



SPECIFICATION

Shenzhen DreamLNK Technology Co., Ltd. 深圳市骏晔科技有限公司

Magnetic Base GSM Chuck Antenna

Product Specification

Client Name		Frequency Band	824-960/1710-2170MHz
Wire Name		Version	V1.0
Customer's Part Number		DreamLNK's Part Number	DL-X018-GSM
RF Designer	Jason Wang	RF Manager	Knight Ai
Structural Designer		Structural Design Manager	
Technical Director	Fagan Xu	Date	2023-11-25

Approved By:

Whether the product meets your requirements? ☐ Yes ☐ No

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1. Product Introduction

A Chuck Antenna is a commonly used antenna type in wireless communication devices, with the help of its magnetic suction cup, it can be easily attached to different surfaces, such as walls, windows, televisions, etc. The main principle of a Chuck Antenna is to use the metal coils on the antenna to achieve the reception and transmission of electromagnetic wave signals, thereby achieving wireless communication.

GSM antennas are suitable for the frequency range of 824-960/1710-2170MHz. Due to different wavelengths, they are generally used in combination to ensure network coverage, and meet your specific needs. This DL-X018-GSM Chuck antenna is compact in size, but features a stable performance and good standing wave ratio. It also has an excellent anti-vibration and anti-aging functions, which mainly used in smart meter devices, external car antennas, and other mobile wireless devices.

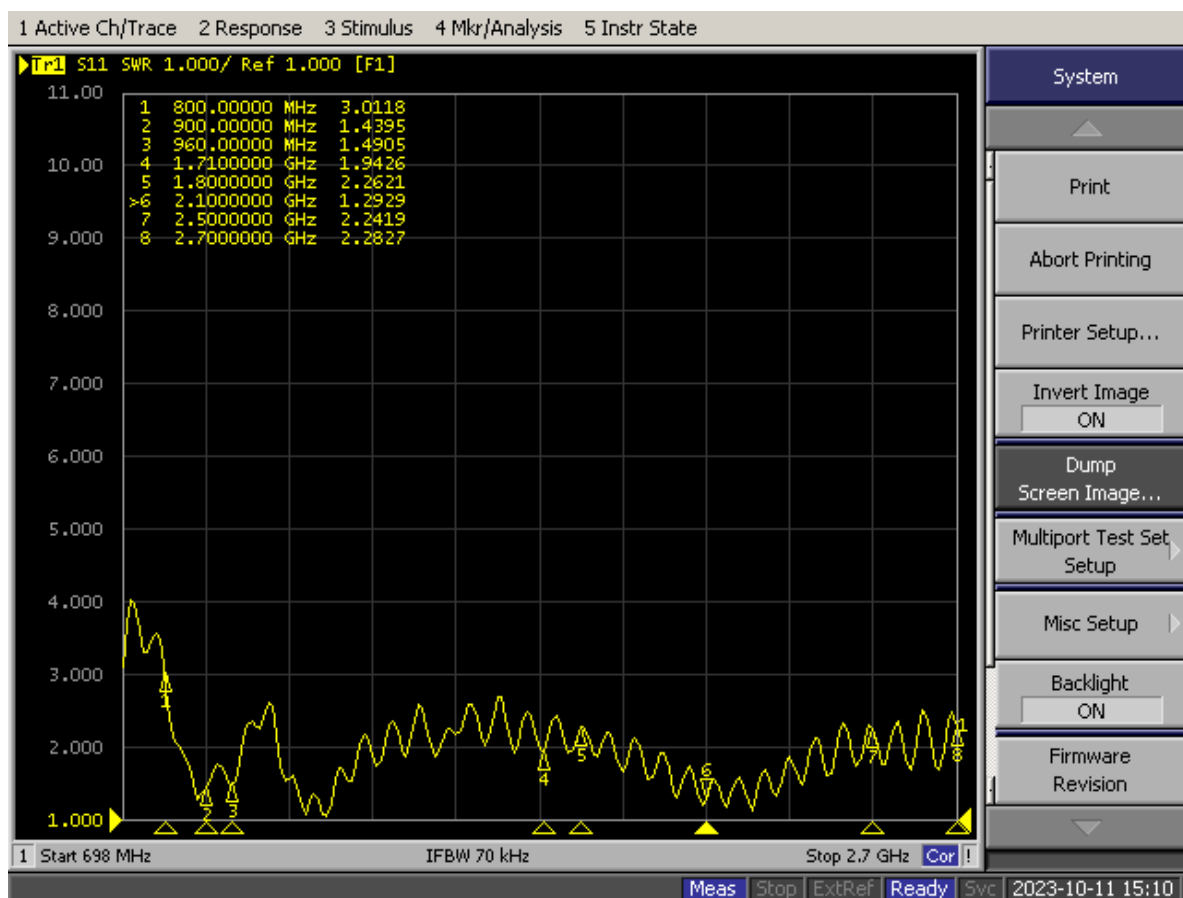
2. Parameters

Test parameters			
Product Name	Magnetic Base Chuck Antenna	Model No	DL-X018-GSM
Electrical Specifications			
Frequency Range	824-960/1710-2170MHz	Polarization	Linear, Vertical
Input Impedance	50 Ω	Radiation direction	Omni-directional
VSWR	≤ 2.0	Power Capacity	10W
Gain	3 dBi	Bandwidth	136/460Mhz
Mechanical Specifications			
Dimensions	D30*90mm	Color	Black
Connector Type	SMA-J (as picture shown)	Cable Length	200 $\pm$ 5cm
Shell Material	ABS	Cable Type	RG174
Working Temperature	-35 $^{\circ}$ C ~ 80 $^{\circ}$ C	Relative Humidity	40-85%

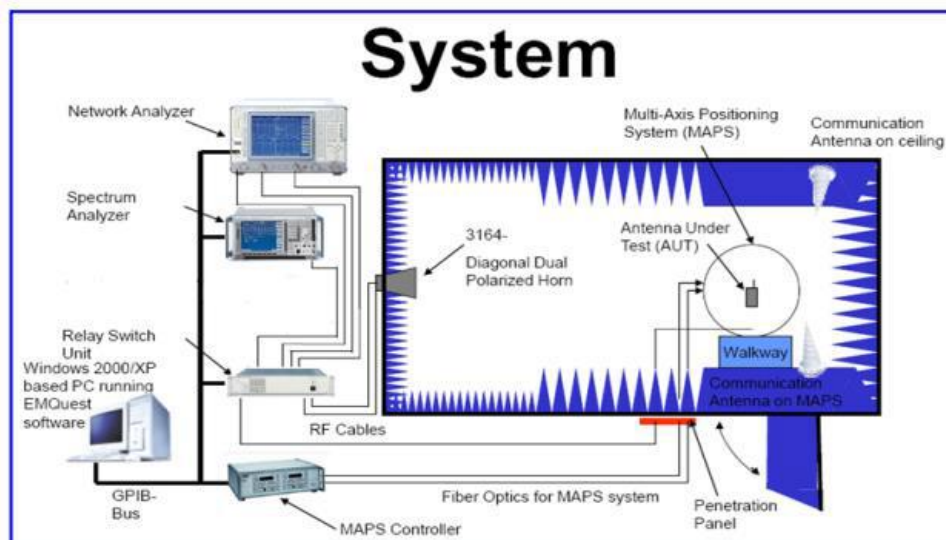
3. Product Photo



4. S11 Data (Test Report)



Testing Principle:



Testing Equipment:

Network Analyzers: Agilent 8753D 5071B

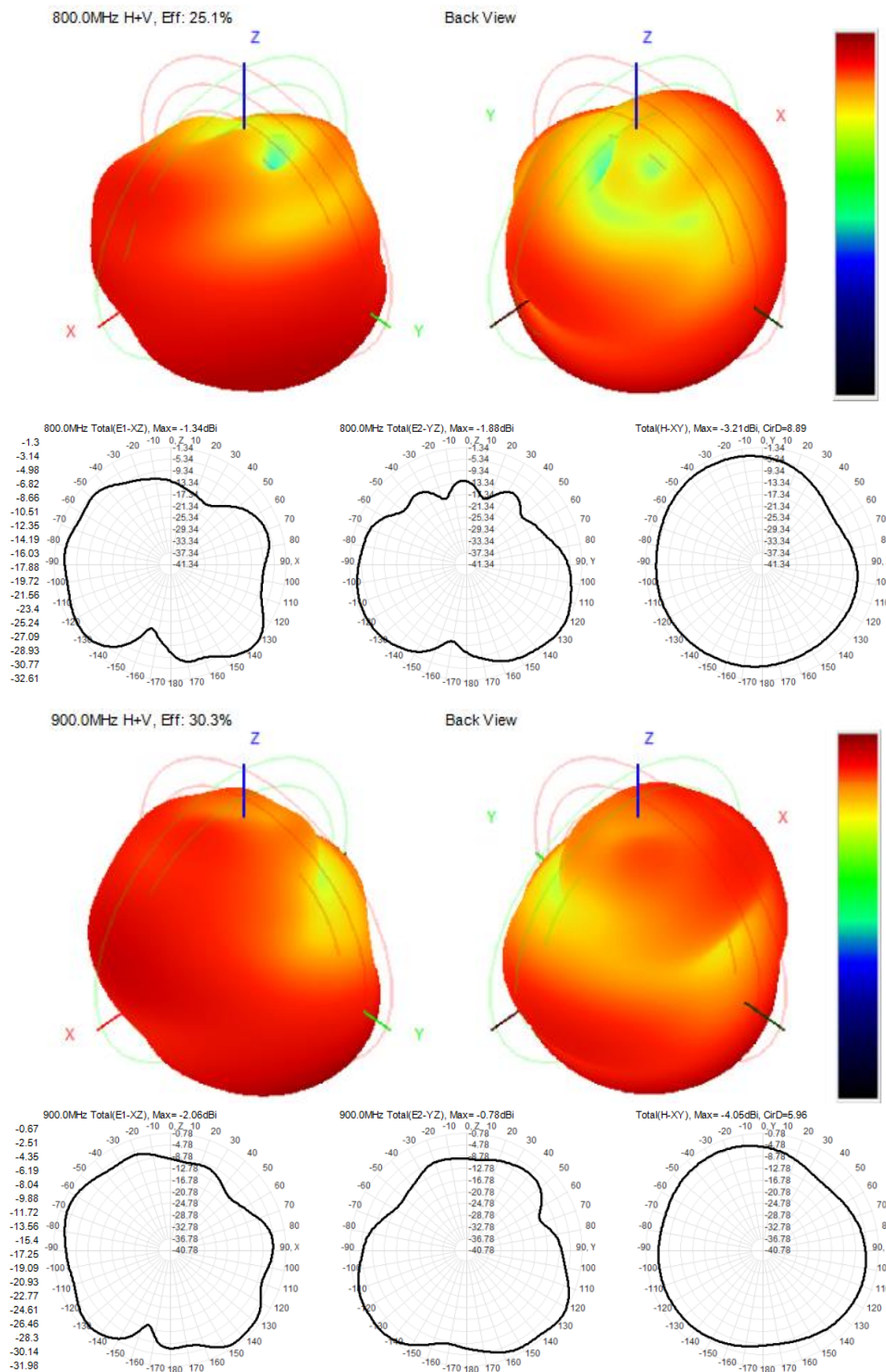
Communications Test Set: Agilent E5515C

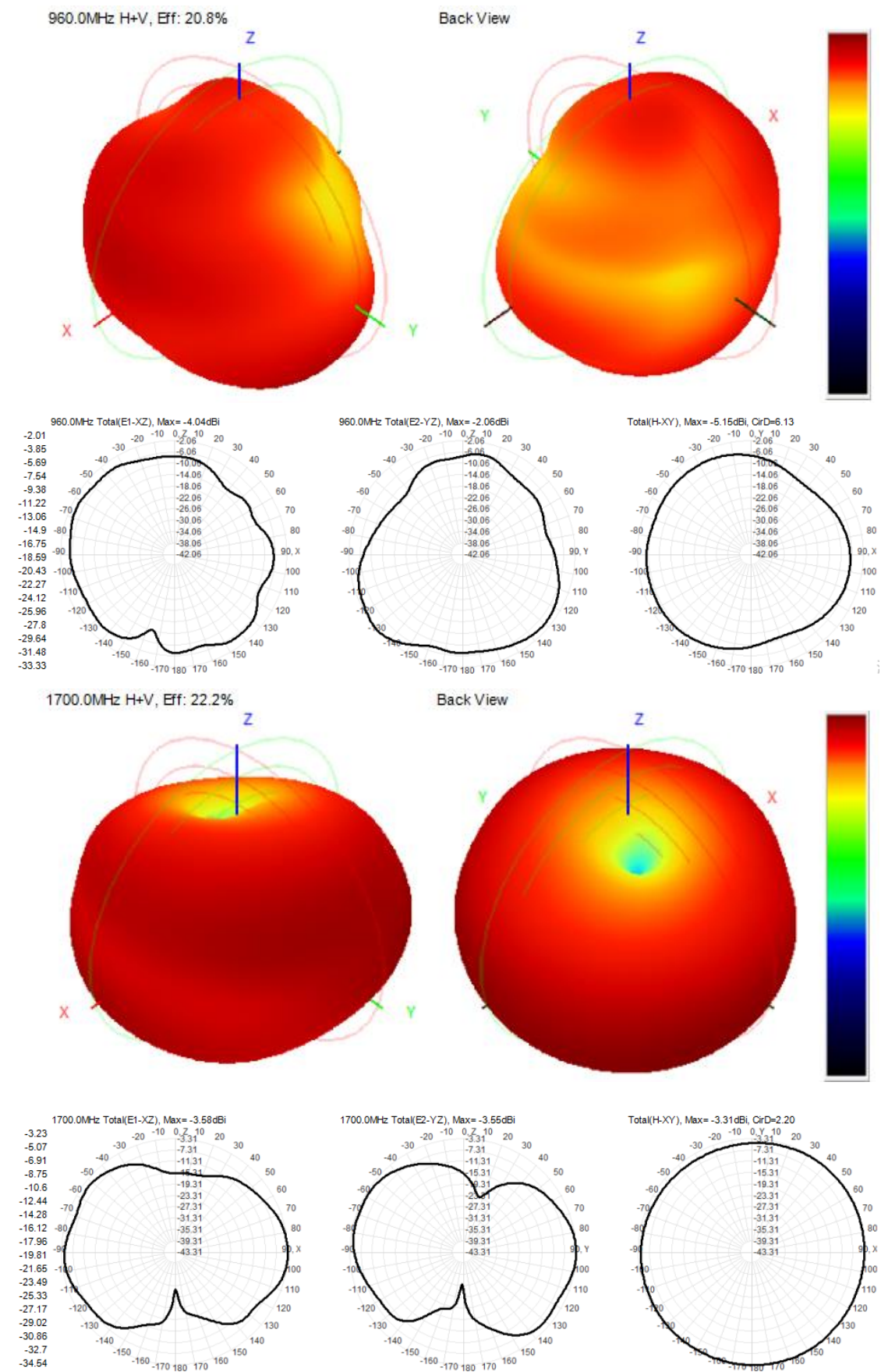
3D Chamber Test System

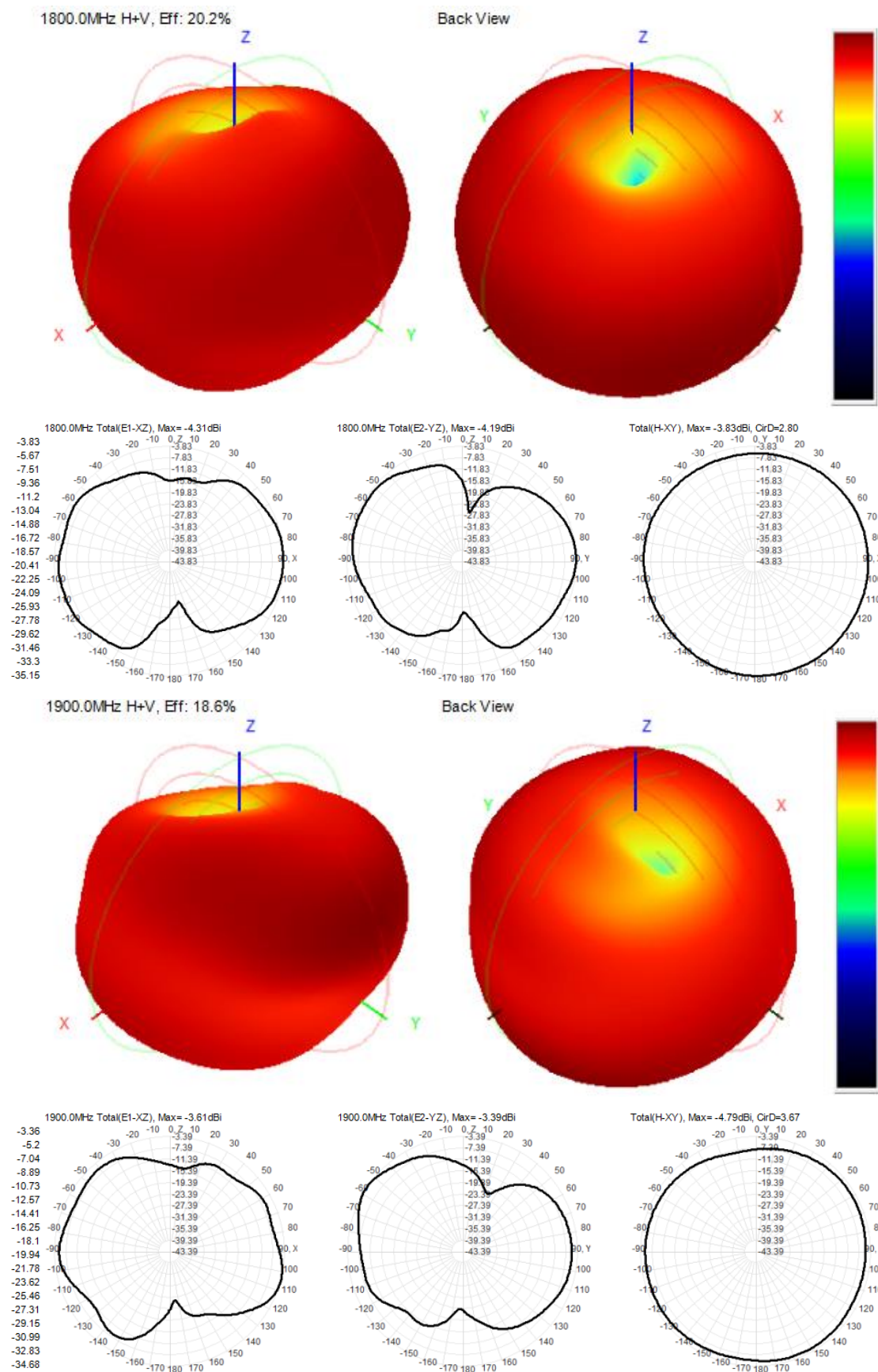
Antenna Efficiency & Gain

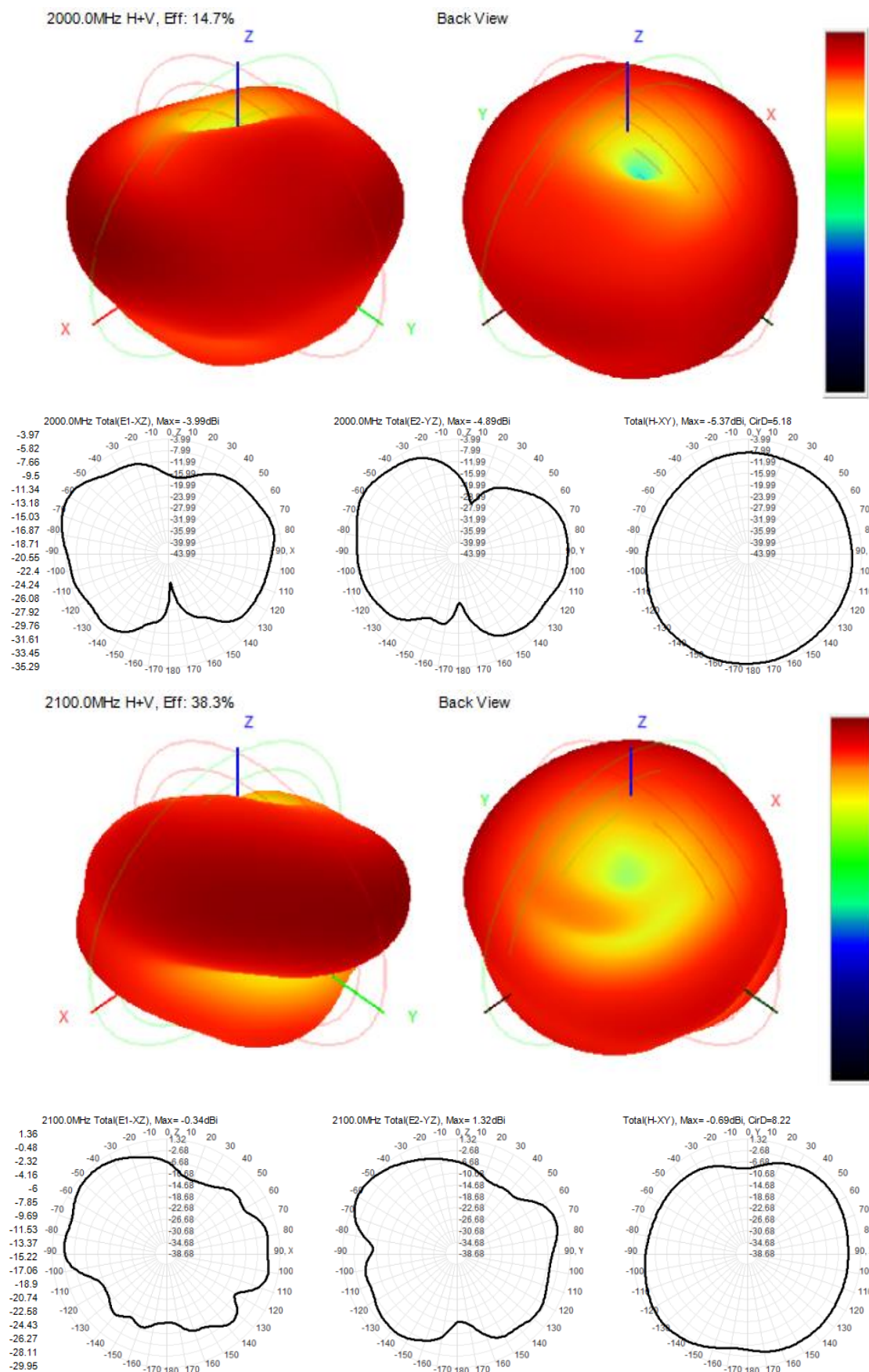
Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
800	25.10	-1.3
900	30.29	-0.67
960	20.78	-2.01
1700	22.24	-3.23
1800	20.19	-3.83
1900	18.57	-3.36
2000	14.66	-3.97
2100	38.27	1.36
2200	31.42	1.02

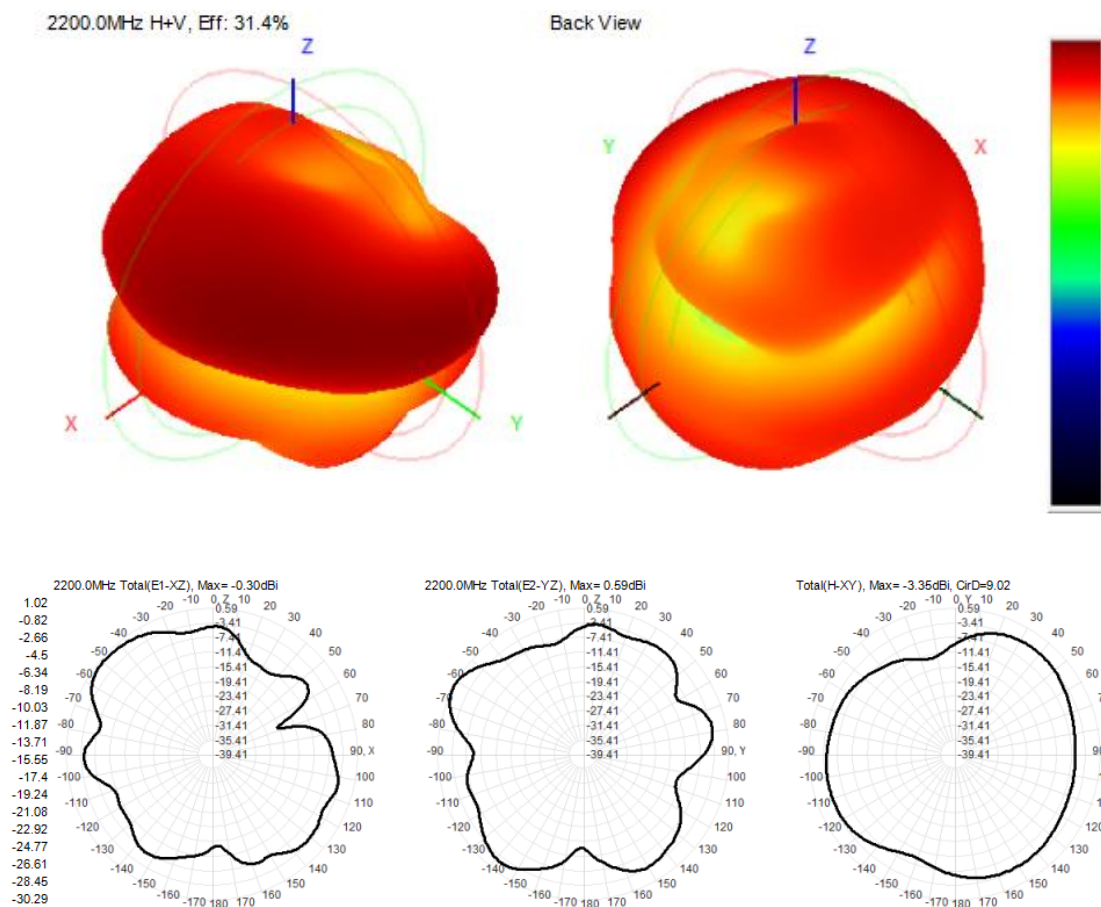
2D&3D Radiation Pattern



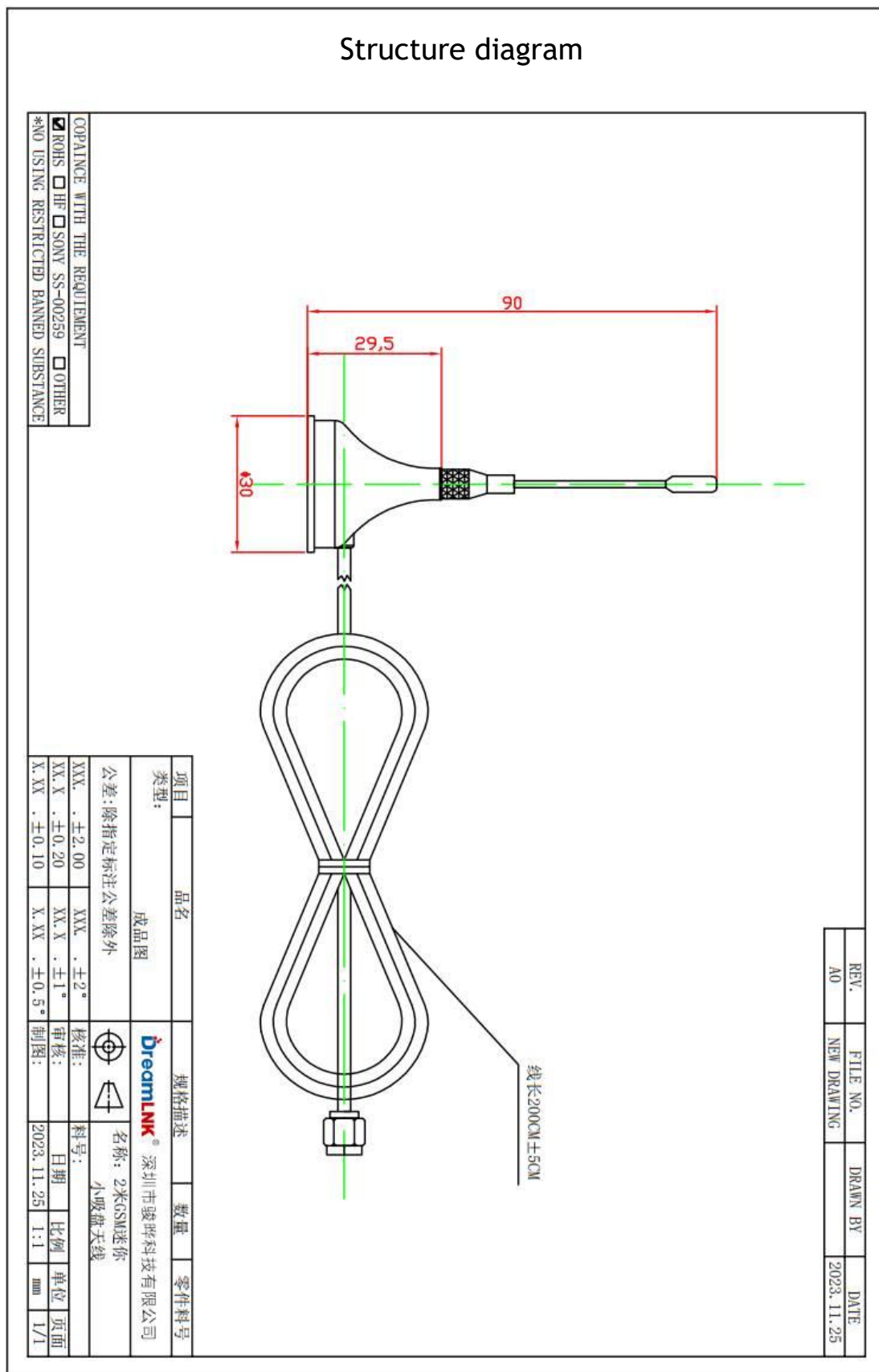








5. Structure diagram



6. Environmental reliability experiment report

Item	Test condition	Specification
Storage environment	Tested temperature, humidity and air pressure as following without specifying: 1. The temperature is -30 °C ~ + 80 °C 2. Relative humidity is 45% -85% 3. The air pressure is 86kpa-106kpa	The electrical mechanical performance is normal
High and low temperature test	Perform 5 cycles between 70 °C and 40 °C, then check the appearance quality, under normal conditions 1-2H	The size should meet the requirements for mechanical and electrical performance
Resistant to constant heat and humidity	Test Relative humidity: 95 ± 3%, Test temperature: 40 °C. After continuous 2H running, take out the sample, and measure its electrical properties within 5 minutes, put the sample in a normal condition for another 1-2H, check the appearance quality	The size should meet the standard, and meet for mechanical and electrical performance
Vibration test	Vibration frequency range 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude: 50.0M / S, frequency of sweeping cycle: 30 times	Normal electrical and mechanical performance
Drop test	1M high-altitude free fall 3 times, in the direction of mutually perpendicular axes	Normal electrical and mechanical performance

7. Contact us

Shenzhen DreamLnk Technology Co., Ltd

★ Data collection, Smart home, Internet of Things applications, Wireless remote control technology, Remote active RFID, Antennas ★

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