Innovative Service Around the Globe YAGEO

DATA SHEET

WIRELESS COMPONENTS

WLAN ANTENNA

Model: LN313

Part No / YAGEO: ANTA0ZV1421124554
Part No /Customer: 6036B0289901

Product Specification – OCT. 06 2020_ R01

Yageo (Taiwan) Ltd.
16, west 3rd Street, N.E.P.Z Kaohsiung, 811 Taiwan, R.O.C
Yageo Electronics (China) Co, Ltd
No. 10, Zhu Yuan Road, Suzhou New District, Suzhou, PRC

YAGEO Phycomp

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1. ORDERING INFORMATION - GLOBAL PART NUMBER, PHYCOMP CTC & 12NC

All part numbers are identified by the series, packing type, material, size, antenna type, working frequency and packing quantity

YAGEO BRAND ordering code

GLOBAL PART NUMBER (PREFERRED)

ANTA0ZV1421124554

(1) (2) (3) (4) (5) (6) (7)

(1) FAMILY

ANT = Antenna Products

(2) SPECIAL DESIGN PRODUCT

A0

(3) CUSTOMER NAME

ZV=Customer

(4) **PROJECT NUMBER**

1421 = Project Series Number

(5) **AMOUNT OF CONNECTORS**

1= 1 connector

(6) **ANTENNA FUNCTION**

2455 = WLAN

(7) **ANTENNA NUMBER**

4 = Project Part Number

2. SPECIFICATIONS

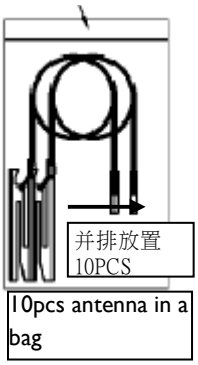
DESCRIPTION	
Working Frequency	2400 ~ 2500MHz/ 5150~5850MHz
VSWR	4.0 : 1 max for WLAN Antenna
Peak Gain	2.58 dBi for 2400 ~2500MHz band 2.69 dBi for 5150 ~5850MHz band
Cable Loss	0.08 dBi for 2400 ~2500MHz band 0.13 dBi for 5150 ~5850MHz band
Radio Connector	I-PEX, TN , KS, FD or equivalent
Coaxial Cable	KB, HL, SY or equivalent
Impedance	50Ω Nominal.
Cable Diameter / Length / Color / Jacket	1.13 mm / 30mm / White / FEP
Antenna Dimension	20*11.7 mm
Operating Temperature	-40~90℃
Maximum Power	1W
Polarization	Linear
Radiation Pattern	Omni-directional
Tube	OD2.5mm/L=20mm
Antenna Type	PIFA

3. PACKING SPEC

Packing 10 pcs of antenna in a small bag(No.6); every 10 bags packing in a big bag(No.8); every 20 bags(No.8) packing in a carton. Each carton contains 2000pcs antenna in total.

Please refer to below as example.

1. 10 Pcs/Per Small Bag(No. 6)



2. 10 Small Bag/Per Big Bag(No. 8)

3. 20 Big Bag/per Carton (2000pcs)

4. Finished Packing

4. Test Methodology

4.1 Test equipment

The equipment for the antenna measurement we used is as follows.

A. Agilent 8753ET / 8719D Network Analyzer to measure the VSWR and input impedance.

B. Three-dimensional anechoic chamber to measure the gain
(Standard dipole and horn were used to calibrate the chamber)

C. Digital caliper to measure the dimensions.

D. Climatic chamber for mechanical tests.

4.2 Test setup

4.2.1 Frequency Range

2000 ~ 6000MHz

4.2.2 Antenna configuration

The antenna basically has two parts; the stamping and the cable assembly with the connector on one side. The detailed drawing is attached.

4.2.3 VSWR

The VSWR is measured with Agilent 8753ET / 8719D network analyzer. All the measurements are performed with the customer provided fixture. Figure 1 shows the schematic diagram for measuring VSWR.

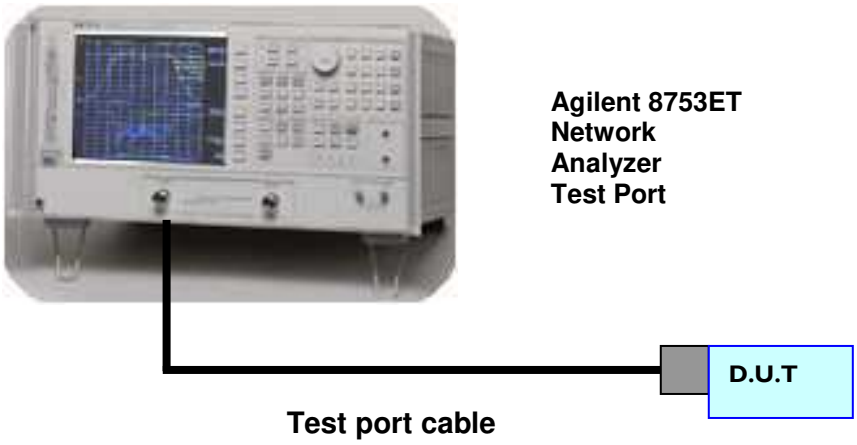


Figure 1. The schematic diagram for measuring VSWR

4.2.4 Radiation pattern and gain

The radiation pattern must have the omni-directional characteristic in both positions. The radiation pattern measurements are performed in the three-dimensional anechoic chamber. The chamber provides less than –30dB reflectivity from 700MHz through 8GHz. The chamber is calibrated using both standard dipole and horn antenna. The gain here is expressed as dBi that standardizes the isotropic antenna. The gain measurements are also performed in the same chamber described previously. Figure 2 shows the schematic diagram for measuring radiation pattern and gain.

2D / 3D Anechoic chamber

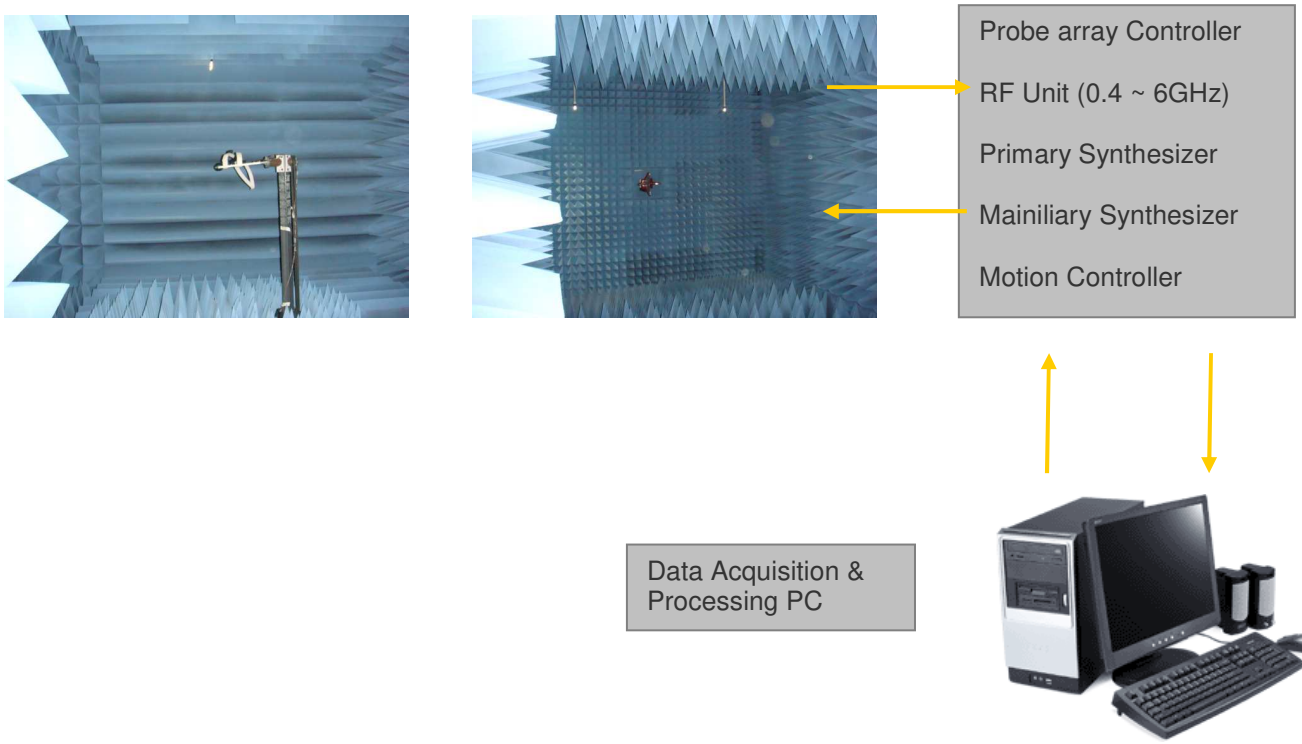
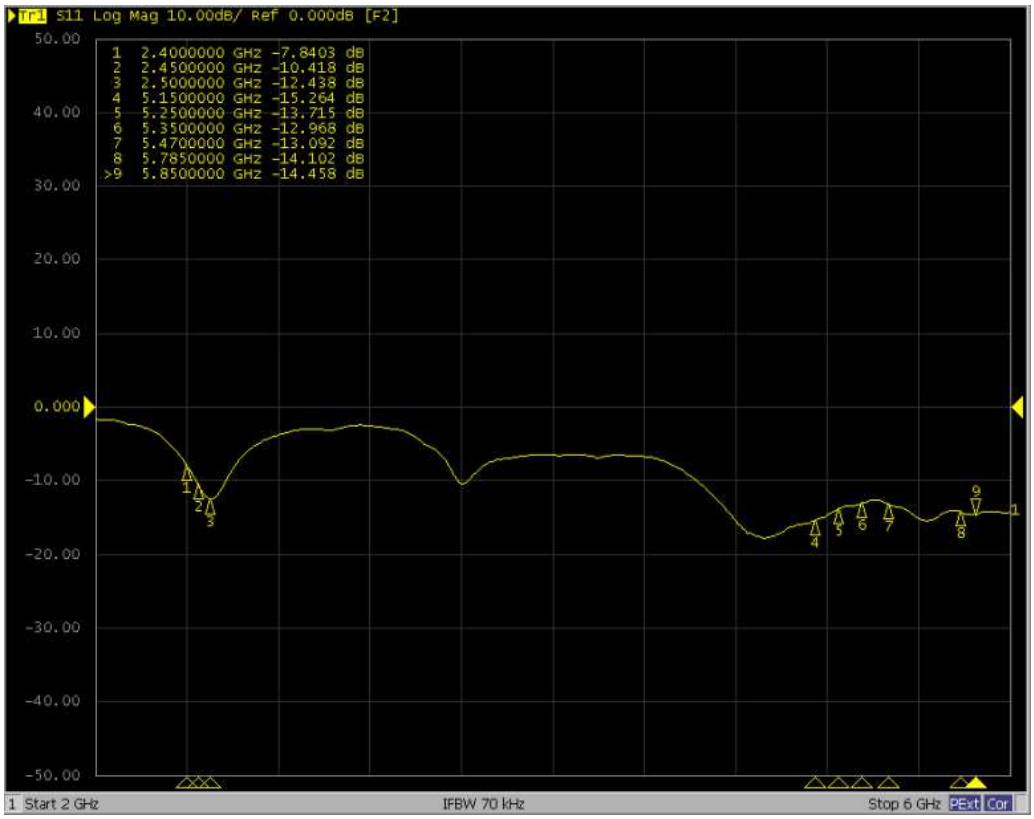


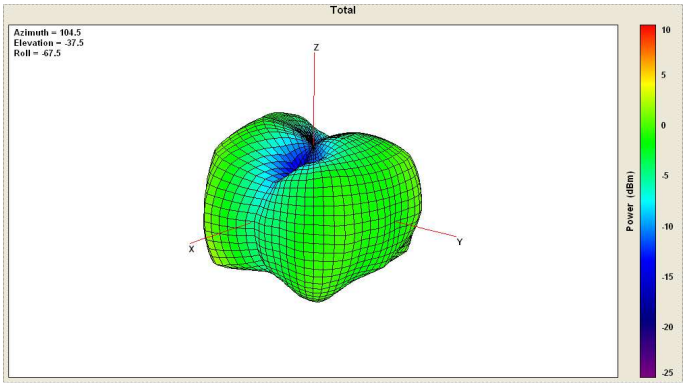
Figure 2. The schematic diagram for measuring radiation pattern and gain

5. Performance Data

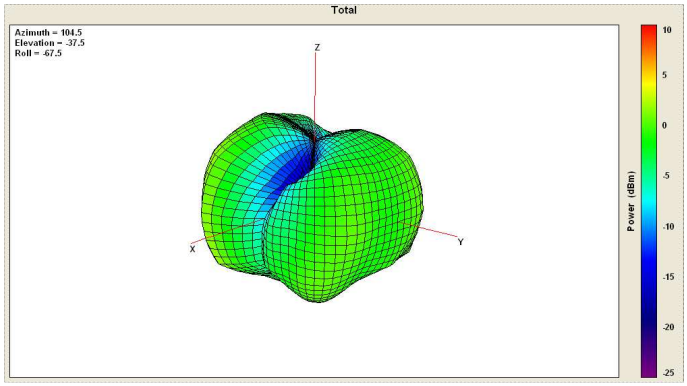
5.1 VSWR in the Fixture



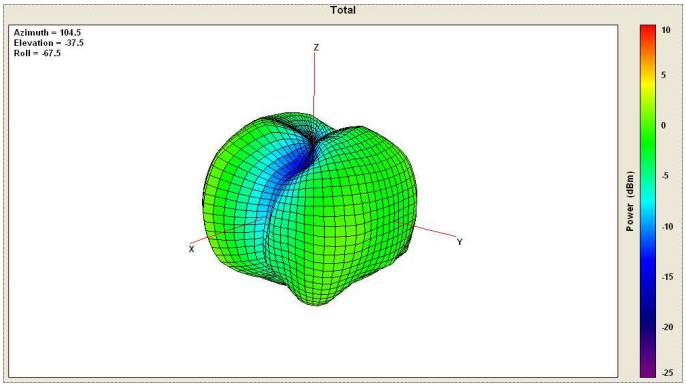
5.2 Radiation pattern and gain for 3D Data



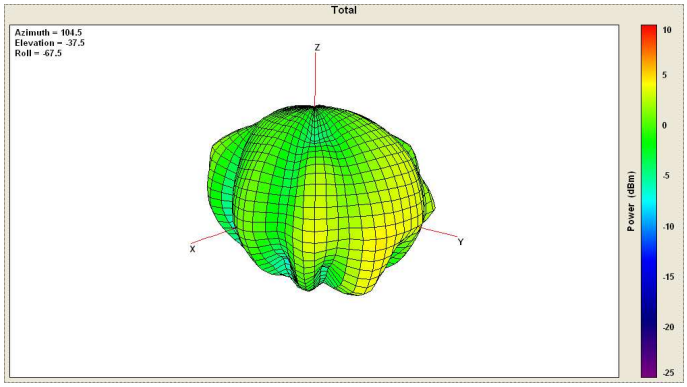
2400MHz



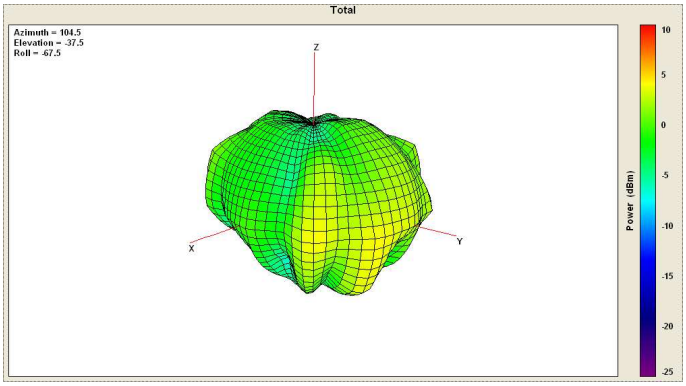
2450MHz



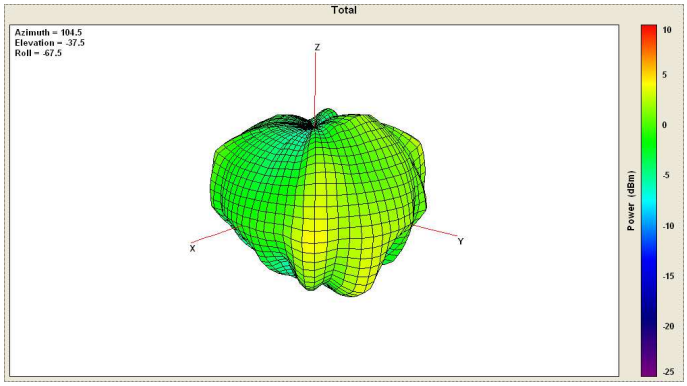
2500MHz



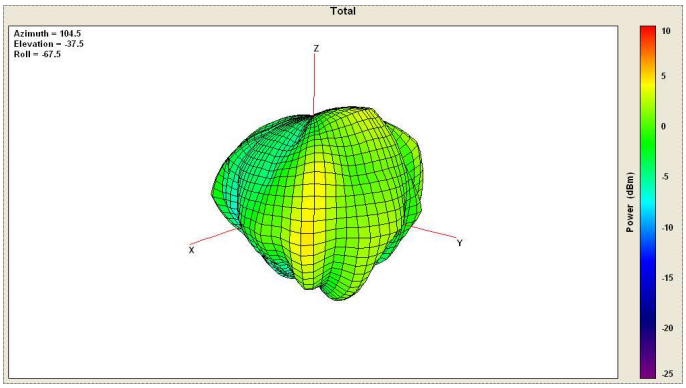
5150MHz



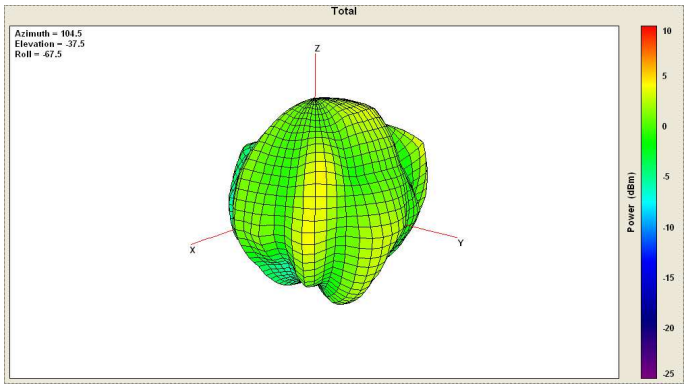
5250MHz



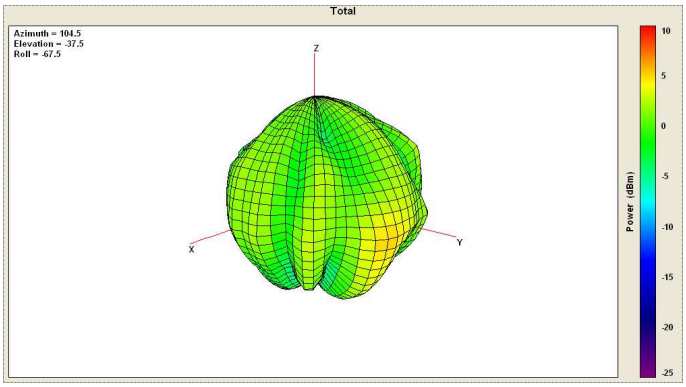
5350MHz



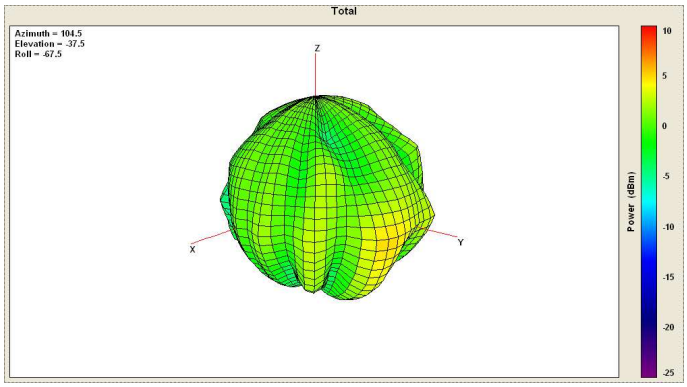
5470MHz



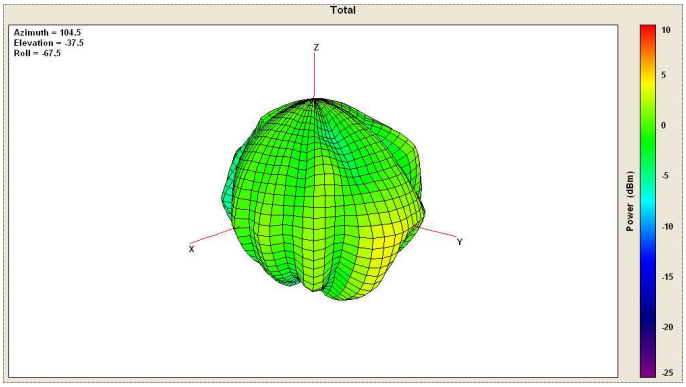
5600MHz



5725MHz



5785MHz



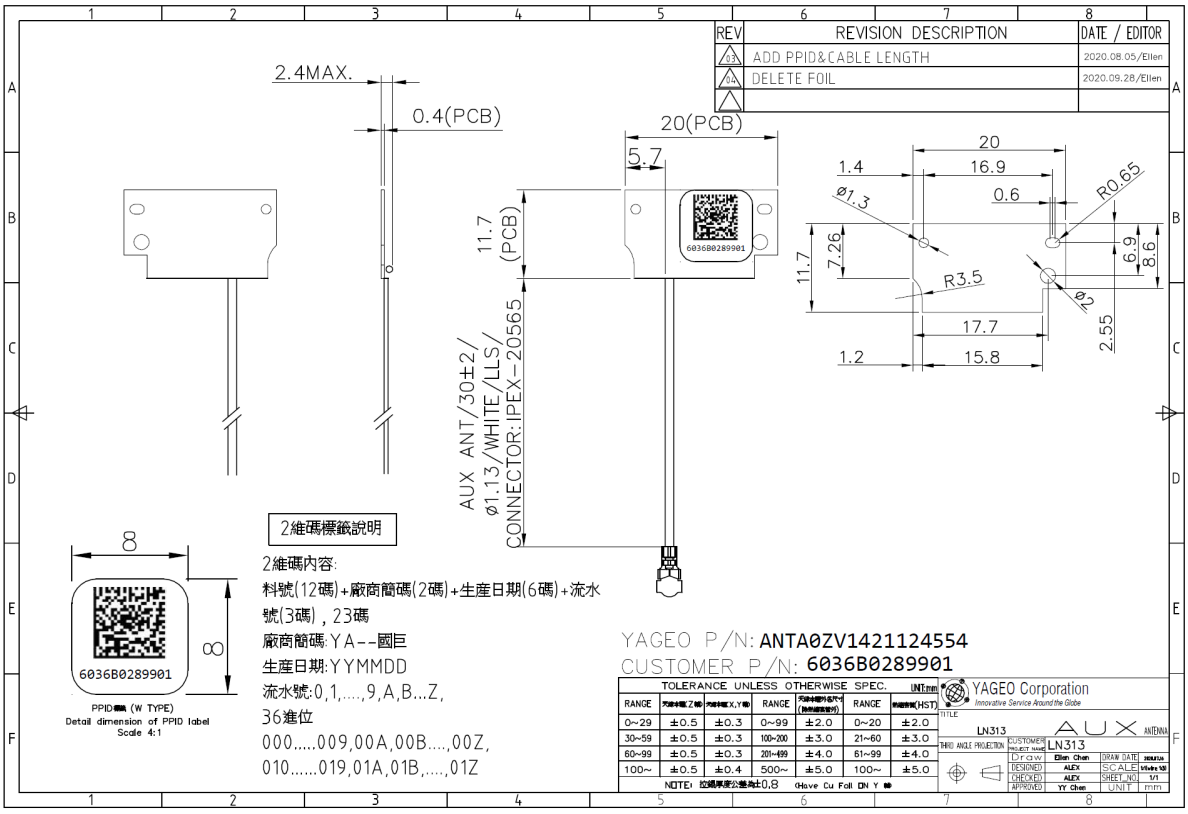
5850MHz

5.3 Average gain (dBi) summary

Antenna (Cable color) / Band / Frequency			Gain Spec 3D Spec NB Mode	Test Date Antenna Gain	
2nd WLAN	2.4GHz	2400	-4.3	-2.01	
		2450	-4.3	-1.65	
		2500	-4.3	-1.64	
	5GHz	5150	-5.3	-1.21	
		5250	-5.3	-1.44	
		5350	-5.3	-1.50	
		5470	-5.3	-1.85	
		5600	-5.3	-1.75	
		5725	-5.3	-1.70	
		5785	-5.3	-1.59	
		5850	-5.3	-2.13	

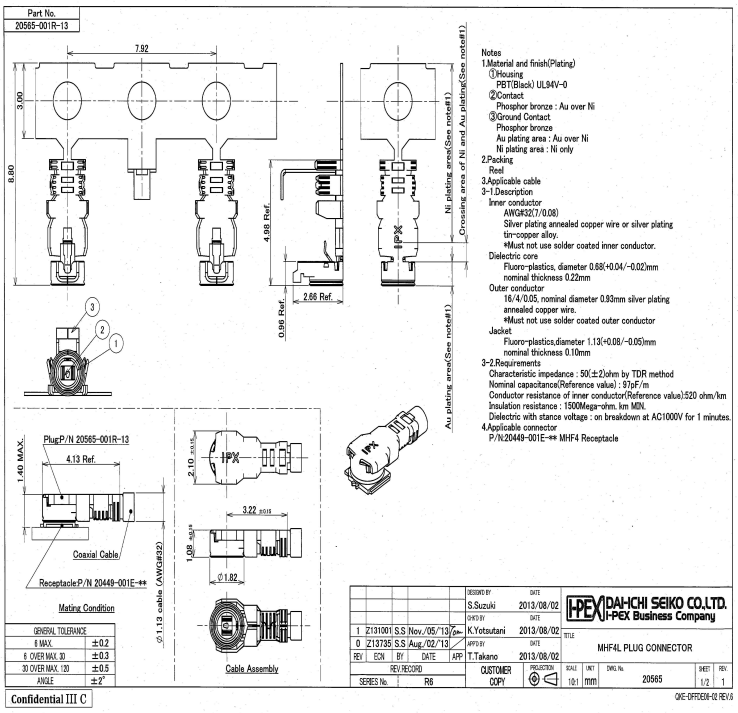
6. Antenna Drawing

6.1 Antenna Drawing



6.2 RF Connector Drawing

IPEX RF Connector Drawing (20565)



7. Reliability Data For Antenna Patch

IEC 384-10/ CECC 32 100 CLAUSE	IEC 60068-2 TEST METHOD	TEST	PROCEDURE	REQUIREMENTS
4.12	4(Na)	Rapid change of temperature	-40 °C (30 minutes) to +90 °C (30 minutes); 5 cycles	No visible damage Central Freq. Change 6%
4.14	3(Ca)	Damp heat	500 ± 12 hours at 40 °C; 90 to 95 % RH	No visible damage 2 hours recovery Central Freq. Change ± 6%
4.15		Endurance	500 ± 12 hours at 90 °C;	No visible damage 2 hours recovery Central Freq. Change ± 6%

8. REVISION HISTORY

Revision	Date Change Notification	Description
R01	2020/10/06	New Release