



SHENZHEN HANYANG ANTENNA DESIGN CO. LTD.

BT Antenna Test Report

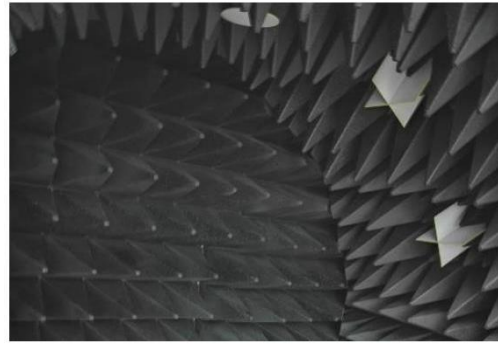
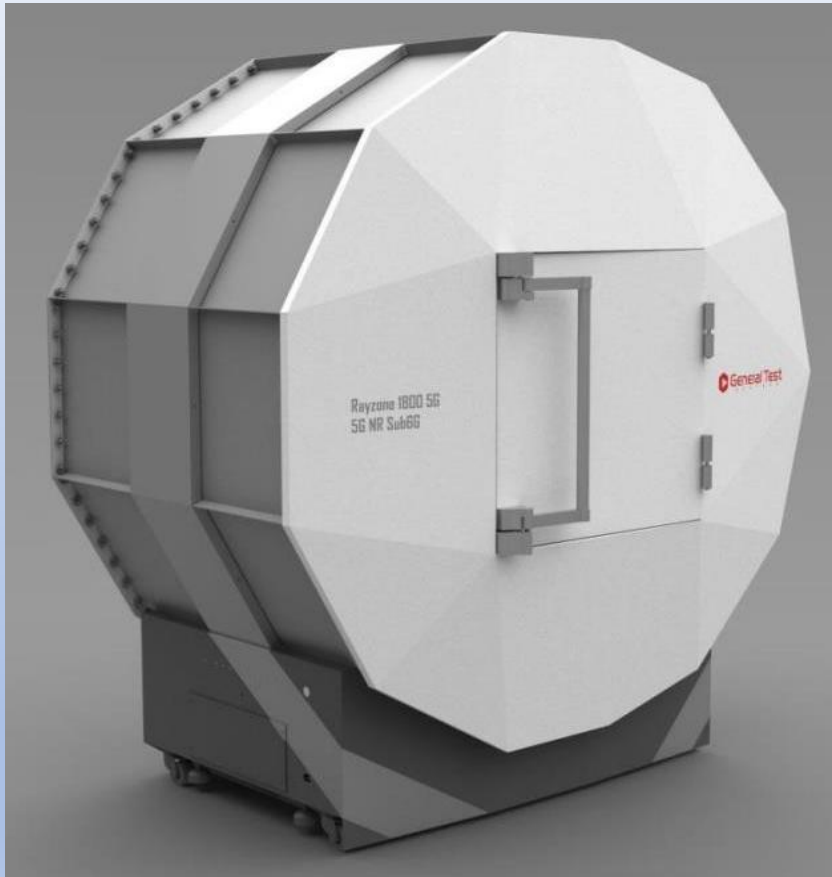
Project Name: Q1 Pro

Date: 2022-11-28

Testing Equipment



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Wireless communication standards: 2G/3G/4G/5G(FR1)/GNSS/A-GNSS/Wi-Fi/Bluetooth

IoT Communication Standards: LTE Cat NB1(NB-oT)/Cat-M1(e-MTC)

SISO test TRP/TIS/EIRP/EIS, 2x2 MIMO Throughput rate test

Passive antenna test, Desense test, ICS

Support 600MHZ-7.5GHz frequency band

GTS MaxSign 100 test software supports antenna/OTA testing and provides visual data analysis

New EPP hard environmental absorbers, low RCS high gain measurement antenna set, wave transmission turntable and fixture

Fast MIMO testing; Certification-grade test accuracy

All-in-one design, plug and play, easy maintenance

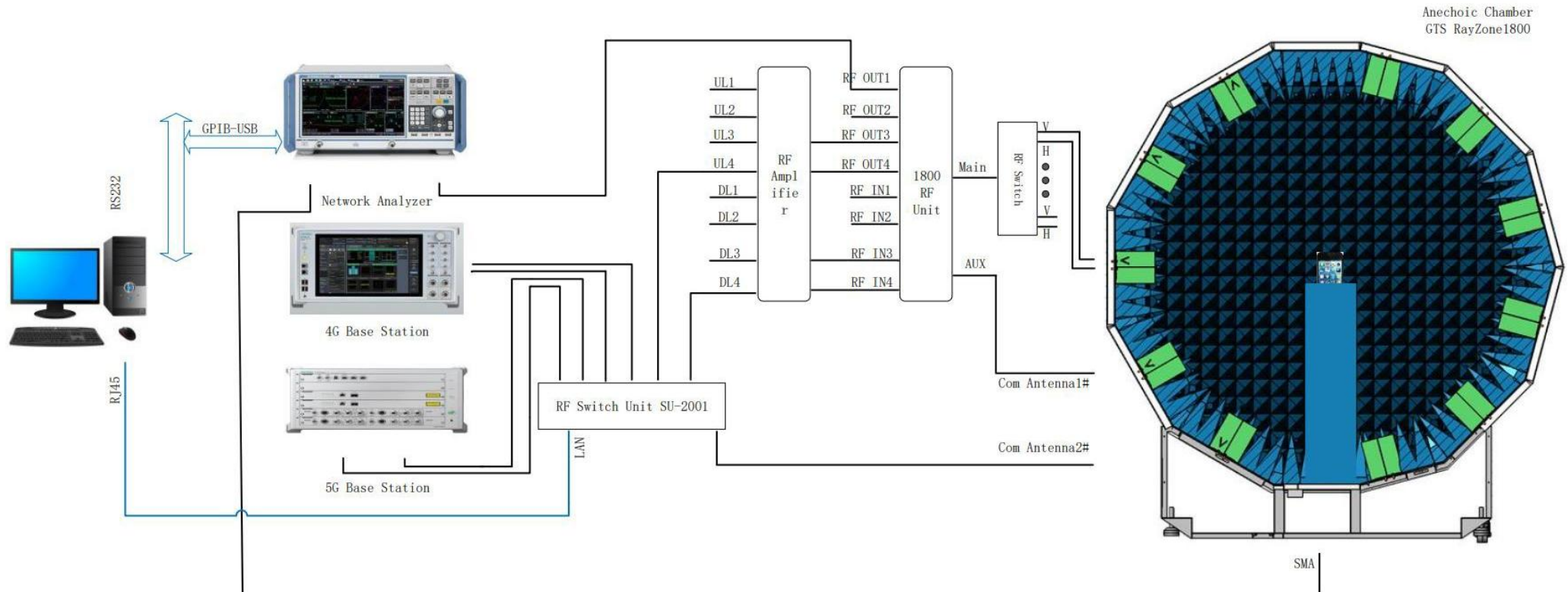
Testing Principle



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General Test

RayZone1800 Test Setup





L=120mm



Main Product Properties



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Technical Property	
Frequency Spectrum	2400MHz—2500MHz
Characteristic Impedance	50 Ω
Max Peak Gain (dBi)	1.53 dBi
Max Efficiency (%)	32.82 %
Polarization	Linear Polarization
Directivity	Omnidirectional
Operation/Storage Temp	-10 ~ 85°C

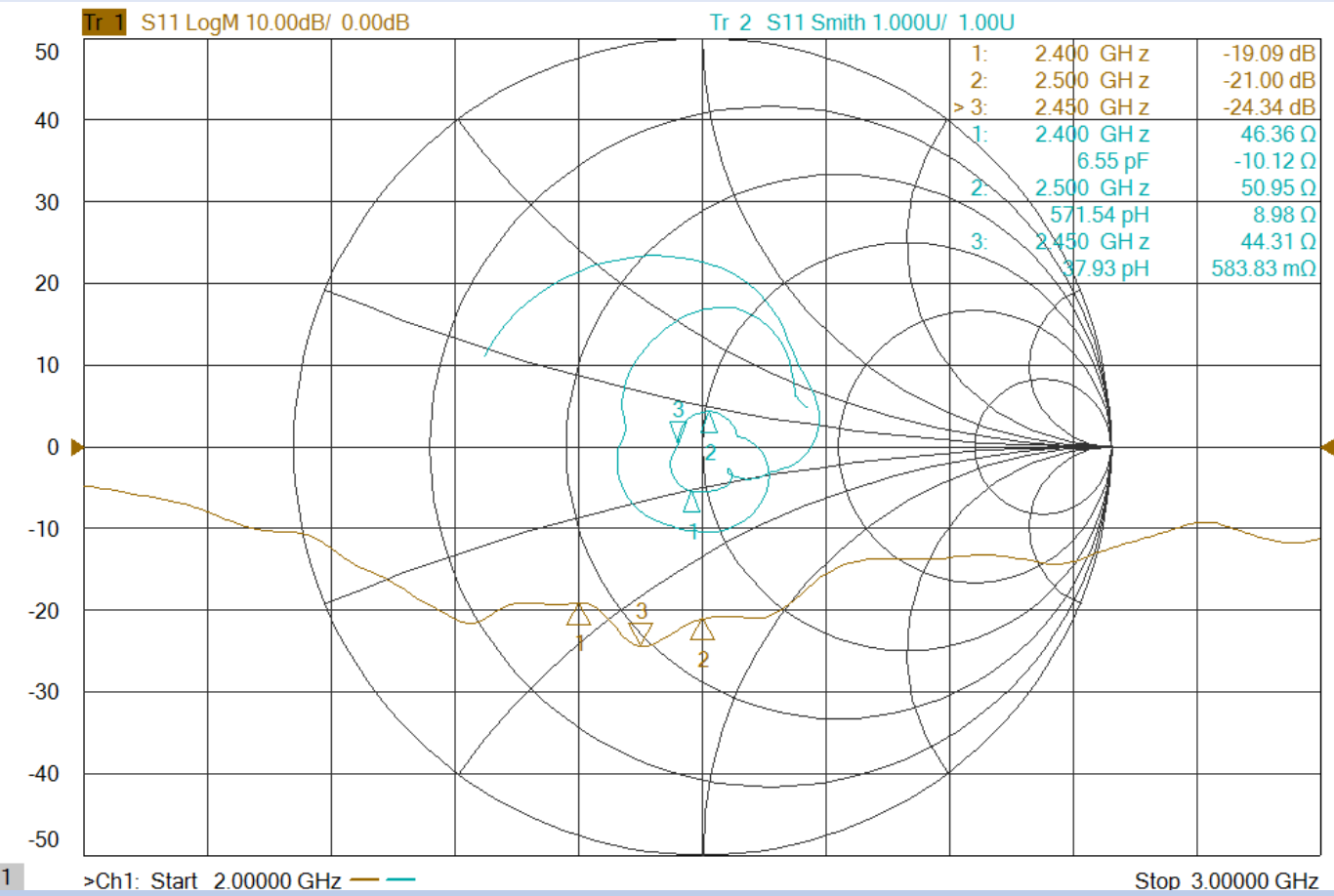
Performance Test(Efficiency & Gain)

Q1#2.4G			
Frequency_MHz	Efficiency_dB	Efficiency_%	Gain_dBi
2400	-5.37	29.04	1.46
2410	-5.07	31.09	1.44
2420	-4.84	32.82	1.53
2430	-5.36	29.13	1.36
2440	-5.84	26.04	1.24
2450	-6.17	24.14	1.13
2460	-6.2	23.98	0.88
2470	-6.03	24.94	0.34
2480	-6.45	22.63	-0.06
2490	-6.8	20.88	0.04
2500	-7.17	19.18	-0.08

S11 Plot & Smith Chart



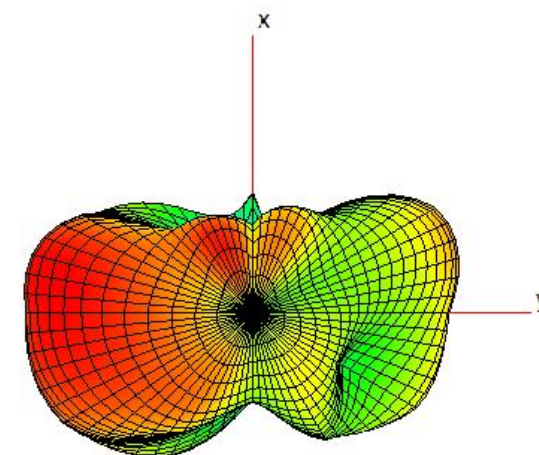
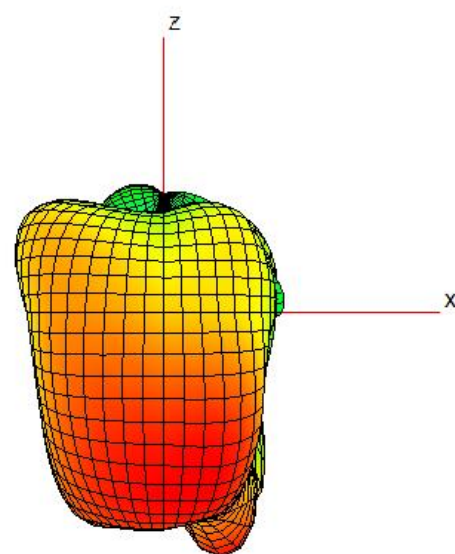
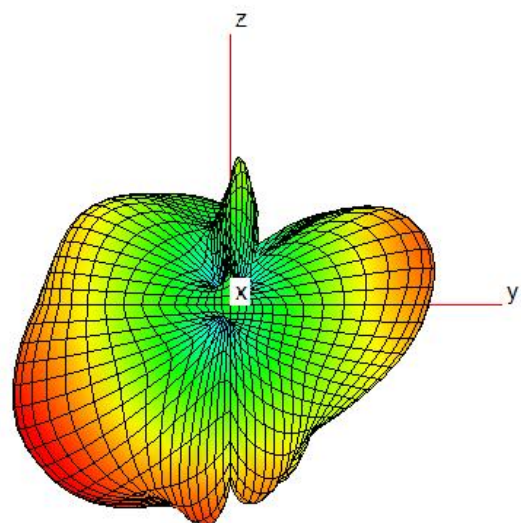
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Radiation pattern-3D



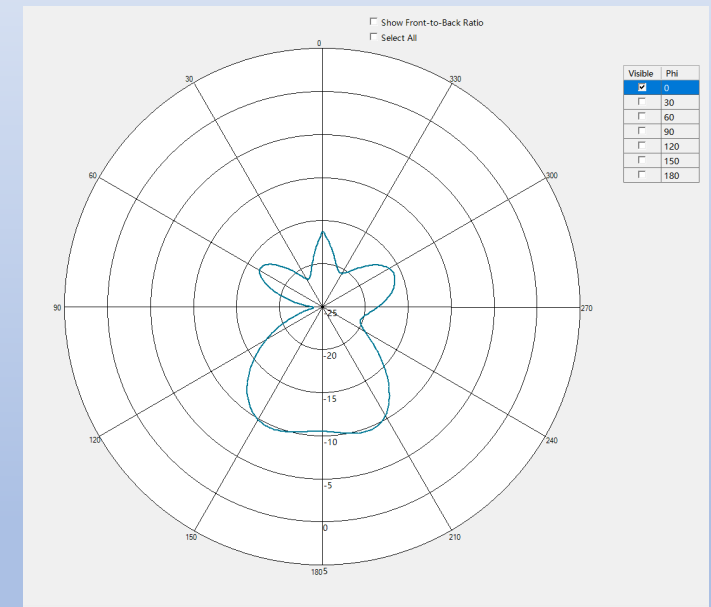
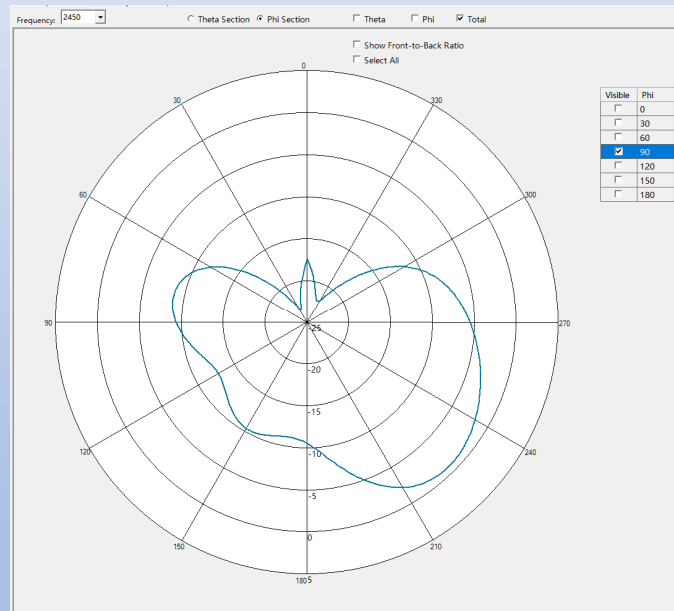
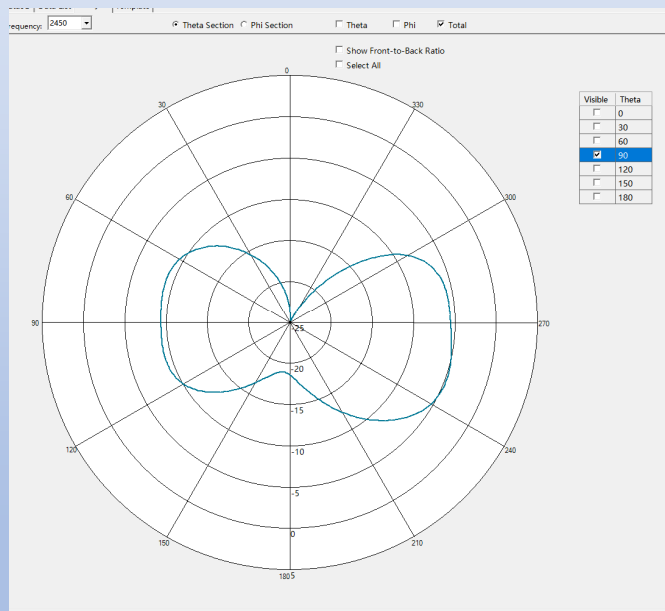
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Radiation pattern-2D



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5G

Welcome calls consultations, negotiations and guidance come!

Thank you