


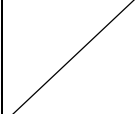
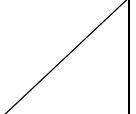
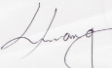
Data Sheet


Type : Active Antenna
 Part No : AGA393914-S0-A6 (GPS & Glonass & Beidou)

	Drawing	Checked		Approved
Date	/	/	/	/

Revision no	Content	Page	Date	Name
0	First, documented	-	2015.07.09	Injo Jeong



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1. Specifications

1.1 Patch Antenna Element Electrical Specifications


No	Item	Spec.	Unit
1	Frequency	1559.0~1610.0 @ 70x70 mm Ground plane	MHz
2	Polarization	RHCP	-
3	Gain @ Zenith	2.7~3.6 @ 70x70mm Ground plane	dBic
4	Axial Ratio	2.0 Typ. @ 70x70mm Ground plane	dB
5	Bandwidth @ -10dB	200 min. @ 70x70mm Ground plane	MHz
6	Impedance	50	ohm
7	Patch antenna size	25 x 25 x 6T	mm

1.2 LNA Electrical Specifications

No	Item	Spec.	Unit
1	Frequency	1559.0~1610.0	MHz
2	Gain	29.0 ± 3.0 @5V	dB
3	Noise Figure	Typ.1.5 @5V	dB
4	Output VSWR	2.0 : 1 max.	-
5	Voltage	DC 3.0~5.0	V
6	Current	14.0 Typ. @ 5.0V	mA
7	Impedance	50	ohm

1.3 Overall Performance

No	Item	Spec.	Unit
1	Frequency	1559.0~1610.0	MHz
2	Total System Zenith Gain	31.0 Typ. @ DC 5V	dBic
3	Axial Ratio	2.0 Typ. (1559~1610MHz)	dB
4	Output VSWR	3.0 : 1 max.	-
5	Output Impedance	50	ohm


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1.4 Mechanical Specifications

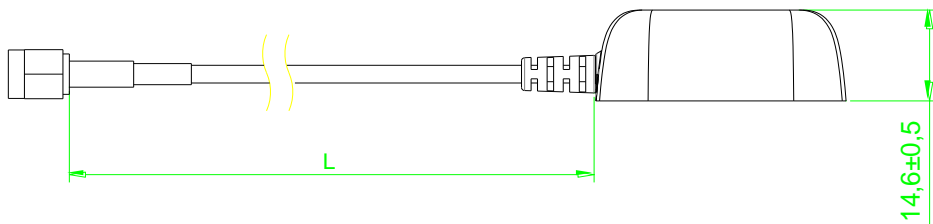
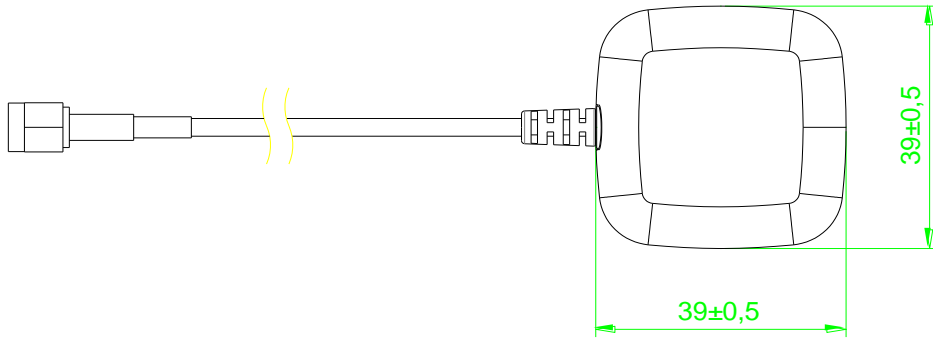
No	Item	Spec.	Unit
1	Size	39.0(L) * 39.0(W) * 14.6(T) ± 0.5	mm
2	Cable / Connector	RG174 Φ2.8 mm L=3000±100 mm /SMA	-
3	Weight	71.0 typ.	g
4	Mounting	Magnetic base	-
5	Housing Color/Material	Black/PC	-

1.5 Connectors

			
SMA	MCX	GT5-1S-HU	Fakra C

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2. Appearance



Unit : mm

L: 3000 ± 100 mm

3. Part No

Part No: AGA XXXXXX - XX - XX
 (1) (2) (3) (4)

- (1) : AMOTECH GPS Active Antenna
- (2) : Antenna Size
- (3) : Revision No.
- (4) : Model No.

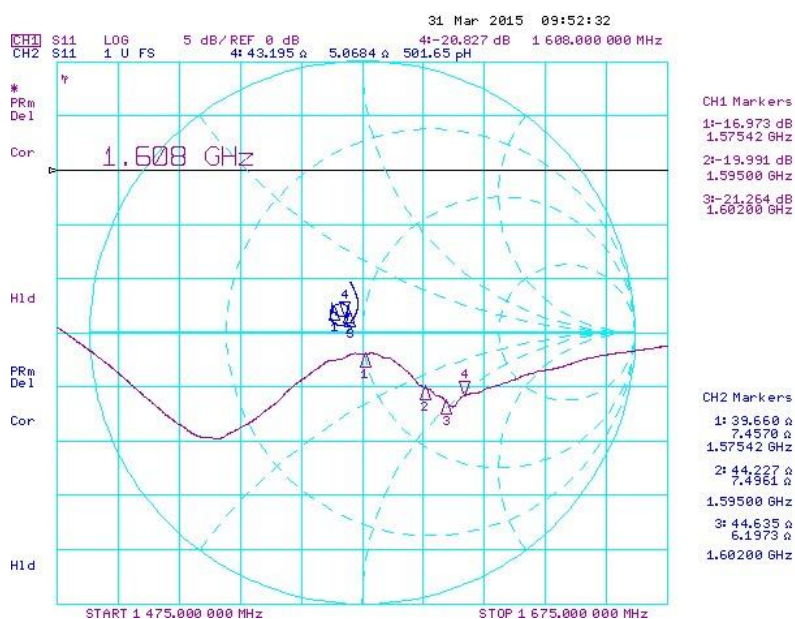
4. Environmental Specifications

No	Item	Spec.	Unit
1	Operating Temp.	-30 ~ +85	°C
2	Storage Temp.	-40 ~ +85	°C
3	Water Proof	IP66	-

5. Typical Characteristics

5.1 Typical S11 of Antenna

(Test condition: with case, Hibrid coupler, on the 70x70mm Ground plane)

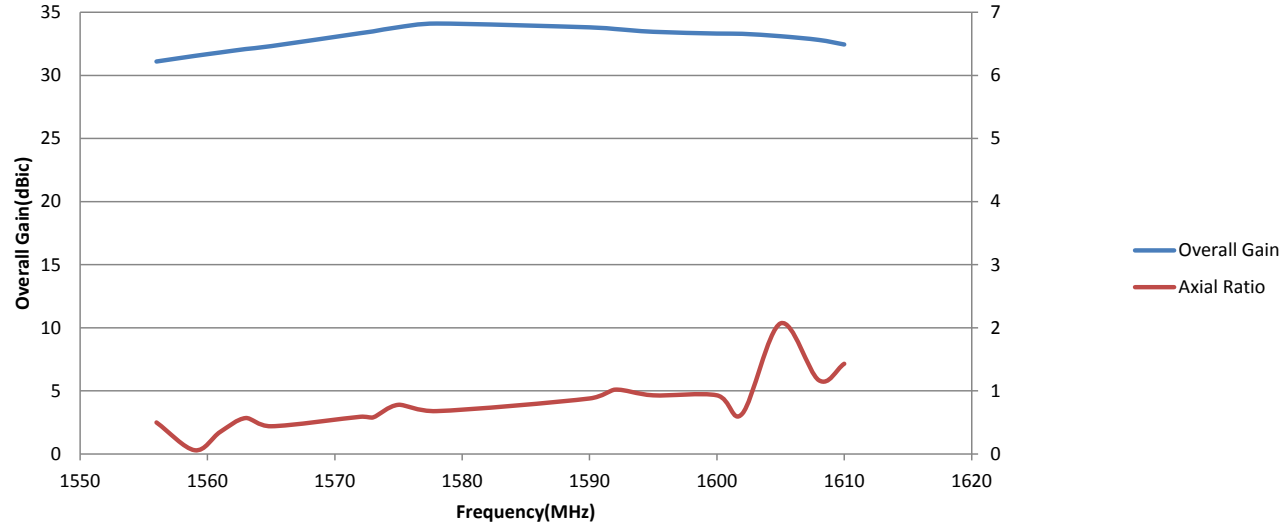


[Log mag & Smith Chart]

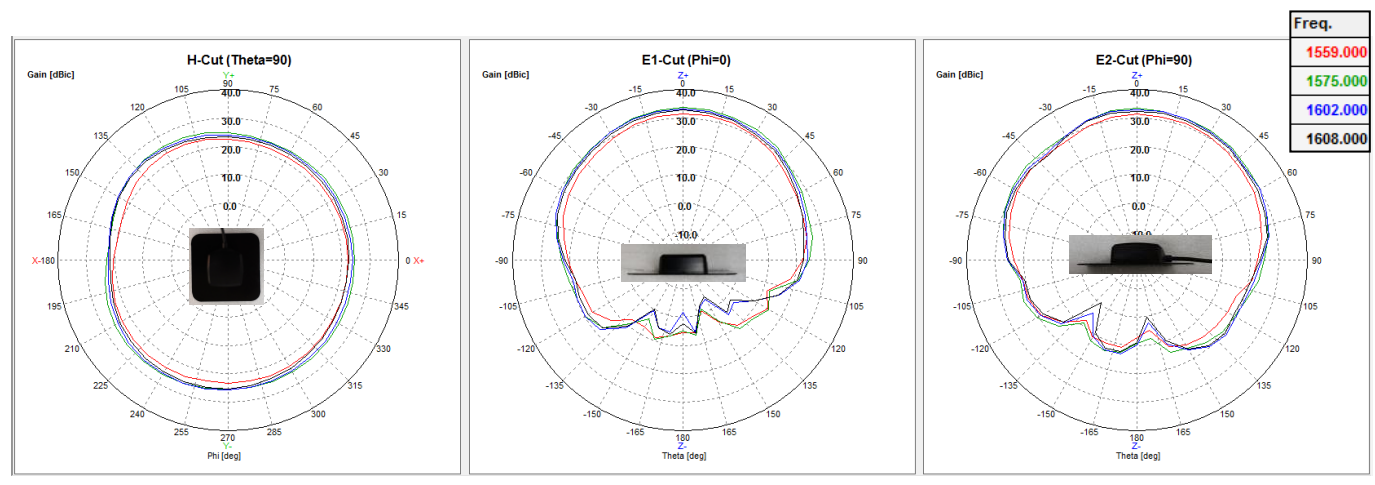
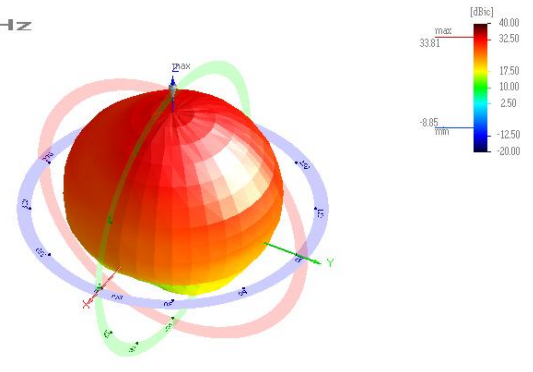
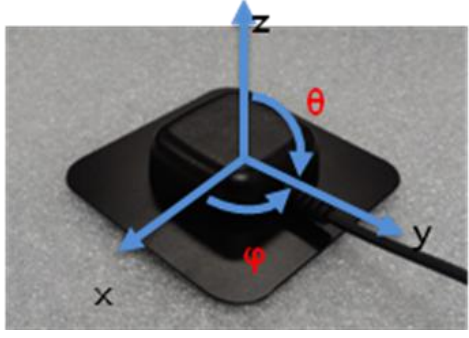
5.2 Overall Gain & Axial Ratio of active antenna (Test condition: DC 5.0V)


Freq. [MHz]	Avg. Gain [dBic]	Peak Gain [dBic]	Zenith Gain [dBic]	AR [dB]	Current
1559.0	25.08	31.55	31.55	0.06	14mA @ DC 5.0V
1575.0	27.29	33.81	33.81	0.78	
1592.0	27.20	33.67	33.67	1.02	
1608.0	26.15	32.81	32.81	1.17	

Overall Gain & Axial Ratio



1575.000MHz



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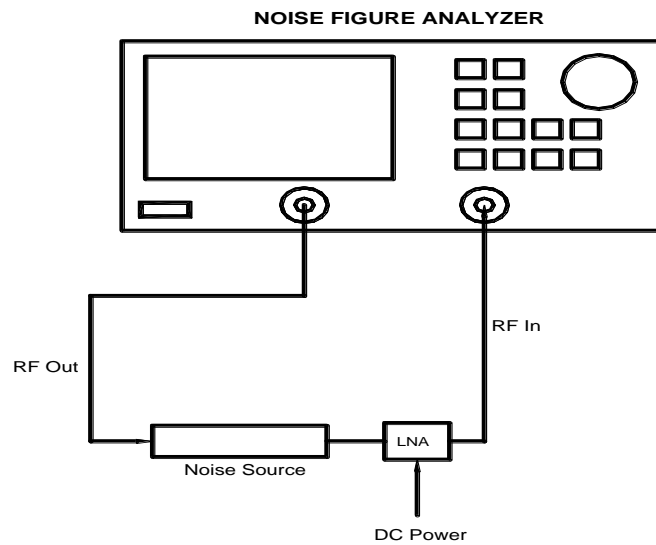
6. Test Method

6.1 LNA Gain and Noise Figure and Current Measurement

6.1.1 Measurement Equipment

- Noise Figure Analyzer, Power Supply, Bias Tee

6.1.2 Measurement Diagram



6.2 Radiation inspection

6.2.1 Measurement Equipment

- Manual Jig, Network Analyzer, DC power supply, Bias Tee

6.2.2 Measurement Diagram

