

ANAM Electronics


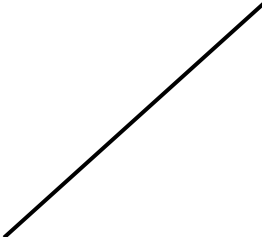

Model Name	SB550
ANAM P/N	ANT 1(400L) : : CSA3A093Z

Date: October 13, 2020

PRODUCT SPECIFICATION

Product : Internal WIFI/Bluetooth Antenna

Part No. :ANT 1(400L): KH-WFDI-AN008

RF Eng'r	Mfg. Eng'r	Approved By
		
2020. 10. 13.	-	2020. 10. 13.

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Table of Contents

1. General		
1.1	The Product	----- Page 3
1.2	Electrical Properties	----- Page 3
1.3	Mechanical Properties	----- Page 3
2. Electrical Properties		
2.1	Frequency Bands	----- Page 4
2.2	Impedance	----- Page 4
2.3	VSWR	----- Page 4
2.4	Gain(dBi)	----- Page 5
3. Test Data		
5.1	Network Data	----- Page 6
5.2	Gain Data	----- Page 7
4. Mechanical Drawing		----- Page 8

1. General

1.1 The Product

Model Name	SB550 WIFI / Bluetooth Antenna
Part No.	ANT 1(400L): KH-WFDI-AN008
Antenna Type	Dipole Antenna
Applications	WIFI 2.4~2.5 / 5.15~5.825

1.2 Electrical Properties

Frequency Range(Tx)	2.4~2.5 Ghz / 5.15~5.825 Ghz	
Frequency Range(Rx)	2.4~2.5 Ghz / 5.15~5.825 Ghz	
VSWR	2.4~2.5	Less Than 2.0 : 1
	5.15~5.825	Less Than 3.0 : 1
GAIN dBi (Avr. / Peak)	2.4~2.5	-1.2~-2.3 / 3.0~3.5
	5.15~5.825	-3.5~-4.5 / 0.7~2.1
Polarization	Vertical	
Impedance	50Ω ± 10Ω	

1.3 Mechanical Properties

Dimension	Ipex Cable : ANT ① = 400L
	PCB : 40 x 8.0 x 0.8.t White color
Operational Temperature	-30°C ~ +75°C
Connector Type	Ipex Connector + PCB Type

2. Electrical Properties

2.1 Frequency Band

Service \ Band	KH-WFDI-AN008	
Tx (MHz)	2,400 ~ 2,500	5,150 ~ 5,825
Rx (MHz)	2,400 ~ 2,500	5,150 ~ 5,825

2.2 Impedance

2.2.1 Normal Value

50Ω ± 10Ω

2.2.2 Measuring Method

The impedance over the frequency bands shall be as close as possible to 50Ω after matching. Both free space and talk position are considered.

2.3 VSWR

2.3.1 Maximum values in free space

Service \ Band	KH-WFDI-AN008	
	2,400 ~ 2,500	5,150 ~ 5,825
VSWR	2.0 : 1	3.0 : 1

2.3.2 Measuring Method

A 50Ω coaxial cable is connected(soldered) to the 50Ω point, at the duplex-filter on the main PCB. The connection of the coaxial cable shall be done to introduce a minimum of mismatch. As much as possible the coaxial cable arrangement shall prevent influences from induced currents on the cable. In the other end, the coaxial cable is connected to a network analyzer. The measurement is performed at room temperature. The handset, including the PCB, must not in any significant way differ from the mass produced handset, i.e. the antenna feeding network has to be equivalent to the feeding network in mass production. The specification shall be met in the entire frequency band. The free space means that the handset is placed on a non-conductive surface of cellular plastic.

2.4 Gain(dBi)

2.4.1 Typical minimum values in maximum direction

Band / Service	KH-WFDI-AN008	
	Service	2,400 ~ 2,500
Gain(Avr./Peak)	-1.2 ~ -2.3 / 3.0 ~ 3.5	-3.5 ~ -4.5 / 0.7 ~ 2.1

2.4.2 Measuring Method

The connection is done according to 2.3.2.

Radiation patterns are measured at 6 different frequencies : Txmin, Txmid, Txmax, Rxmin, Rxmid and Rxmax. The antenna is measured in the 3D

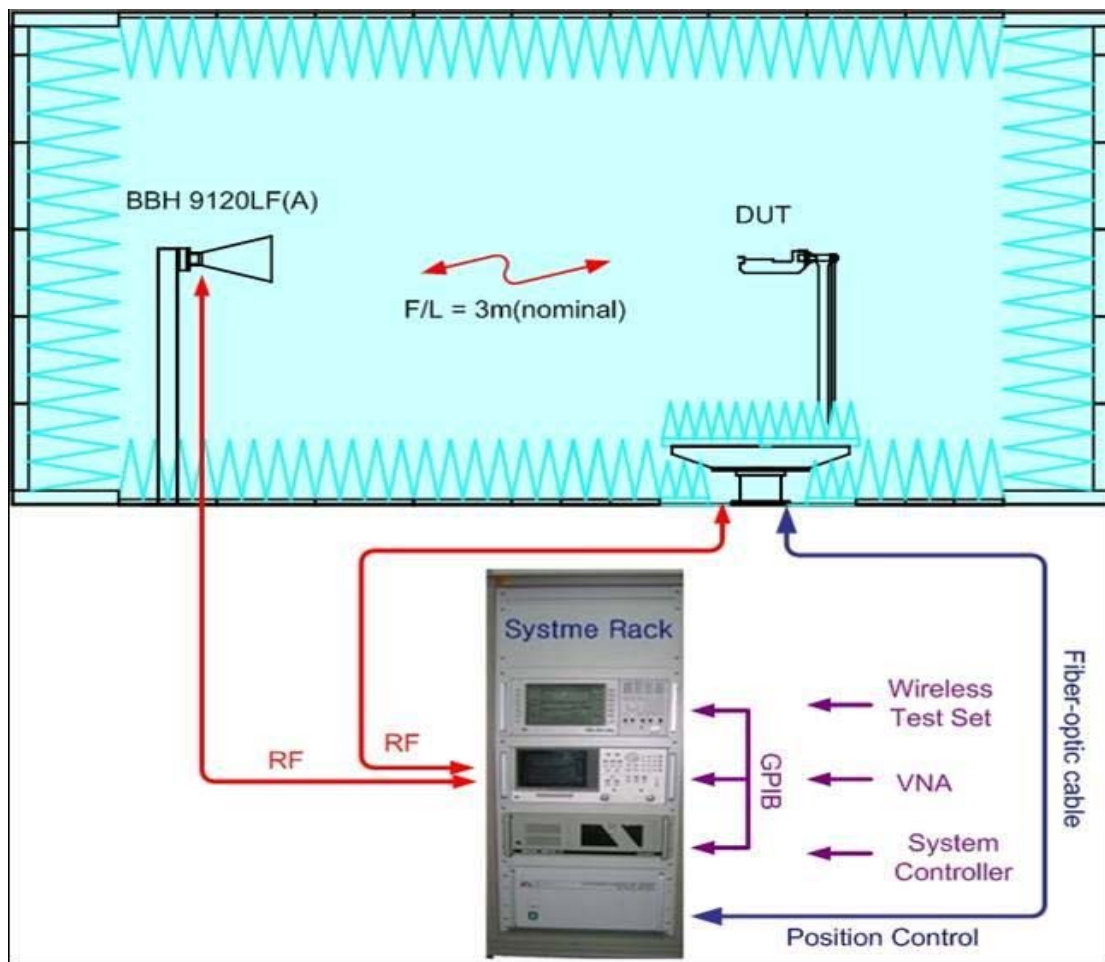


Figure 1. 3D Antenna Gain Test

3. Test Data

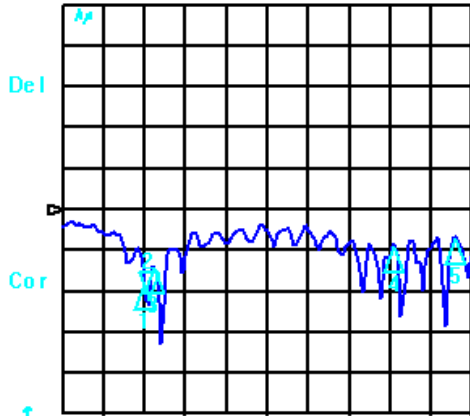
3.1 Network Data

- KH-WFDI-AN008 (ANT 1)

24 Mar 2019 17:18:56

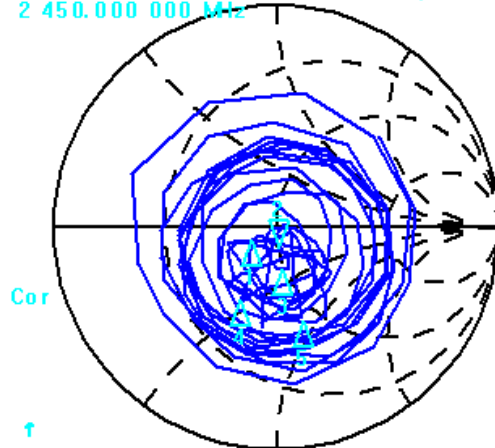
CH1 LOG 10 dB/ REF 0 dB
MEM 2:- 21.682 dB 2 450.000 000 MHz

CH3 MEM 1 U FS
2: 50.477 μ -8.3828 μ 7.7493 pF
2 450.000 000 MHz



CH1 Markers

- 1:- 18.220 dB
2.40000 GHz
- 3:- 14.350 dB
2.50000 GHz
- 4:- 8.9345 dB
5.15000 GHz
- 5:- 6.9633 dB
5.82500 GHz



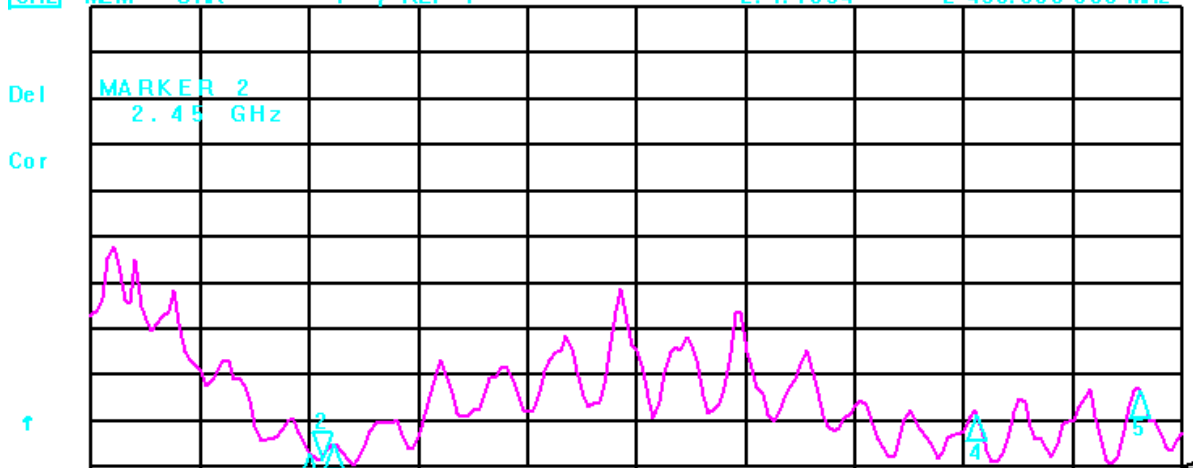
CH3 Markers

- 1: 39.777 μ
-4.8418 μ
2.40000 GHz
- 3: 49.529 μ
-19.494 μ
2.50000 GHz
- 4: 29.761 μ
-22.279 μ
5.15000 GHz
- 5: 42.447 μ
-44.682 μ
5.82500 GHz

START 1500.000 MHz STOP 6000.000 MHz

START 1500.000 MHz STOP 6000.000 MHz

CH2 MEM SWR 1 / REF 1 2: 1.1894 2 450.000 000 MHz



CH2 Markers

- 1: 1.2849
2.40000 GHz
- 3: 1.4836
2.50000 GHz
- 4: 2.1416
5.15000 GHz
- 5: 2.6447
5.82500 GHz

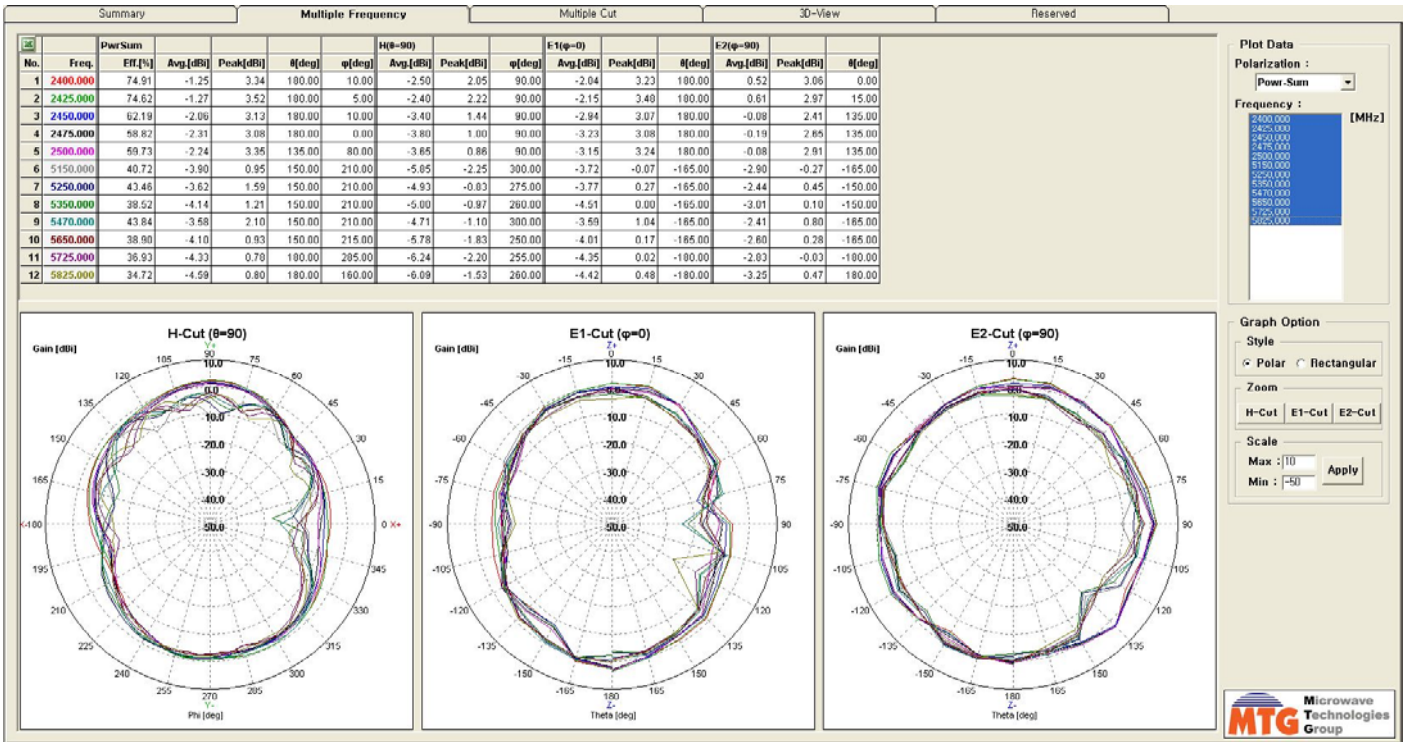
START 1 500.000 000 MHz

STOP 6 000.000 000 MHz

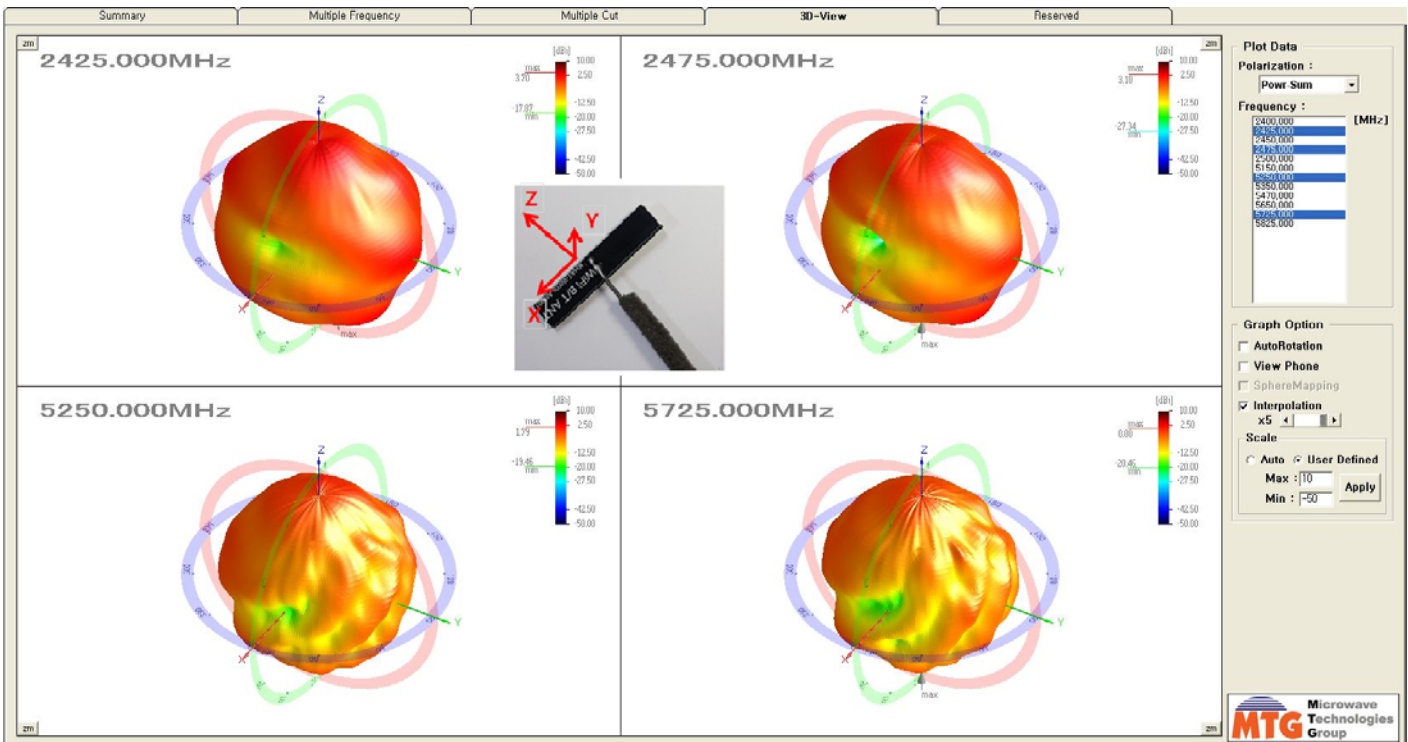
3.2 Radiation Pattern Data

- KH-WFDI-AN008 (ANT 1)

-Radiation

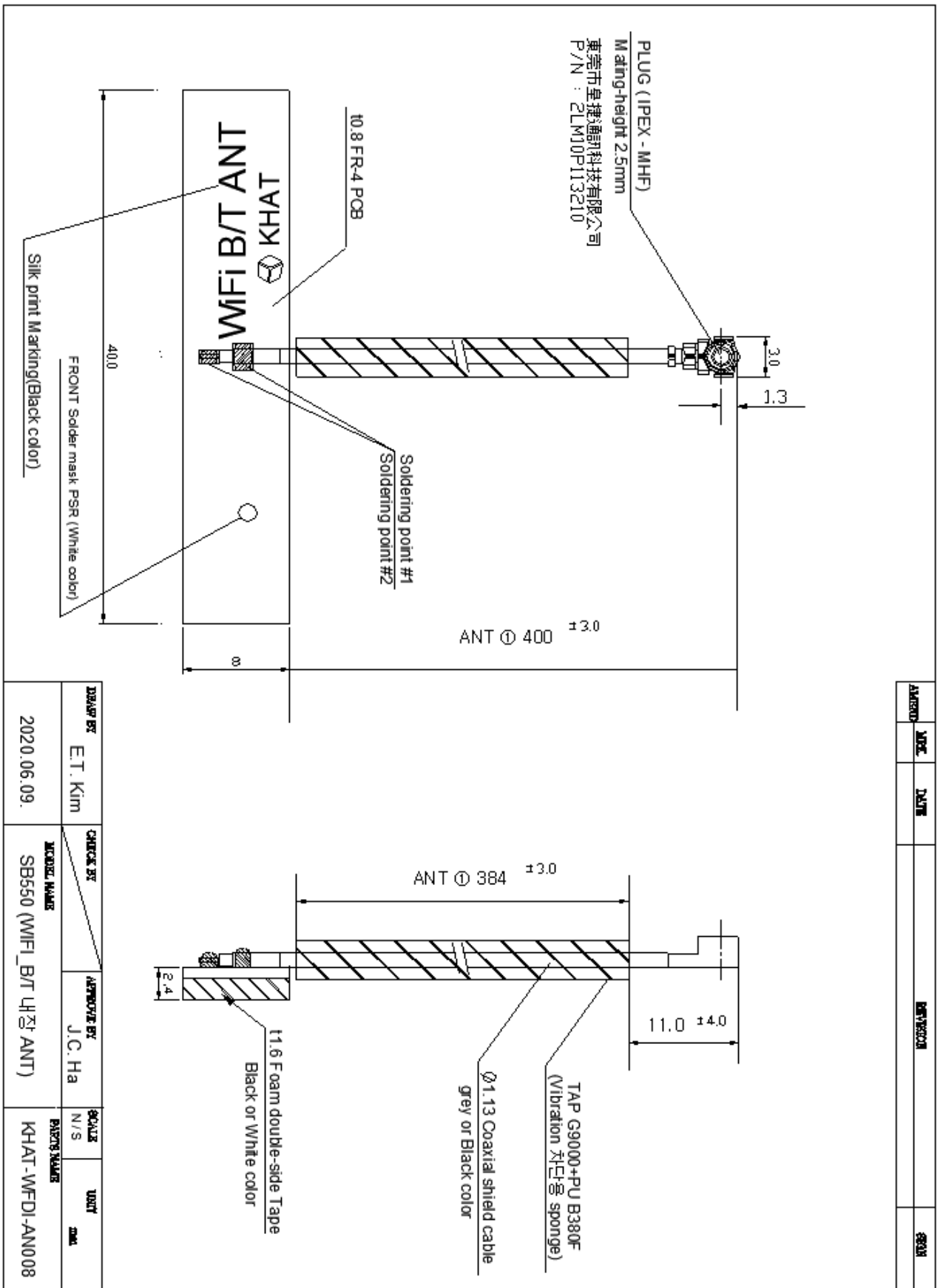


-3D View



4. Mechanical Drawing

A3 (297 420)



REVISED	DATE	REVISION	REASON

DESIGN BY	E.T. Kim	CHECK BY	APPROVE BY	SCALE	UNIT
2020.06.09.		SB550 (WiFi B/T 내장 ANT)	J.C. Ha	N/S	mm
DRAWN NAME		APPROVED NAME		PARTS NAME	
				KHAT-WFDI-AN008	