

Signal Plus Technology co., Ltd.

SPECIFICATION FOR APPROVAL

DATE: 2025.07.23

REV.: B

CUSTOMER: Shanghai Huace Navigation Technology Co., Ltd.

CUSTOMER P/N:

PART NAME: 410-470MHz Soft Plastic Antenna with RP SMA Male

SUPPLIER P/N: 6068F00127

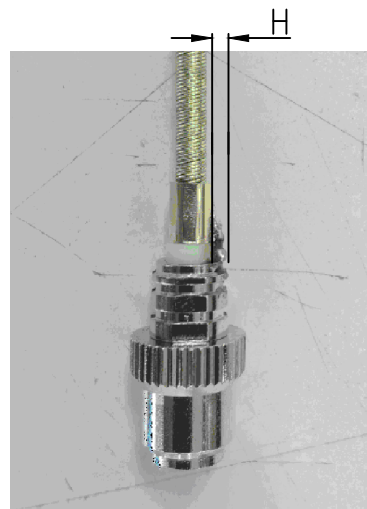
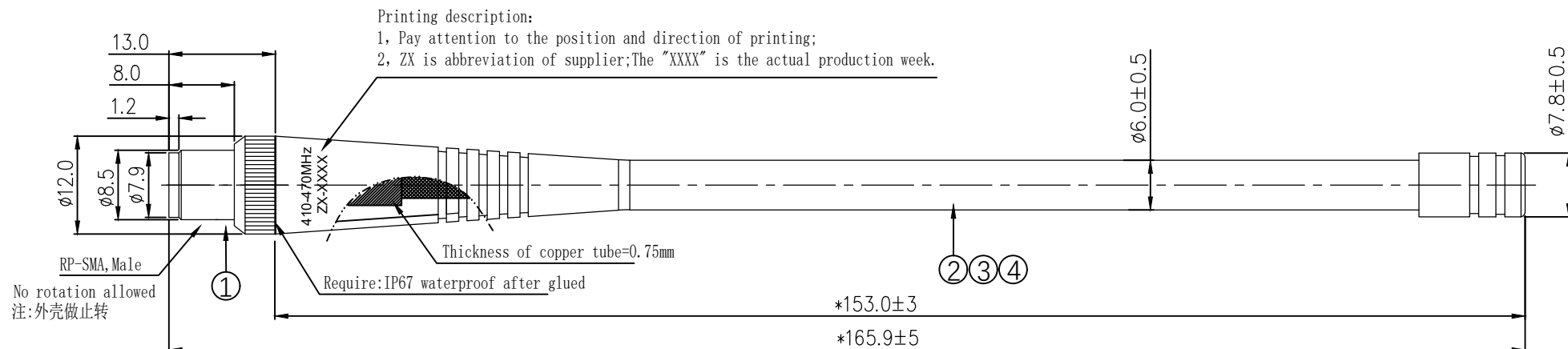
Date:	Q'TY:	Pcs
CUSTOMER APPROVED BY		
Approved by	Checked by	Confirmed by

SUPPLIER SIGNATURE		
Approved by	Checked by	Prepared by
Andy		Cindy

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REV	DATE	DESCRIPTION
X1	04/17-2025	New Issue
X2	06/09-2025	Polish technical specification
X7	07/23-2025	Update VSWR



Capacitor welding precautions:

1. The welding position is shown in the left figure. The welding height H should be controlled to avoid assembly interference.
2. The solder joints should be full and there should be no poor soldering, false soldering, or solder tips.
3. The insulation layer should not be damaged by heat.

Specification:

- 1, Frequency Range: 410~470MHz
Impedance: 50Ω
VSWR: ≤2.8 (Test in the complete machine)
Gain: -3.95dB
- 2, The SMA base is no rotation allowed;
- 3, There is no abnormal sound after assembled;
- 4, The antenna requires IP67 waterproof;
- 5, Single antenna packaged with individual PE bag for shipment;
- 6, The connector meets the requirements of 48H salt spray test;
- 7, SMA service life ≥500 times;
- 8, These Products are in conformity with ROHS 2.0;
- 9, With "*" are Important Dimension, and () for reference

4	Capacitance	Capacitance(电容); Value: 2.7pF, 0805 package	1	
3	Antenna	Ø3.2mm copper strand	1	
2	Antenna Husing	TPEE 55D; Color: Black	1	
1	Connector	RP-SMA; Male; Metal cover; Ø12mm; Nickel Plated	1	
NO	DESCRIPTION		Q'TY	REMARK

CUSTOMER'S SIGNATURE	XXX.	±2.0	APPROVED		CUSTOMER:		
	XX.	±1.0			PART NO:		
	X.	±0.5	CHECKED		PART NAME: 410-470MHz Antenna		
	.X	±0.3			Z&X P/NO: 6068F00127		
	.XX	±0.2	DRAWING		REV	UNIT	FILE:
	⊕	⊖		Y!	X7	mm	SHEET: 1/1



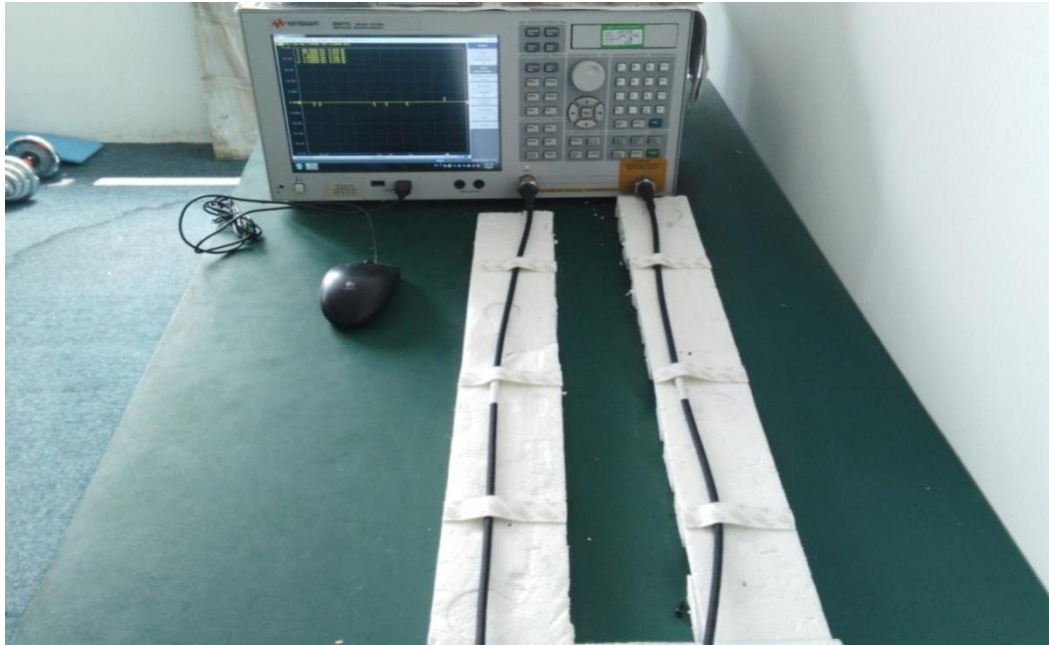
Antenna Test Report

1. RF Fixture Experiment

1.1 Test Setup

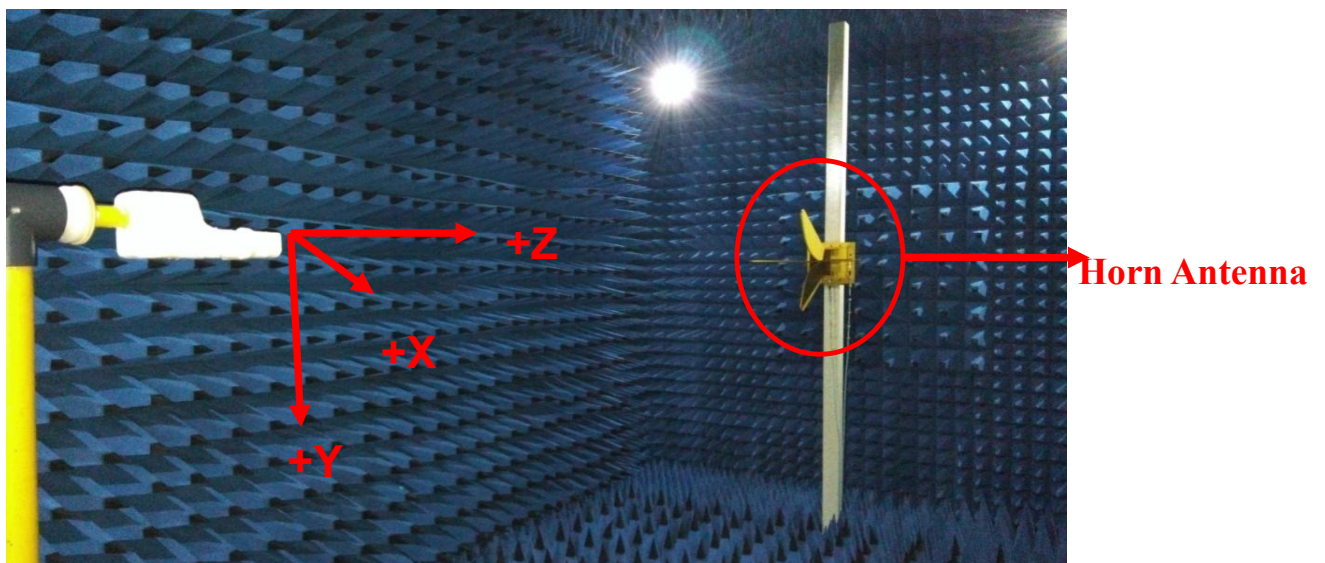
1.1.1 VNA Test Setup

VSWR and Return Loss measurements (S_{11}) were performed using an Keysight E5071C Network Analyzer. The isolation between antennas is also tested. The testing was performed with apparatus in free space.

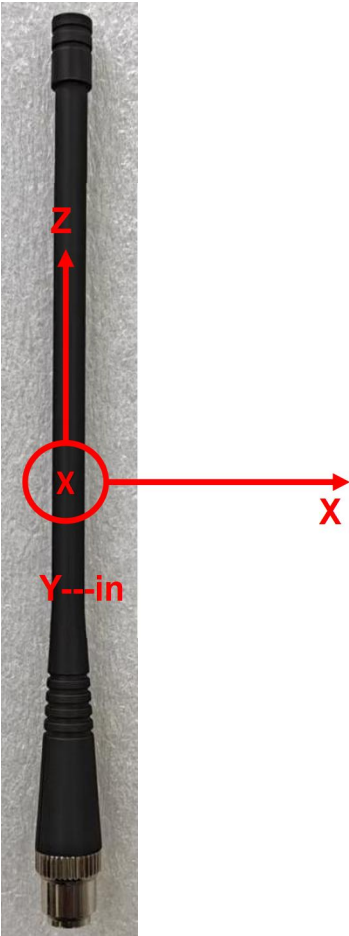


1.1.2 Anechoic Chamber Test Setup

The gain of the antenna was measured in the anechoic chamber. The chamber provides less than -30 dB reflectivity from 400 MHz through 6 GHz. The chamber size is: 7m*4m*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.



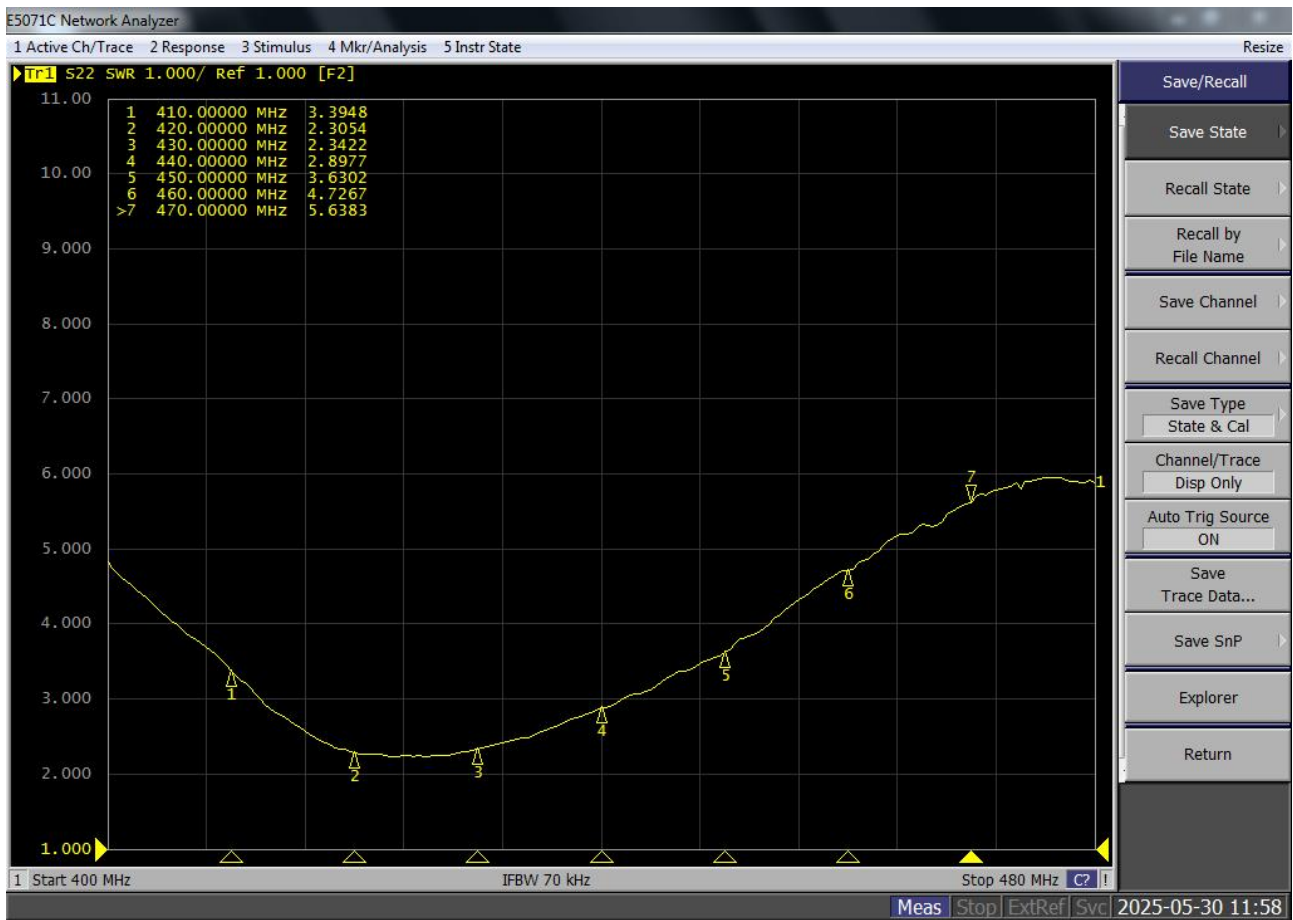
2.Antenna Solution



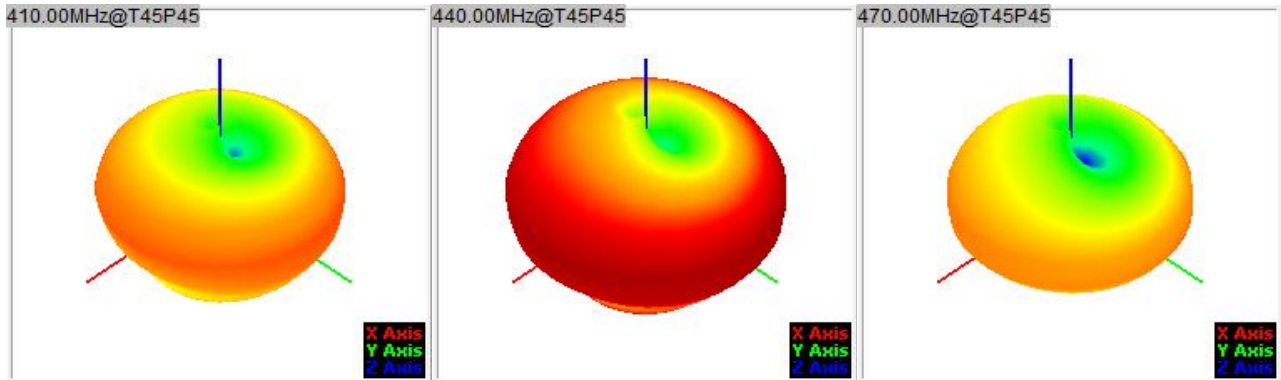
Data Preview

Freq.(MHz)	410	440	470
VSWR	3.39	2.89	5.63
Gain(dBi)	-3.95	-5.02	-4.12
Eff.%	21.60	15.10	18.00

S11



Radiation patterns:3D(410/440/470MHz)



Radiation patterns:2D(410/440/470MHz)

