



Gaoke Ant Co., Ltd.

Specification For Approval

Customer: Skypine Electronics (ShenZhen) Co., Ltd

Supplier: Gaoke Ant co., Ltd.

Customer P/N: 3-W201-0019-02-01

Production Name: 2.4G &5.8G built-in antenna

Production Number: GKZS-2.4&5.8G-AC358-RF1.13I-50

Supplier Signature		
Engineer	Checked by	Approved by
Liu Nanhua	Xie Qianju	Pan Xiwang
2023/11/2	2023/11/2	2023/11/2/

Customer Signature		
Engineer	Checked by	Approved by

Note: After the customer confirms and stamps, please return this letter of recognition to our company.

Guangzhou Gaoke Zhongshi Communication Technology Co., LTD

Address: No.22, Guangcong South Road, Shengang, Conghua District, Guangzhou City, Guangdong Province, China

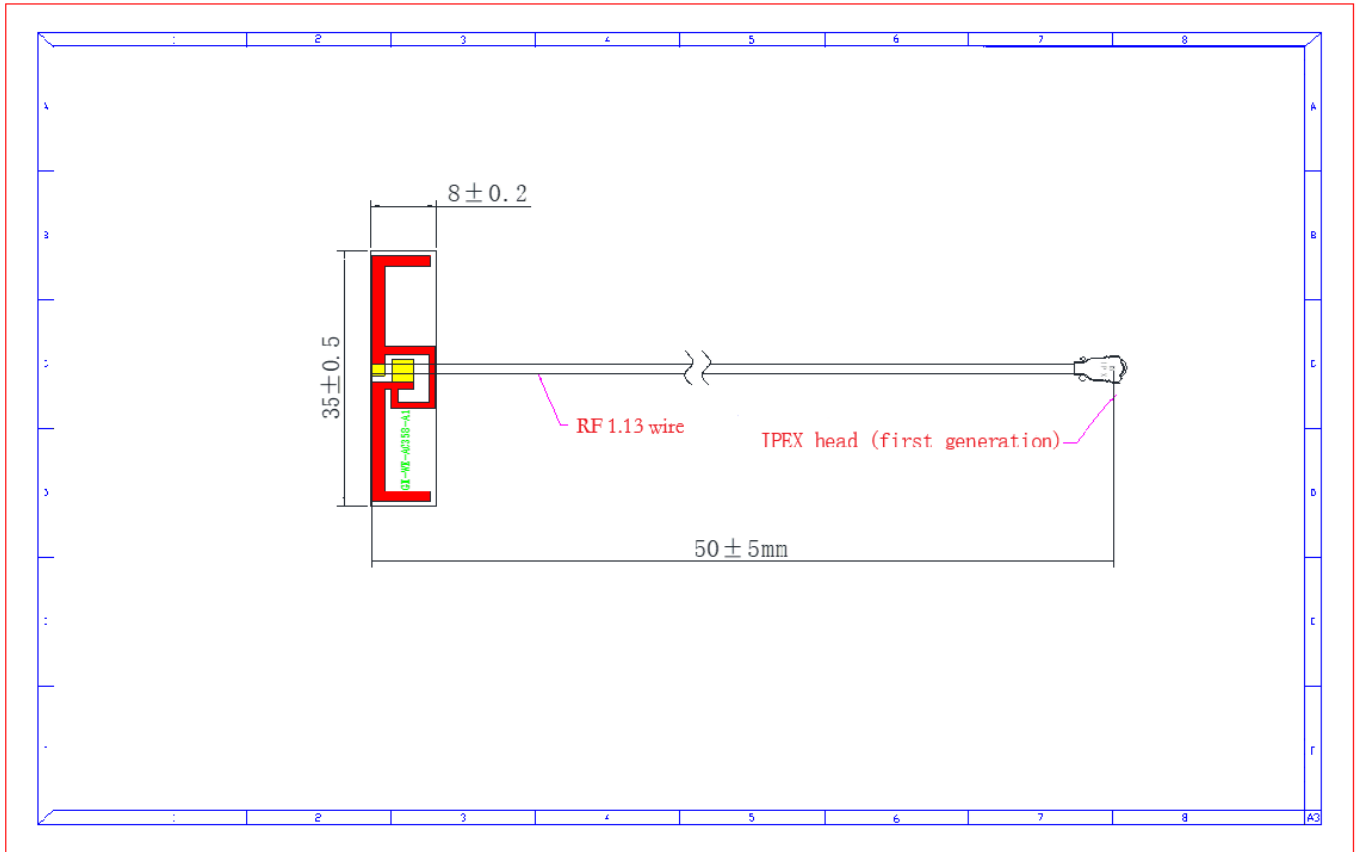
Tel: 020-87080630/87080639/87 080632

Fax: 020-87080731

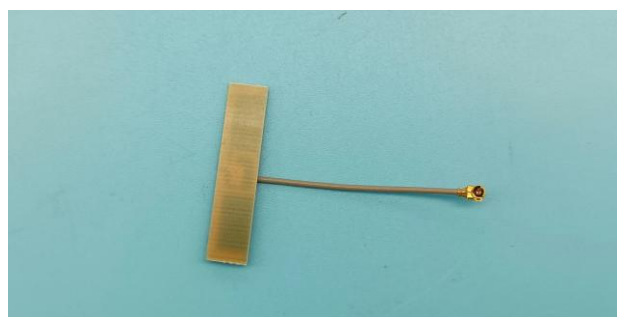
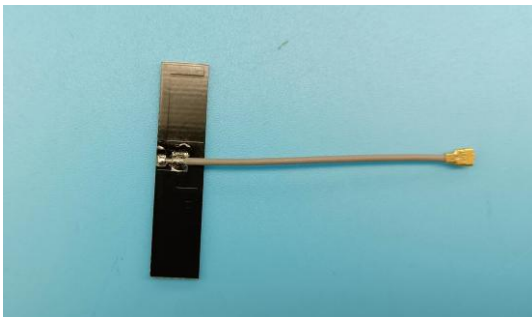
<http://www.gkzs.com.cn>

2 of

1、Product structure drawing (mm)



2、Product physical picture



3、Antenna technical parameters

Design Specifications	Typical
Antenna type	PCB built-in antenna
Working frequency (working Frequency)	2400-2500MHz、5150-5850MHz
Gain	0.19dBi (average) 、2.35dBi (peak) @2400-2500MHz 3.11dBi (average) 、4.27dBi (peak) @5150-5850MHz
Antenna efficiency	≥30%
VSWR	≤5.5@2400-2500MHz ≤2.5@5150-5850MHz
Polarization	Linear polarization
Radiation pattern	Omnidirectional
impedance	50 Ω
Power handling	33dBm
Interface	IPEX / RF1.13 wire (gray) 50mm long
Overall dimensions	35x8mm
Weight	0.8g
Operatin Temp	-40~80℃
Storing Temp	-40~80℃

4、Specifications of RF 1.13 wire

1. SCOPE:

This specification covers FEP insulated High-Frequency coaxial cable for internal wiring of electronic equipment.

[UL STYLE 1354 80°C /30V]

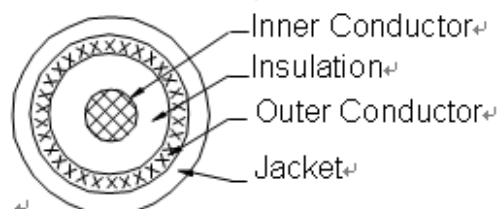
USE:Internal wiring of Class 2 Circuits of Electronic Equipment.

2. Construction :

Item	Unit	Spec. Value
Inner Conductor	Material	Silver plated copper
	construction	No./mm
	Dia.(approx)	mm
Insulation	Material	FEP
	Nom. Thickness	mm
	Dia.(approx)	mm
	Color	Natural
Outer Conductor	Type	Braid
	Material	Silver plated copper
	Coverage	%
	Dia.(approx)	mm
Jacket	Material	FEP
	Nom. Thickness	mm
	Color	Gray
	Dia.(approx)	mm

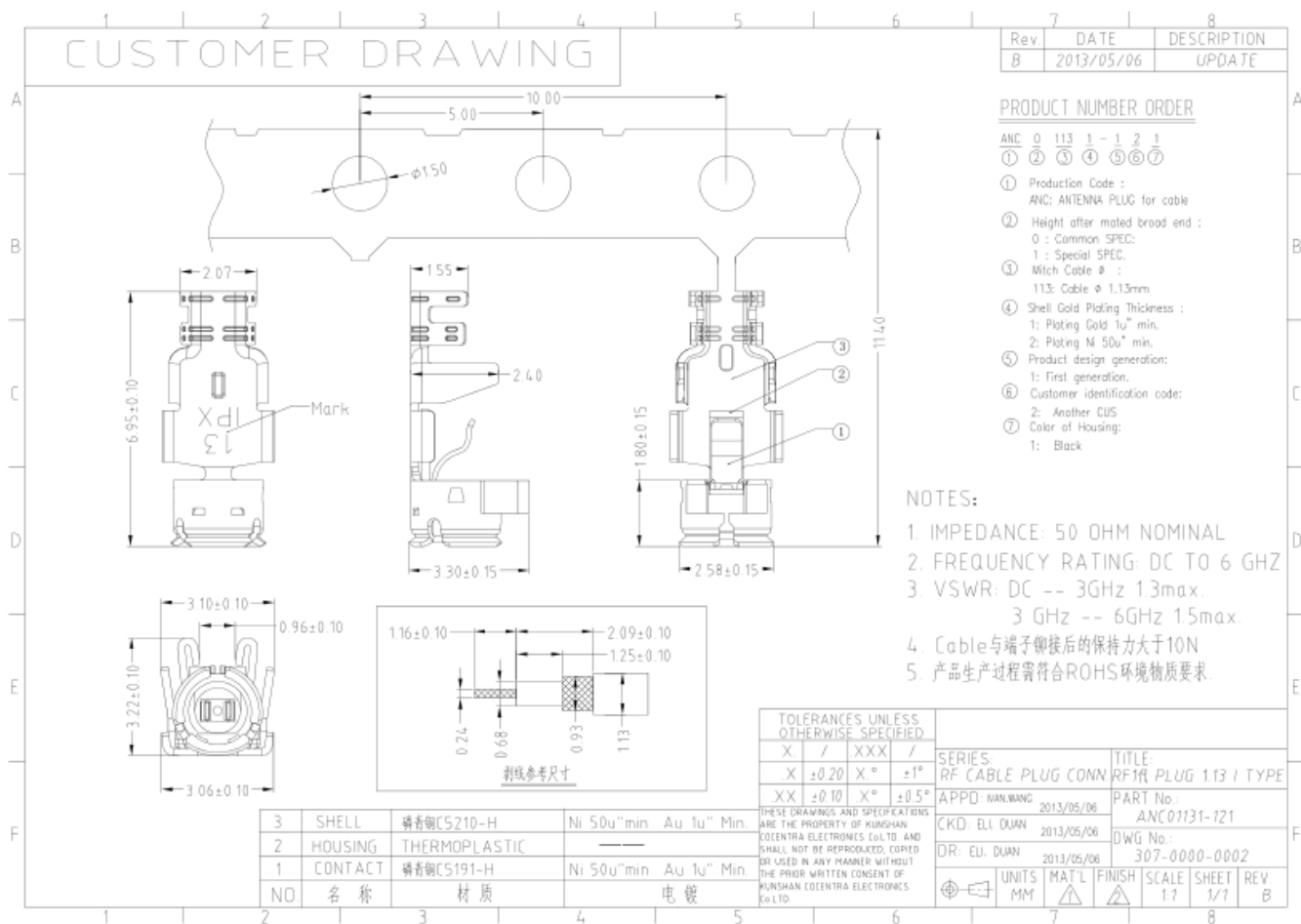
3. Characteristics :

Test Item	Unit	Specified Value	Note
Appearance	-	Faultless in visible	-
Temperature rating	°C	150	-
Voltage rating	V	250	-
Inner conductor resistance (at 20°C)	Ω /km	Max.597	At 20°C
Insulation resistance 1> (at 20°C)	MΩ ·km	Min.1500	At 20°C
Dielectric strength	-	Dielectric core : No breakdown at AC1.5KV for 0.15sec.	Spark test
	-	Jacket : No breakdown at AC 1.5KV for 0.15sec.	Spark test
	-	No breakdown at AC 500V for 1min	Outer conductor to inner conductor
Capacitance	pF/m	Nom.98	At 1KHz
Characteristic impedance (at D-TDR)	Ω	50±2	TDR method
Attenuation	dB/m	2.0	1.0GHz
		2.9	2.0GHz
		3.6	3.0GHz
		4.2	4.0GHz
		4.7	5.0GHz
		5.2	6.0GHz



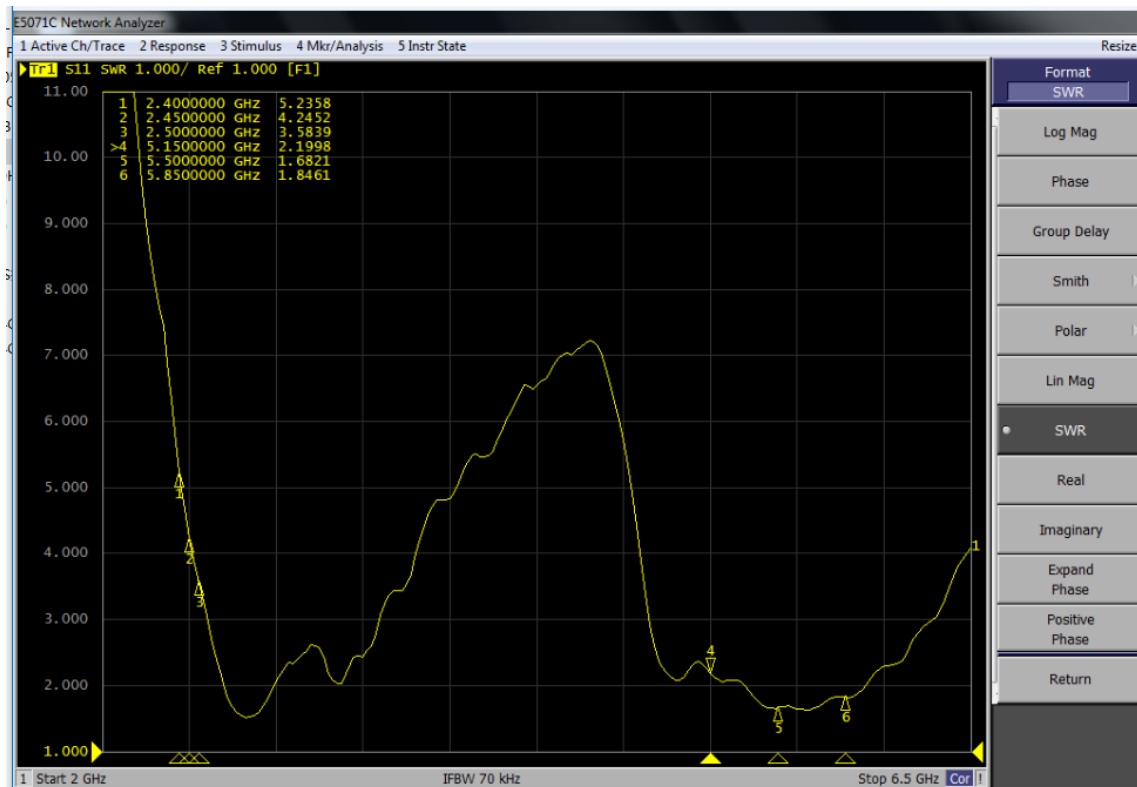
Cross-section of cable

5、Specification of IPEX head (first generation)

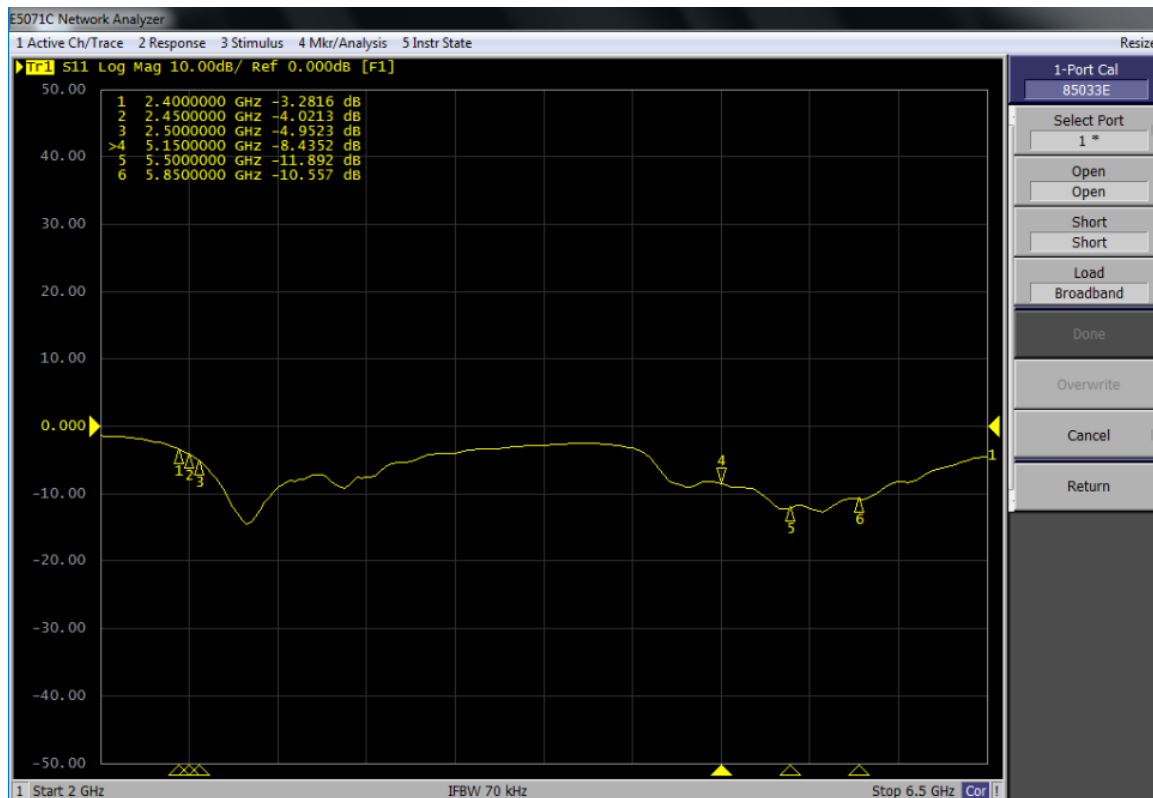


6、Antenna performance test

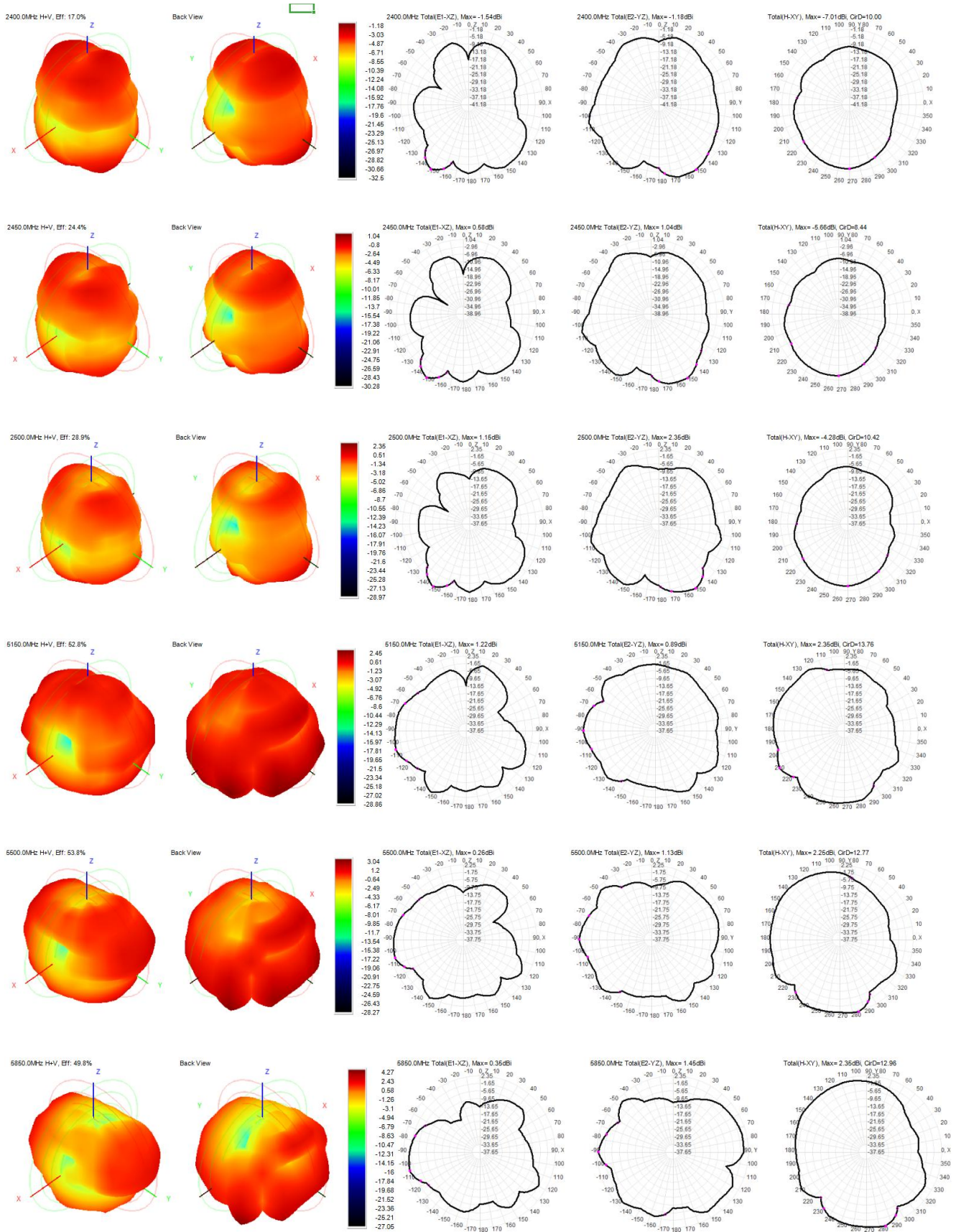
1. VSWR



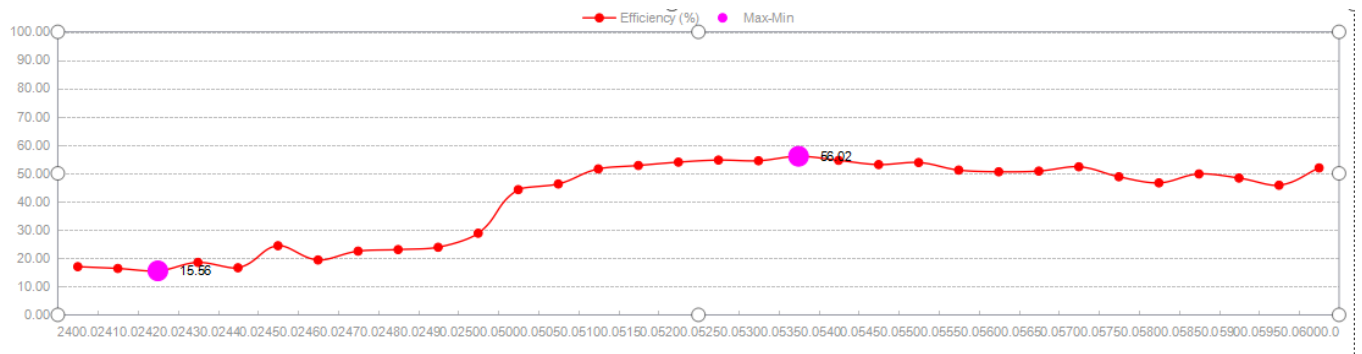
2. Return loss



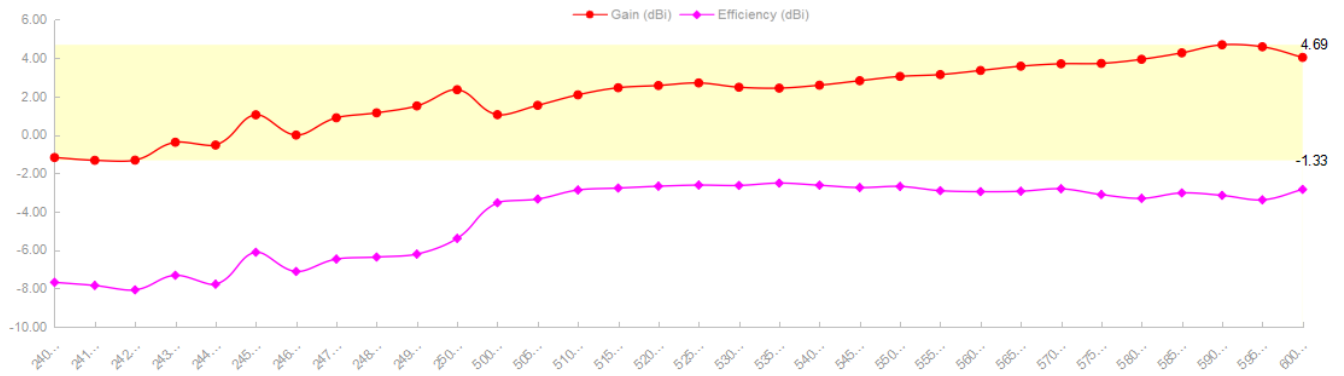
3. Radiation pattern



4. Efficiency Curve Chart



5. Gain curve chart



Salt spray empirical report

Product name	IPEX (Generation 1)	Number of experiments	3PCS	
Experimental requirements	Concentration of sodium chloride solution	5% (m ²)	Intake pressure (once)	2 kg/cm ²
	PH price	6.5-7.2	Exhaust pressure (secondary)	1kg/cm ²
	Pressure tank temperature	47°C±1°C	Saline bucket temperature	35°C±1°C
	Laboratory temperature	35°C±1°C	Laboratory relative humidity	75-85%
	Experimental time requirements	(48) H, no oxidation (no yellowing, green, red rust, white rust, etc.)		
Description of experimental equipment				
start time	2023. 10. 30	terminal time	2023. 11. 1	
Experimental content and record				
Experiment Duration	Description of the actual situation		Note	
☒ 24H ☐ 28H	No oxidation (no yellowing, green, red rust, white rust, etc.)		surface	
☐ 40H ☒ 48H	No oxidation (no yellowing, green, red rust, white rust, etc.)		surface	
☐ 56H ☐ 72H				
Judgment	☒ qualified ☐ Unqualified ☐ Special selection ☐ Downgraded use:			
	Lab technician/date: Xie Wenting 2023. 11. 1		Review/date:: Quan Jun 2023. 11. 1	
Remarks				