

Antenna Data Sheet

Customer Name: 博乐

Project Name: L5089

Product Spec: L5089 天线: 长 27.34 宽 10.9MM

Customer P/N:

REV: V1.0

Date: 2025-10.31

drawing	check	 approved
TanQinHao	WuXi Chun	JiangZhenHua

Customer Approve

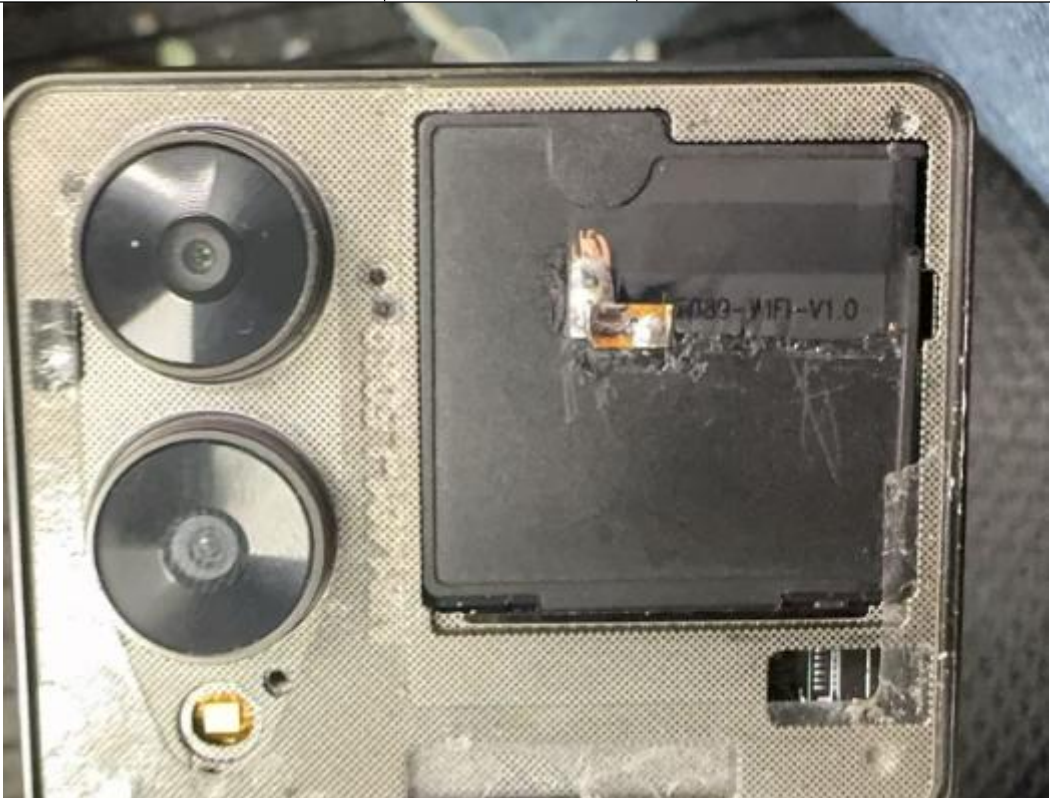
check	approved	approval

catalogue

Index

一、Cover	-----1
二、Index	-----2
三、Electrical Performance Index	-----3
四、Test report	-----4-5
五、Testing Equipment&Principle	-----6
六、Product Drawing	-----7
七、Reliability test report	-----8
八、Code for product packaging	-----9

3. Electrical Performance Index

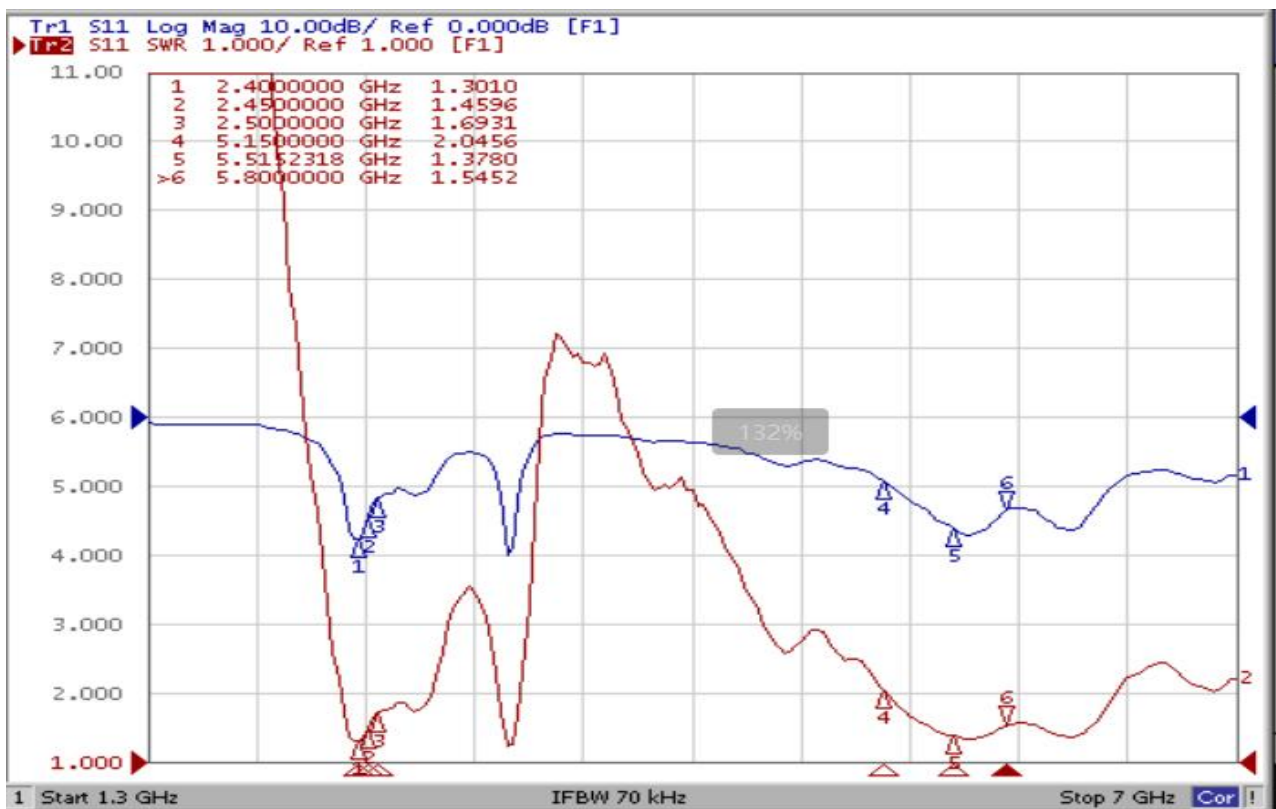
Electrical Performance Specifications		Electrical Specifications	
Frequency range: 800-960 1700-2700MHz		800-960 1700-2700MHz	
voltage standing-wave ratio	≤ 2.0	VSWR	≤ 2.0
gain	$\leq 1.2\text{DBI}$	GAIN	$\leq 1.2\text{DBI}$
radiation mode	omnidirectional	Radiation	OMNI
Polarization method	linear polarization	Polarizatin	LINEAR
input impedance	50 Ω	Input Impedance	50 Ω
Mechanical Performance Indicators		Mechanical Specifications	
Interface format	shrapnel	Input connector	shrapnel
Antenna material	FPC	Antenna materia	FPC
working temperature	-30°C~+80°C	Working Temperature	-30°C~+80°C
Working humidity	40~85%	Working Humidity	40~85%
picture of real products			

4、Test report

1. OTA active data:

Item	Measurement	Band	Channel	Total
1	TRP	WIFI_B (11M)	1	9.73
2	TRP	WIFI_B (11M)	6	11.35
3	TRP	WIFI_B (11M)	11	11.44
4	TIS(EIRP)	WIFI_B (11M)	11	-78.43
5	TRP	WIFI_A (54M)	36	7.28
6	TRP	WIFI_A (54M)	64	6.86
7	TRP	WIFI_A (54M)	165	6.63
8	TIS(EIRP)	WIFI_A (54M)	165	-70.83

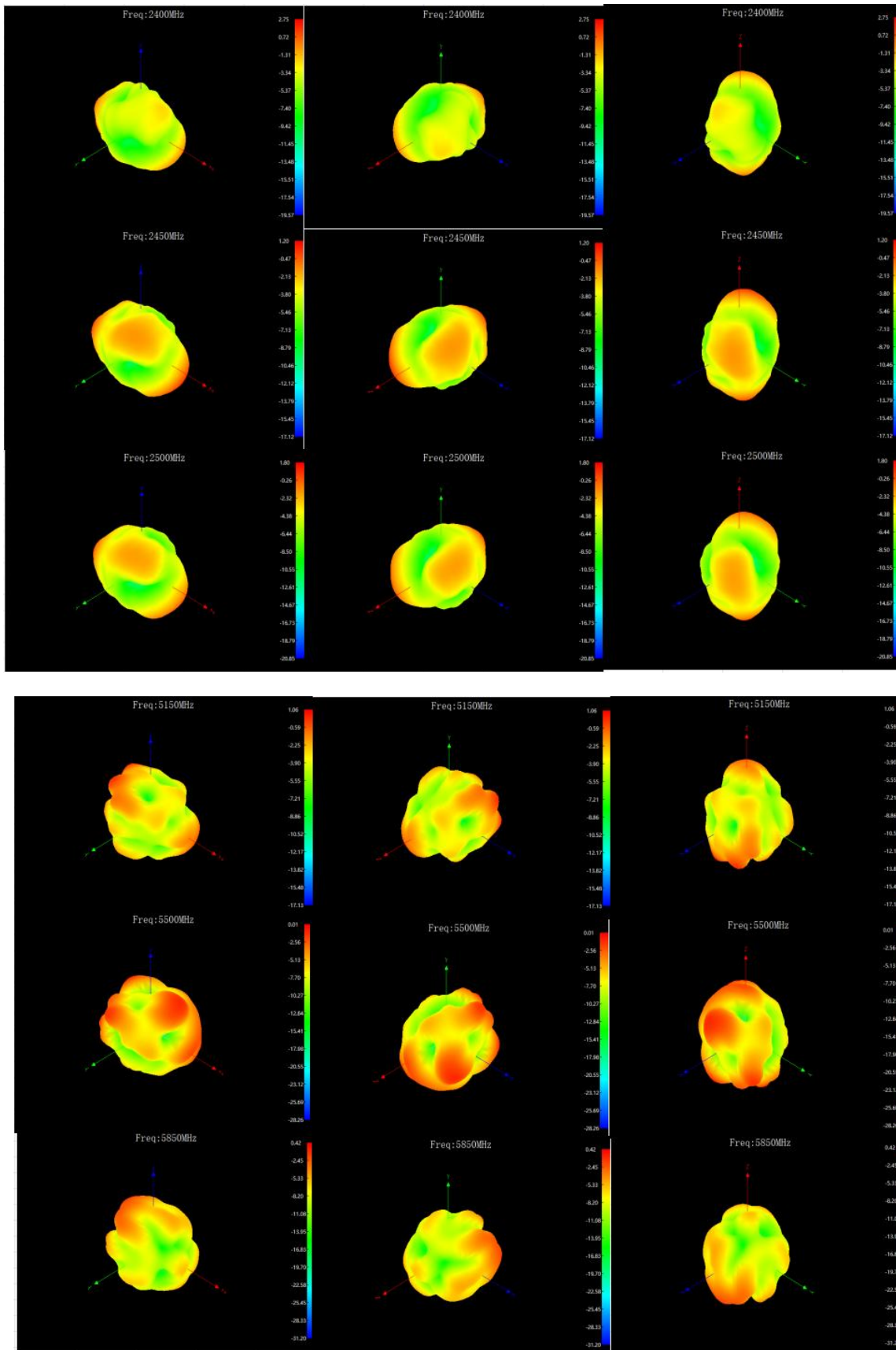
1.2standing wave pattern



1.3 Passive data

Frequency/Mhz	Efficiency / %	MaxGain/dBi
2400	31.22	1.75
2410	29.56	1.15
2420	29.19	2.65
2430	30.11	1.86
2440	30.88	2.7
2450	36.31	1.2
2460	31.15	1.07
2470	32.96	1.33
2480	29.14	1.28
2490	33.88	1.97
2500	31.77	1.8
5150	30.69	1.06
5200	32.43	1.23
5250	31.7	0.62
5300	31.55	0.47
5350	31.55	0.83
5400	29.72	0.74
5450	27.67	0.06
5500	27.54	0.01
5550	27.61	0.71
5600	22.13	-0.65
5650	25.64	0.49
5700	26.44	0.82
5750	26.98	0.44
5800	25.41	0.41
5850	27.54	0.42

1.4 3D reverse direction chart



5. Testing Equipment and Principles

1. testing facility :

Network analyzers:

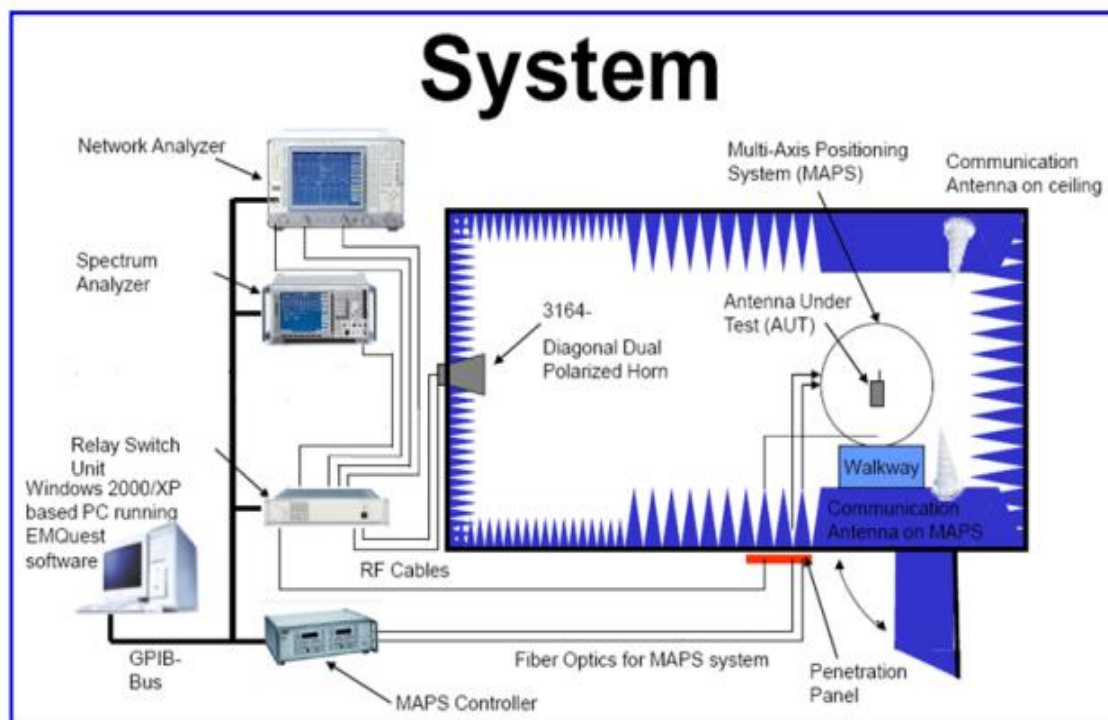
Agilent 8753D 5071B

Communications Test Set: Comprehensive Test Instrument

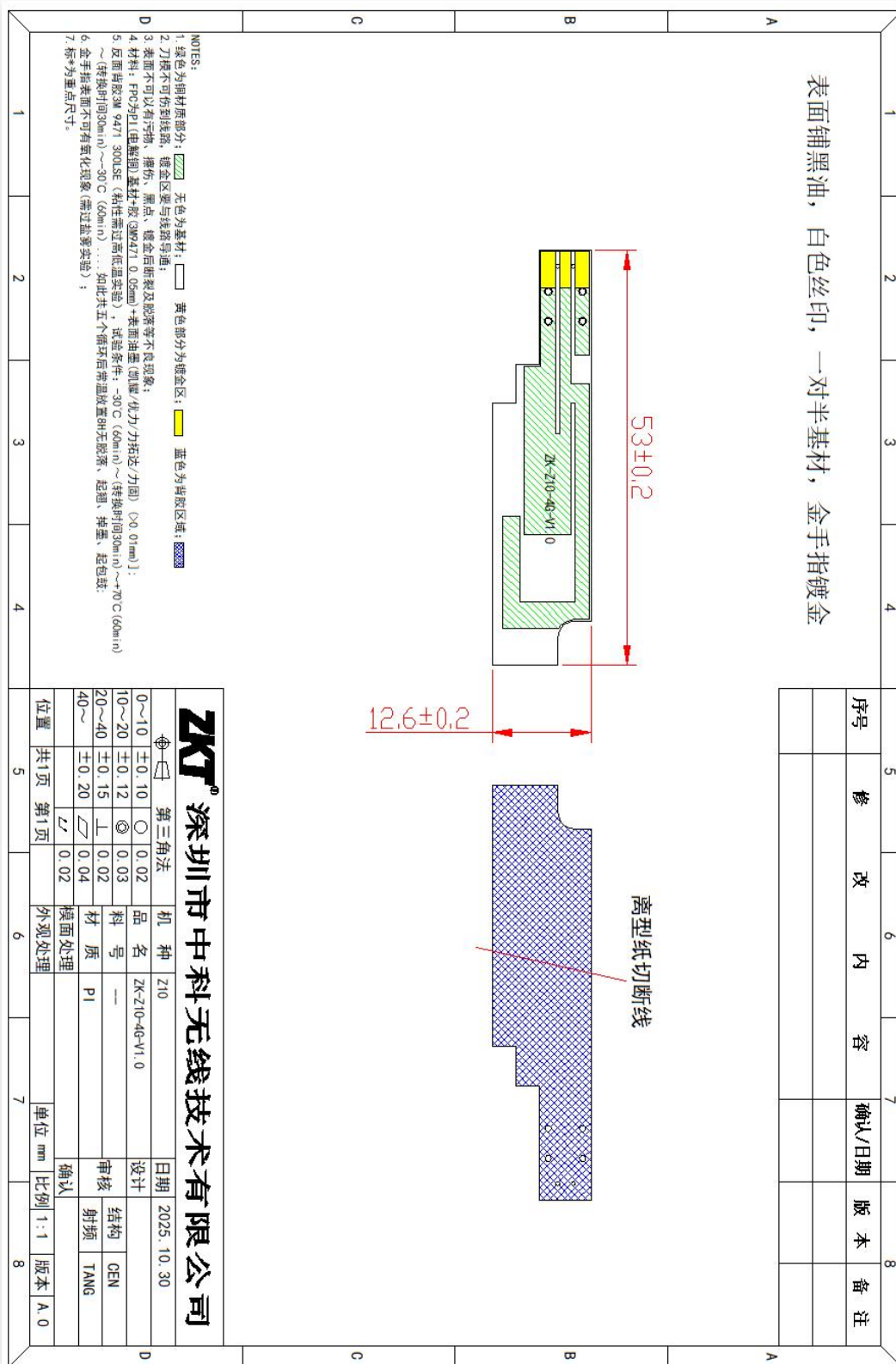
Agilent E5515C

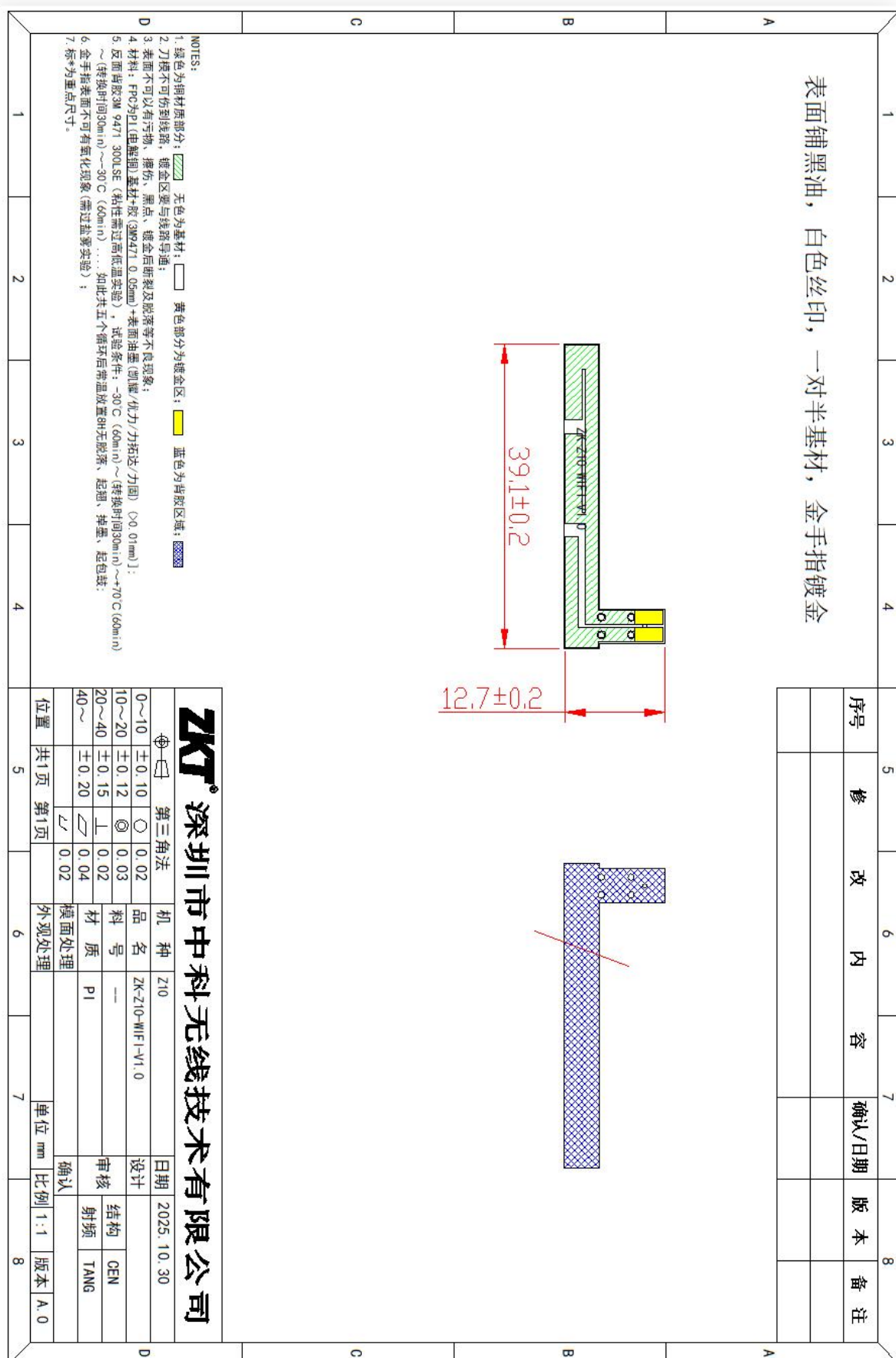
3D Chamber Test System:

2. Test principle:



6. Product Drawing





7. Reliability test report

test item		test method	ask	bear fruit
C1	V.S.W.R. Electric Standing Wave Ratio	Design network analyzer parameters for testing	Meets the test object specification	pass
M1	antenna gain	Designing Antenna Darkroom Parameters for Testing	Meets the test object specification	pass
M2	Vibration	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Frequency: 20 to 80 Hz across 3 directions; 2 hours for each direction.	1. No Visual Damage 2. Frequency Tol.≤5% No obvious appearance defects; frequency deviation ≤5%	pass
M6	Random Drop	GB/T2423.8-1995 Single: Height: 1.0 Meter; 3 directions; 1 time per direction. A single antenna with 1-meter height, providing 3 directional measurements.	1. No parts separated、 fracture 2. Frequency Tol.≤5% No product detachment or breakage; frequency deviation ≤5%	pass
E3	Dimension	Check dimensions, color, material, packaging, and surface treatment.	Directive DUT specification Meets the test object specification	pass
E4	Temperature and Humidity Chamber	GB/T 2423.3-2006 Temperature: 80°C for 12 hours; -40°C for 12 hours; Relative humidity: ≥ 90%; Time: 24 hours. The test involves 12 hours at 80°C followed by 12 hours at -40°C, with humidity maintained at ≥ 90% for 24 hours.	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% After 2 hours of recovery, no significant visual defects; frequency deviation ≤5%	pass
E5	Thermal Shock	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80°C (30 minutes); Cycles: 24 -40°C for 30 minutes followed by 80°C for 30 minutes constitutes one cycle; total of 24 cycles	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% After 2 hours of recovery, no significant visual defects; frequency deviation ≤5%	pass
R1	Aging test	GB /T 2423.2 - 2008 Temp: 80°C; Time: 24 hours Test at 80°C for 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% No obvious visual defects; frequency deviation ≤5%	pass
M1	RoHS	With Reference to IEC 62321:2008 with flow chart Refer to the IEC 62321 testing procedure	Directive RoHS 2015/863/EU Complies with RoHS 2015/863/EU standard	pass

8. 产品包装规范 Code for product packaging

Product Name/Size

1. Label Requirements

Purchase order number	*****
material code	*****
Product Name and Specifications	*****
Quantity/Unit	*****
remarks	*****

Purchase order number	*****
material code	*****
Product Name and Specifications	*****
Quantity/Unit	*****
remarks	*****

II. Packing Requirements

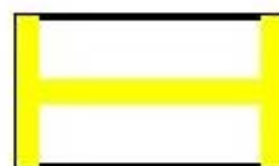
job description :

1. Inner packaging:

50 PCS per small bag

**2. Outer packaging:**

Determine quantity per box based on actual quantity

**纸箱**

matters need attention :

1. Whether to add partition board and perlite;
2. Labeling application, such as ROHS;

