

SPEC NO.	SP03BE15750-1760	ISSUED DATE	2022/07/14	PUBLISHED BY
PRODUCT NAME	GNBA-107AA	VERSION	01	
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SPECIFICATION

SPEC NO. : SP03BE15750-1760

PART NO. : 03V0152F14C010T

PRODUCT NAME : GNBA-107AA

DESCRIPTION : 3V/18dB/ 490mm/ MCX90
ROHS Compliant Product

REVISION STATUS

VERSION	DATE	PAGE	REVISION DESCRIPTION	PREPARED	CHECKED	APPROVED
01	2022/07/14	Whole	New Issued.	楊昆霖	楊昆霖	張敦信

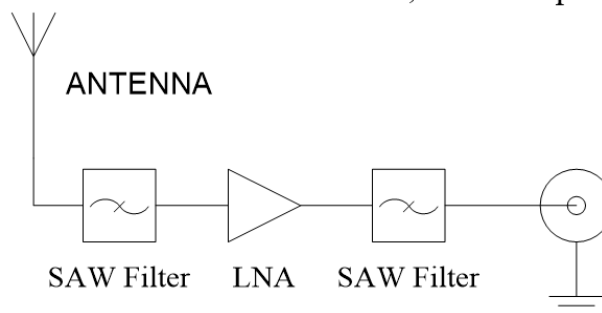
Prepared By	Checked By	Approved By
楊昆霖	楊昆霖	張敦信

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SPECIFICATION FOR GPS ANTENNA WITH LOW NOISE AMPLIFIER

1.0 SYSTEM:

This antenna system consists of two functional blocks, the LNA portion and the patch antenna.



2.0 GENERAL

2.1 ENVIRONMENTAL CONDITIONS

2.1.1	Operation Temperature	- 40°C to + 85°C
2.1.2	Storage Temperature	- 40°C to + 105°C
2.1.3	Relative Humidity	40% to 95%

2.2 ELECTRICAL SPECIFICATIONS

2.2.1	Input Voltage	Min:1.8 V	Typ: 3.0V	Max:5.5V
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2.3 CABLE & CONNECTOR

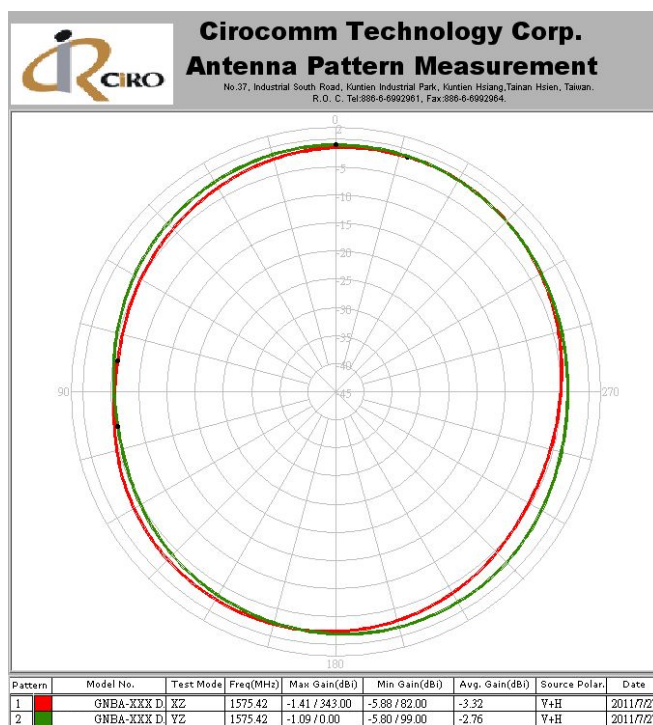
2.3.1	RF Cable	RG-174 Coaxial cable, \varnothing 2.7mm, Color: Black L = 490 \pm 5 mm
2.3.2	RF Connector	MCX90 (M)

3.0 ANTENNA

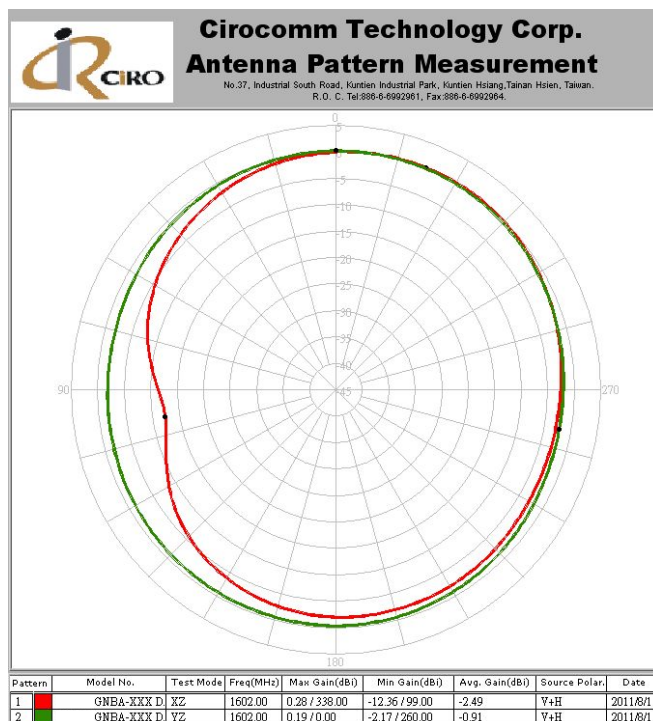
3.1	Antenna Dimensions	25mm*25mm*4mm
3.1	Frequency Range	1574~1610 MHz.
3.2	Gain	1575.42MHZ: - 1.5 dBic Typ. @zenith 1602MHZ: +0 dBic Typ. @zenith
3.3	Polarization	RHCP
3.4	Axial Ratio	Max 3.0dB @zenith

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3.1 Radiation patterns



@1575.42MHz

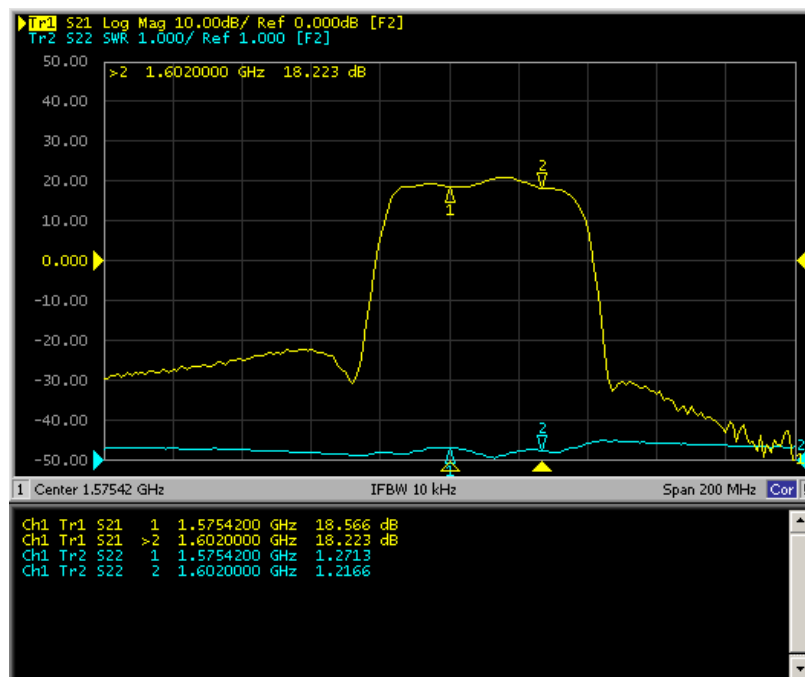


@1602MHz

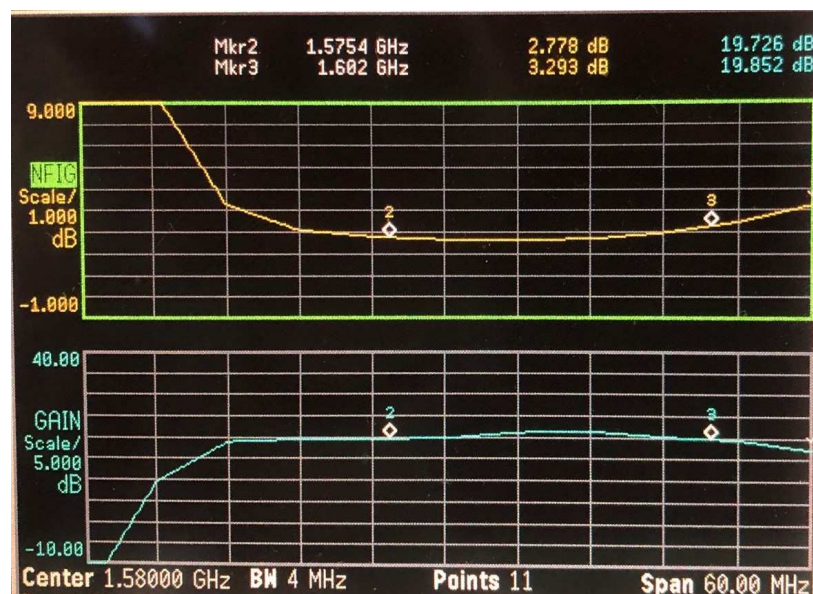
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4.0 LNA

4.1	Frequency Range	1575.42 ± 1.023 MHz 1602 ± 8 MHz
4.2	Gain	18 dB Typ.(+ 25 °C± 5°C)
4.3	Noise Figure	3 dB Typ. (+ 25 °C ± 5°C)
4.4	Output Impedance	50 Ω
4.5	Output VSWR	2.0 Max



LNA Gain @3.0V



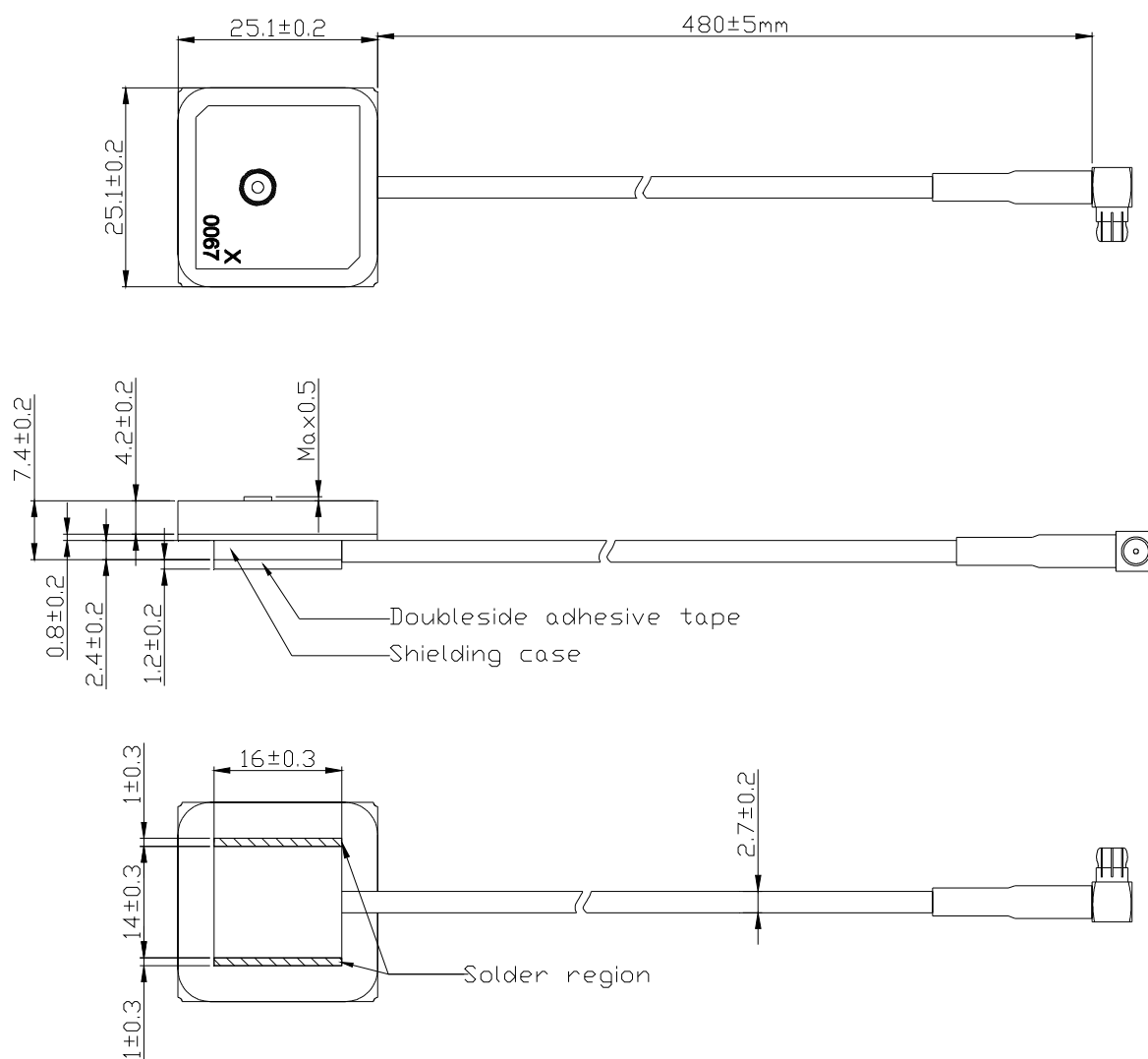
LNA Noise Figure @3.0V

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5.0 TOTAL SPECIFICATIONS (Through Antenna, LNA, Cable and Connector)

5.1	Frequency Range	1574~1610 MHz.
5.2	Gain	At 90° 1575.42MHz: 16.5± 3dBic 1602MHz: 18± 3dBic
5.3	Output Impedance	50Ω

6.0 OUTLINE



Unit: mm

