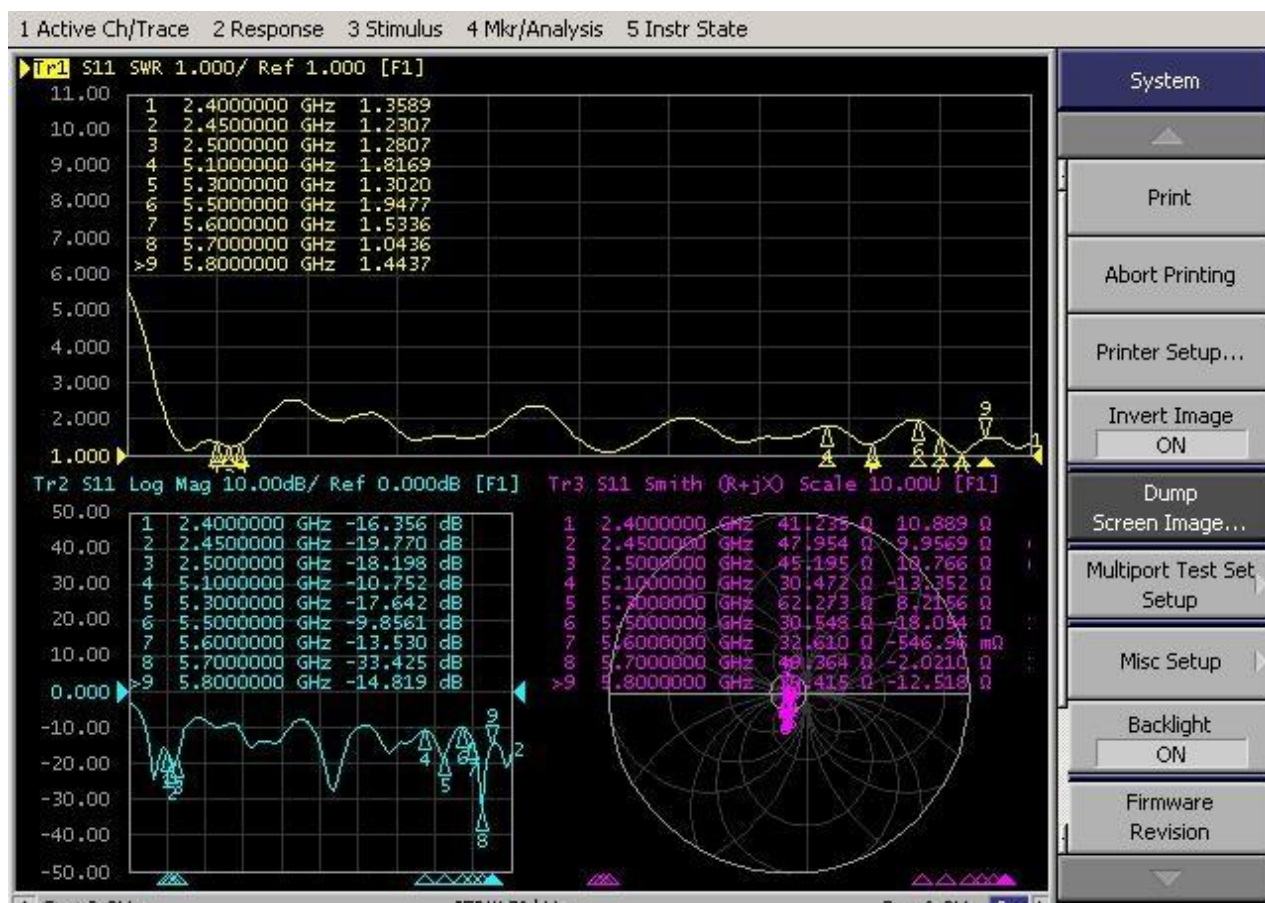
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2. Antenna performance



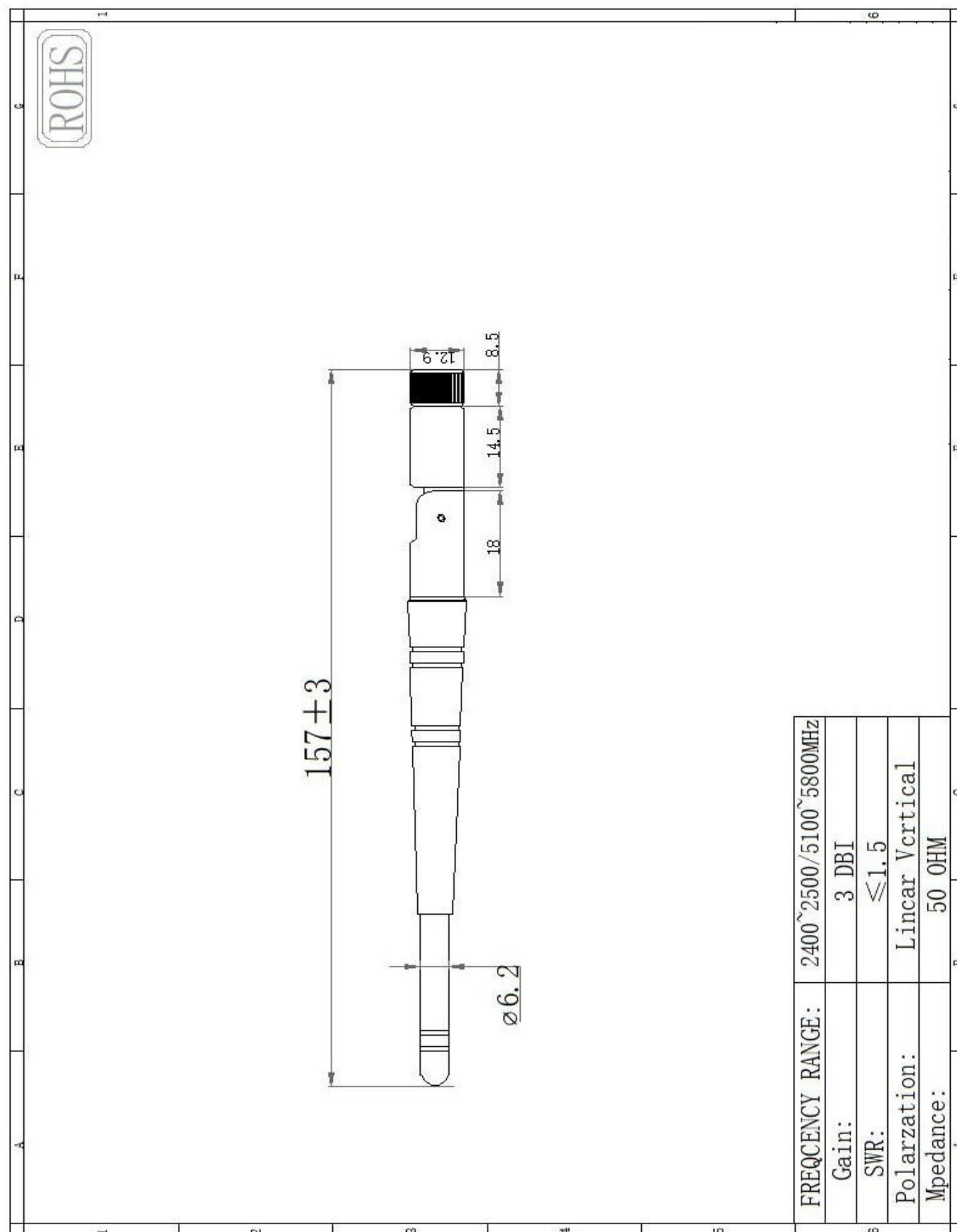
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3.Antenna Configuration:



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4. Antenna efficiency and gain:

Passive Test For WIFI										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
2400	50.95	-2.93	2.57	0.42	22.906	28.047	2.57	-23.43	48.09	47.94
2410	50.35	-2.98	2.48	0.33	23.585	26.761	2.48	-24.02	48.07	47.87
2420	51.21	-2.91	2.46	0.31	25.17	26.045	2.46	-26.2	48.18	48
2430	53.88	-2.69	2.59	0.44	27.509	26.373	2.59	-27.38	48.17	47.99
2440	56.87	-2.45	2.76	0.61	29.67	27.204	2.76	-26.16	48.33	48.11
2450	59.47	-2.26	2.83	0.68	31.157	28.317	2.83	-27.79	48.44	48.14
2460	60.02	-2.22	2.73	0.58	31.354	28.668	2.73	-26.56	48.41	48.06
2470	60.23	-2.2	2.63	0.48	31.501	28.732	2.63	-25.39	48.49	48.11
2480	60.97	-2.15	2.62	0.47	32.315	28.653	2.62	-23.73	48.63	48.18
2490	62.93	-2.01	2.71	0.56	34.131	28.803	2.71	-22.93	48.76	48.29
2500	63.47	-1.97	2.79	0.64	35.22	28.248	2.79	-22.05	48.69	48.16

Passive Test For WIFI-5G										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
5100	47.61	-1.7	2.49	0.34	32.894	34.717	2.49	-22.46	60.54	59.93
5200	45.39	-1.4	2.67	0.52	35.099	37.294	2.67	-20.99	60.75	60.28
5300	45.1	-1.48	2.76	0.61	34.539	36.565	2.76	-19.3	60.42	59.76
5400	50.94	-1.68	2.59	0.44	33.002	34.938	2.59	-19.6	60.61	60.07
5500	47.98	-1.68	2.49	0.34	32.854	35.125	2.49	-21.11	60.91	60.18
5600	48.41	-1.71	2.25	0.1	32.662	34.752	2.25	-20.24	60.86	60.31
5700	50.82	-1.95	2.02	-0.13	30.931	32.887	2.02	-21.02	61.2	60.63
5800	44.69	-1.89	2.13	-0.02	31.456	33.23	2.13	-20.23	60.81	60.17

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电器技术参数			
电 性 能 指 标		Electrical Specifications	
频率范围	2400~2500/5100~5800MHz	Frequency Range	2400~2500/5100~5800MHz
电压驻波比	≤2.0	VSWR	≤2.0
输入阻抗	50 Ω	Input Impedance	50 Ω
增益	3 DBI	Gain	3 DBI
最大输入功率	50W	Maximum Input Power	50W
机 械 指 标		Mechanical Specifications	
天线颜色	黑色	Antenna Color	BLACK
接口形式		Input connector	
天线长度	157mm	Cable length	157mm
工作温度	-40℃~+85℃	Working Temperature	-40℃~+85℃
工作湿度	20~80%	Working Humidity	20~80%

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环境性能测试（Environment performance test）：

Project	Test condition	Test results
Storage environment	Test temperature, humidity, pressure without stated condition as follwings:1.Temperature: -30°C ~ $+80^{\circ}\text{C}$;2.Relative humidity: 45%-85%;3,Pressure: 86kpa-106kpa	Electrical and mechanical performance normal
High and low temperature test	Having 5 times cycle between -40°C to 70°C ,Then in common condition 1-2 hours test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
Resistance constant hot and humid test	Relative humidity: $95\pm 3\%$,Test temperature: 40°C ,last 2 hours ,put it after 5 min test the electrical function .Test products during common condition 1-2 hours ,Then test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
Vibration test	Vibrate Frequency:10-55HZ; Distance :0.35mm;Acceleration :50.0m/s;Sweep frequency cycle:30 times	Electrical and mechanical performance normal
Fall test	From 1m height fall down 3 times freely (vertical direction)	Electrical and mechanical performance normal