

Datasheet

AGGBP.SLS.35A Active GNSS Patch

Part No:
AGGBP.SLS.35A.07.0060A

Description:

35x35mm Single Stage GPS-GLONASS-GALILEO-BeiDou Embedded Active Patch Antenna Module with Front-End and Back-End SAW Filters

Features:

- Full GPS-GLONASS-GALILEO-BeiDou Coverage
- 13.0 dB One-Stage LNA
- Ceramic Patch Element
- Front-End and Back-End SAW Filters to Reduce Out of Band Interference
- Wide Input voltage +1.8V to +5V
- Cable: 60mm \varnothing 1.13
- Connector: IPEX MHFI (U.FL)
- RoHS & REACH Compliant

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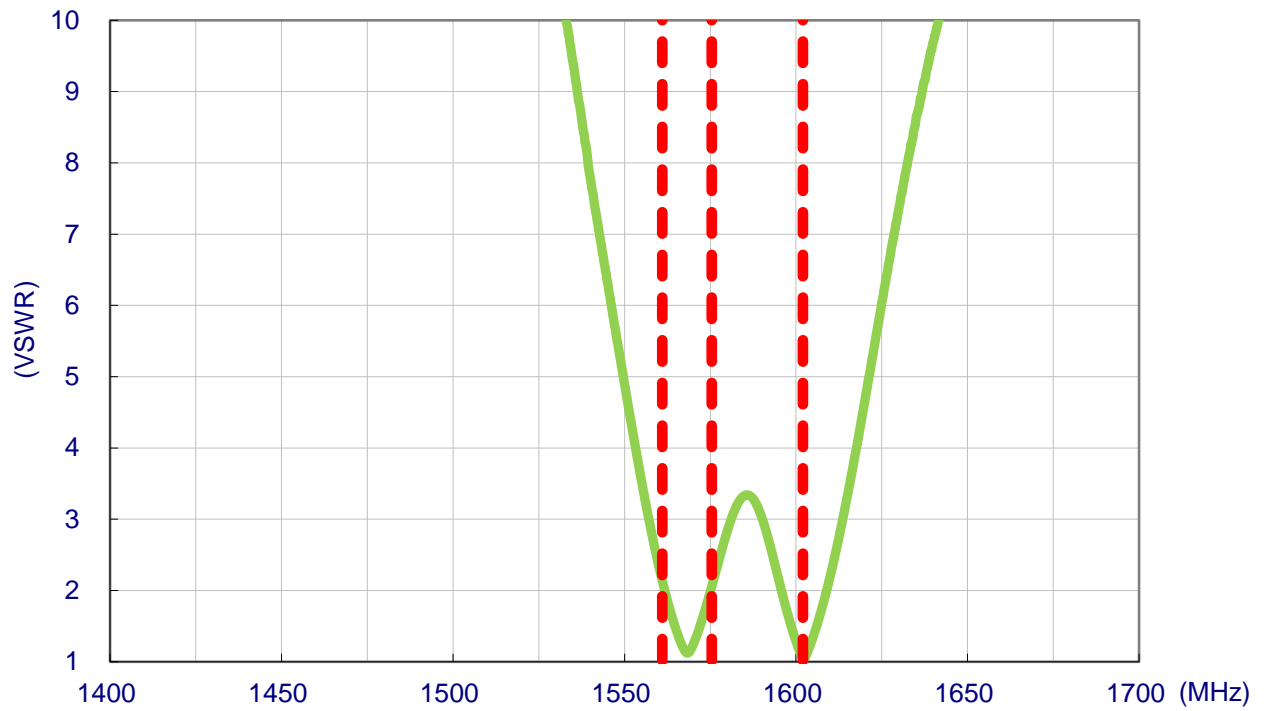
2. Specifications

GNSS Frequency Band							
GPS/QZSS	L1 1575.42MHz	L2 1227.6MHz	L5 1176.45MHz	L6 1278.75MHz			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
GLONASS	L5R 1176.45MHz	L3PT 1201.5MHz	L2PT 1246MHz	L1CR 1575.42MHz	L1PT 1602MHz		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Galileo	E5a 1176.45MHz	E5b 1201.5MHz	E4 1215MHz	E3 1256MHz	E6 1278.75MHz	E2 1561MHz	E1 1575.42MHz
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BeiDou	B1 1561MHz	B2 1207.14MHz	B3 1268.52MHz				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Compass	E5B(B2)/ E6(B3) 1268.56MHz	E2(B1) 1561MHz					
	<input type="checkbox"/>	<input checked="" type="checkbox"/>					
SBAS	Omnistar 1542.5MHz	WAAS/EGN OS 1575.42MHz					
	<input type="checkbox"/>	<input checked="" type="checkbox"/>					

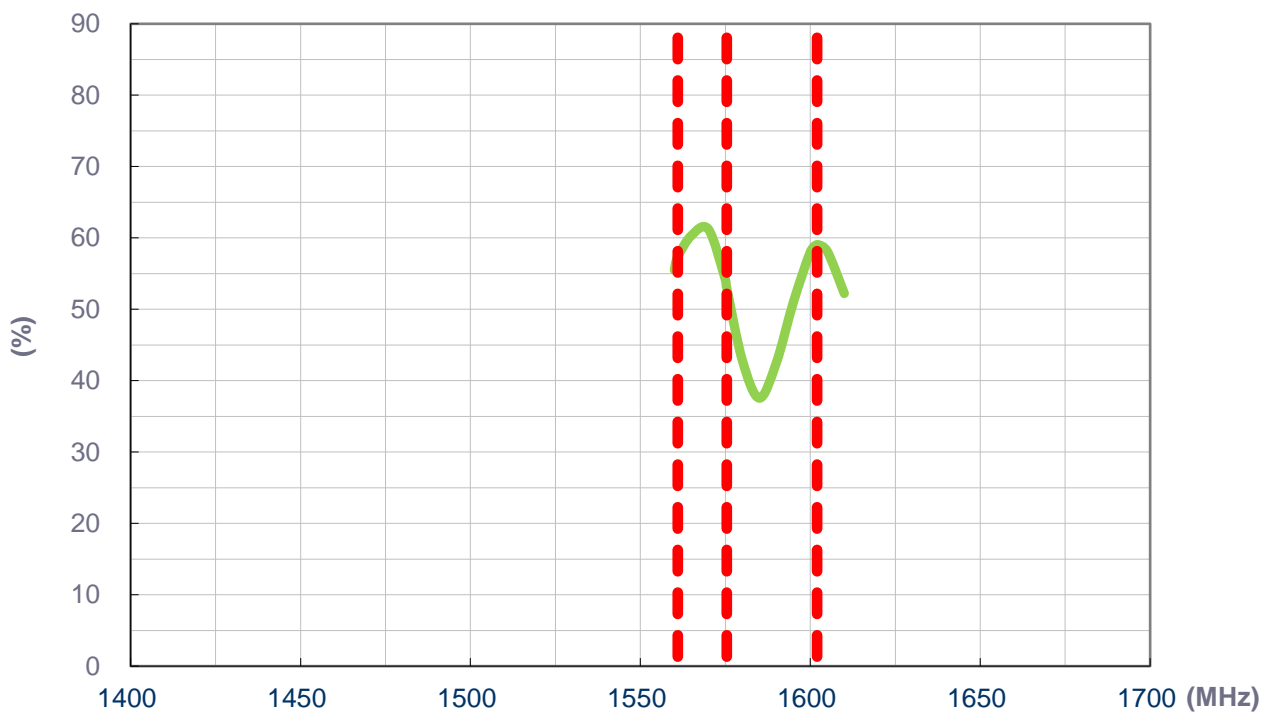
Electrical			
Frequency	BeiDou	GPS/GALILEO	GLONASS
	1561MHz	1575.42MHz	1602MHz
Efficiency (%)	57.4	53.0	59.1
Average Gain (dBi)	-2.41	-2.75	-2.29
Peak Gain (dBi)	2.79	2.23	1.32
Impedance	50Ω		
Polarization	RHCP		
LNA Specification			
Gain (dB)	13.1 ± 1	13.8 ± 1	13.7 ± 1
NF (dB)	2.5 ± 0.2	2.0 ± 0.2	2.3 ± 0.2
Input Voltage	+1.8 to +5 VDC		
Power Consumption	3 to 24.5 mA typical		
Out-Of-Band Attenuation (dB)	10-840MHz		> 60
	840-1500MHz		> 50
	1700-2000MHz		> 45
	2000-3250MHz		> 40
	3250-5000MHz		> 45
	5000-6000MHz		> 30
Mechanical			
Ceramic Dimension	35 x 35 x 3.5mm		
Total Dimension (Including Shielding Case)	35 x 35 x 8.6mm		
Connector	IPEX MHFI (U.FL)		
Cable	Coaxial Cable ø1.13, length 60mm		
Weight	21g		
Environmental			
Operation Temperature	-40°C to 85°C		
Storage Temperature	-40°C to 85°C		
Humidity	Non-condensing 65°C 95% RH		

3. Antenna Characteristics

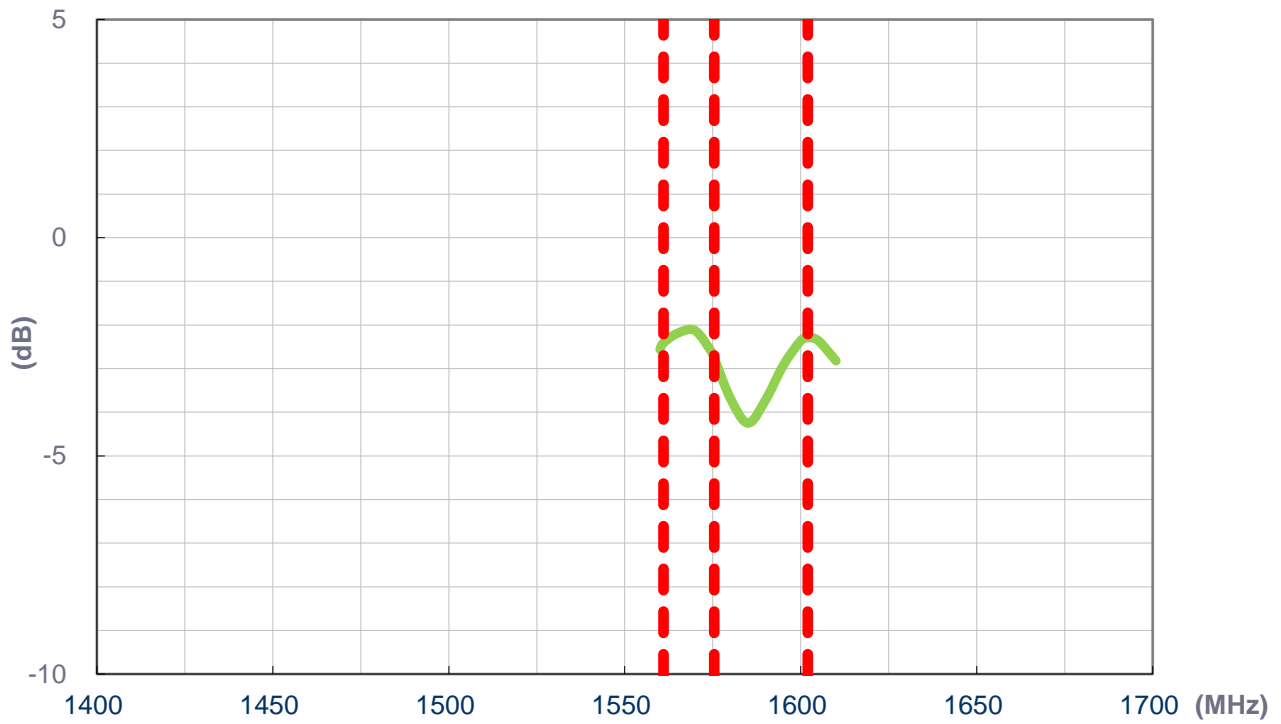
3.1 VSWR



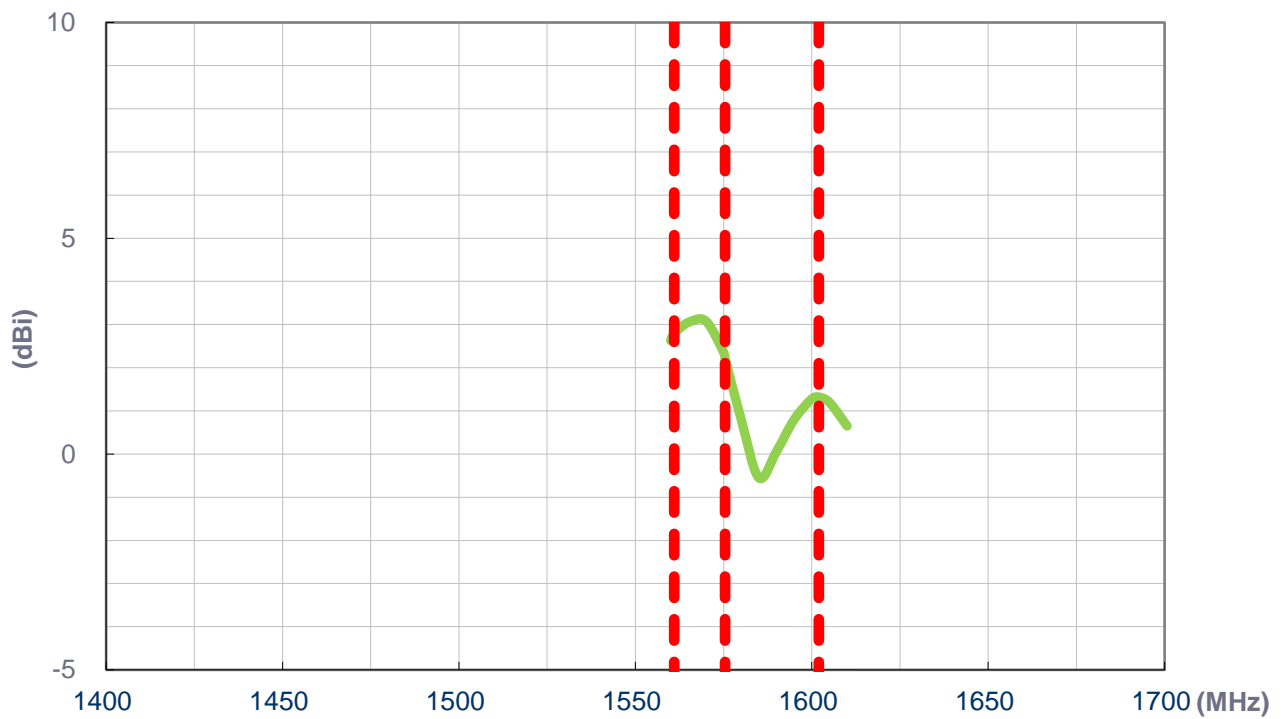
3.2 Efficiency



3.3 Average Gain

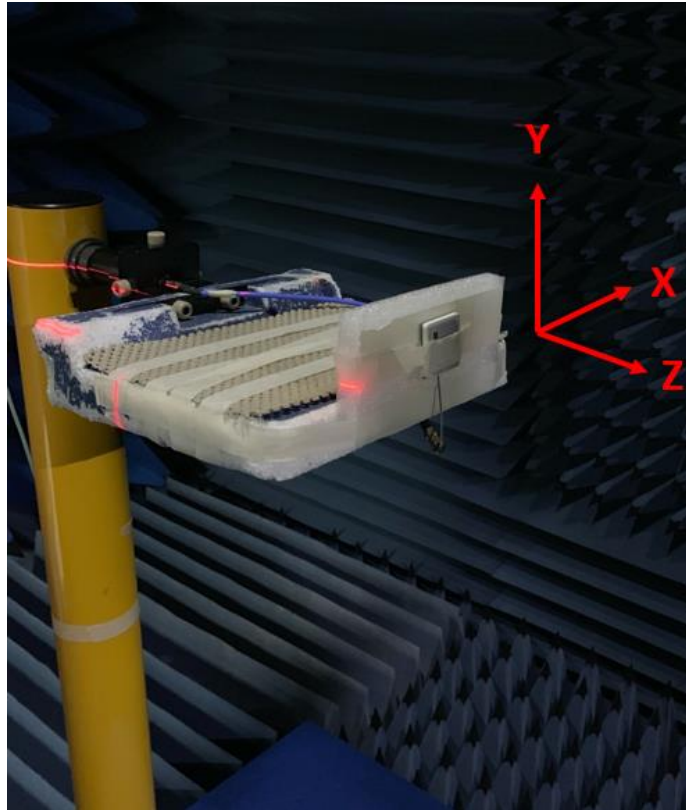


3.4 Peak Gain



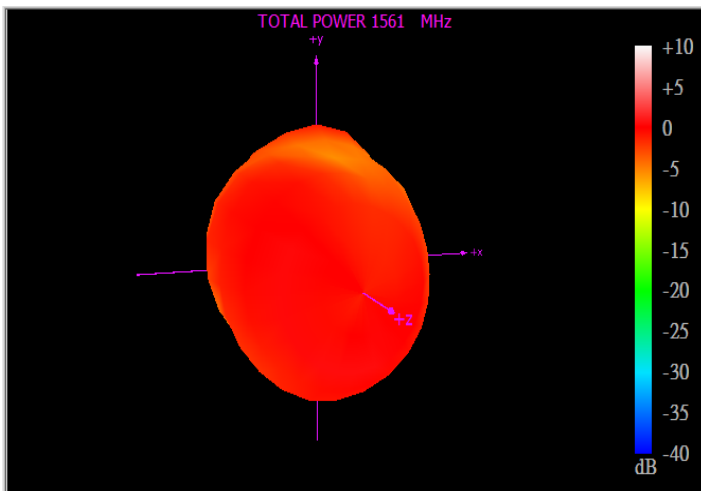
4. Antenna Radiation Patterns

4.1 Test Setup

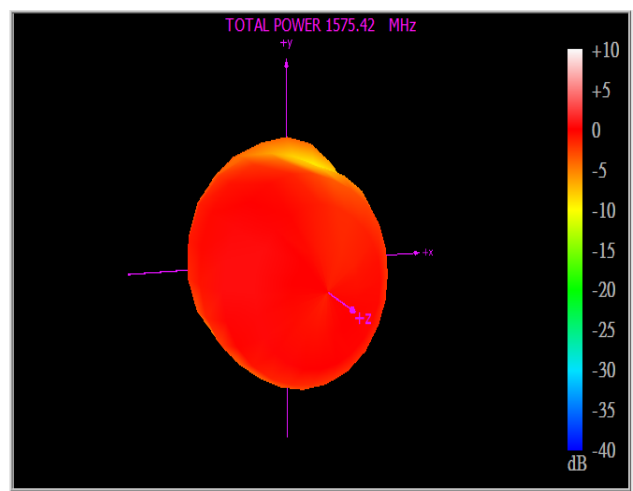


Free Space

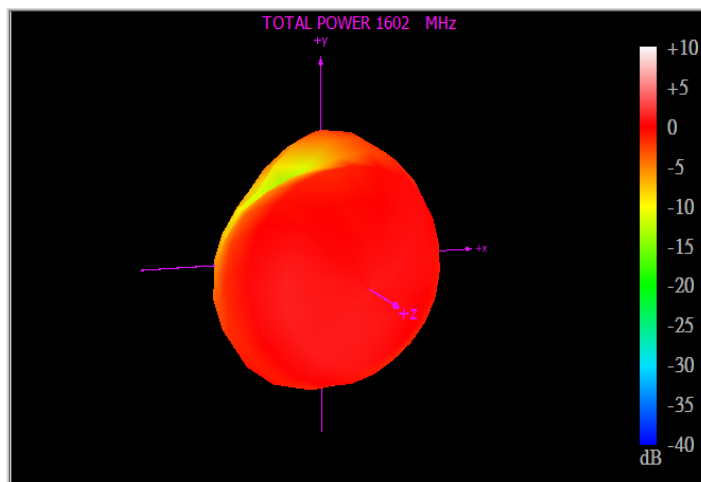
4.2 2D & 3D Radiation Patterns



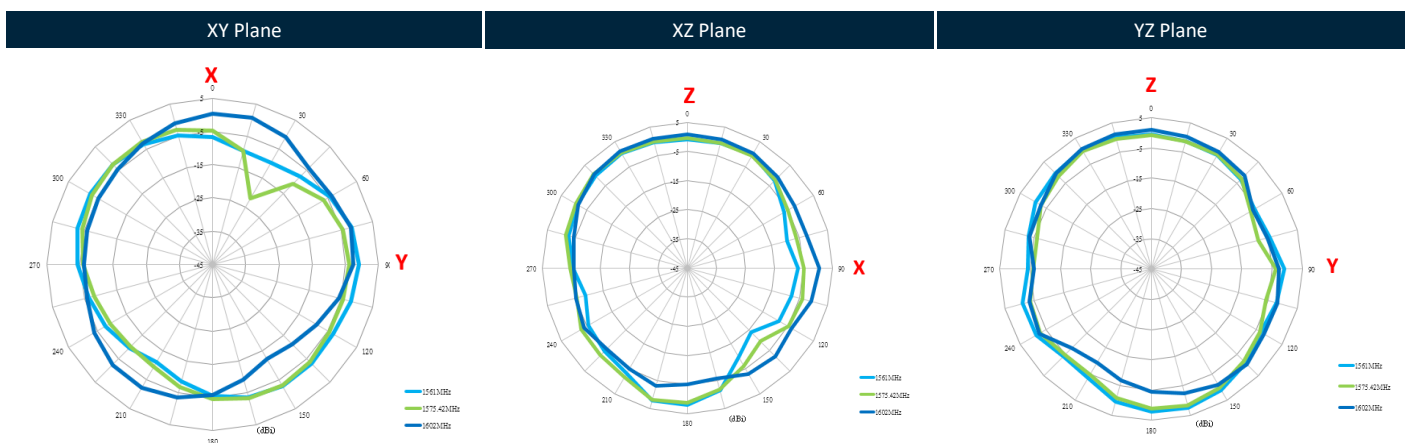
1561MHz



1575.42MHz

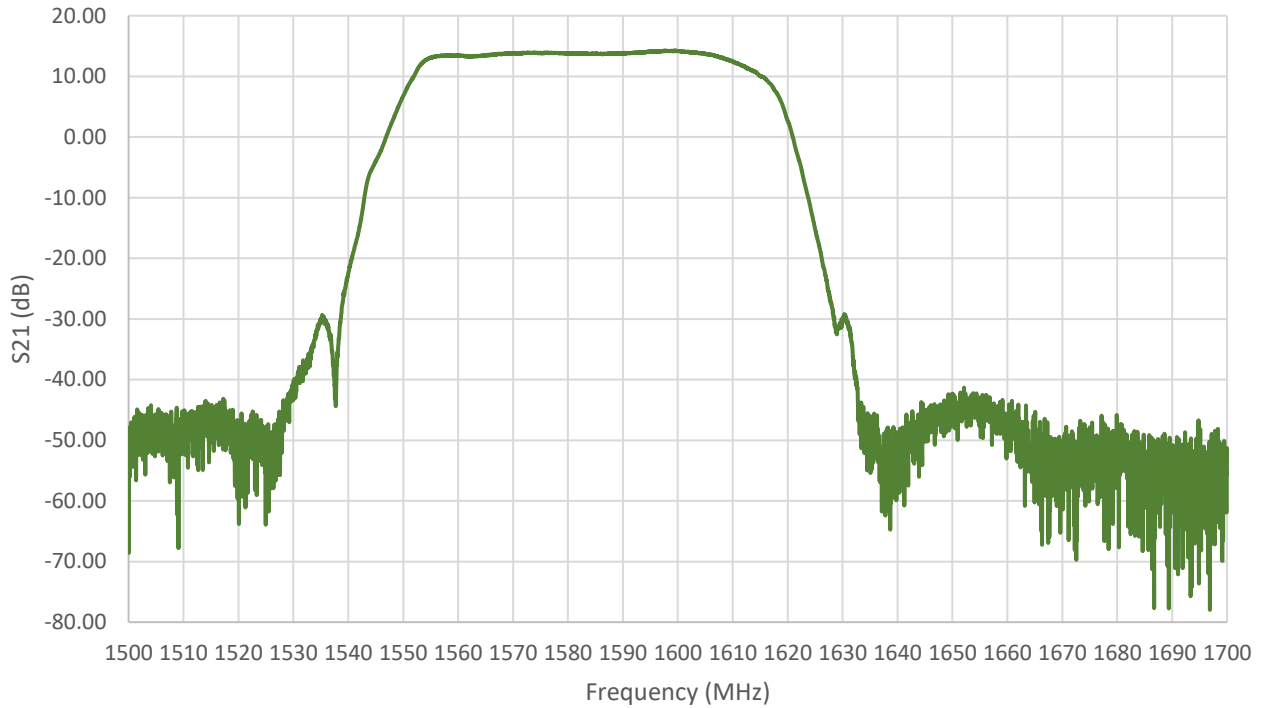


1602MHz

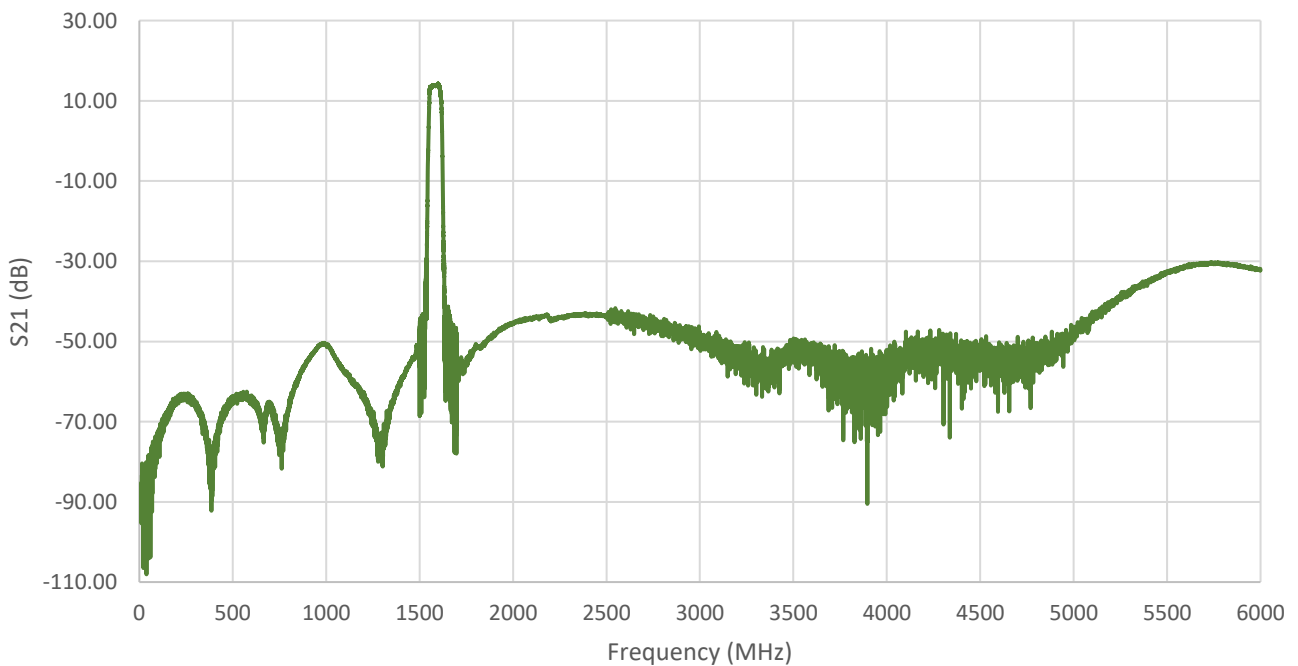


5. LNA Characteristics

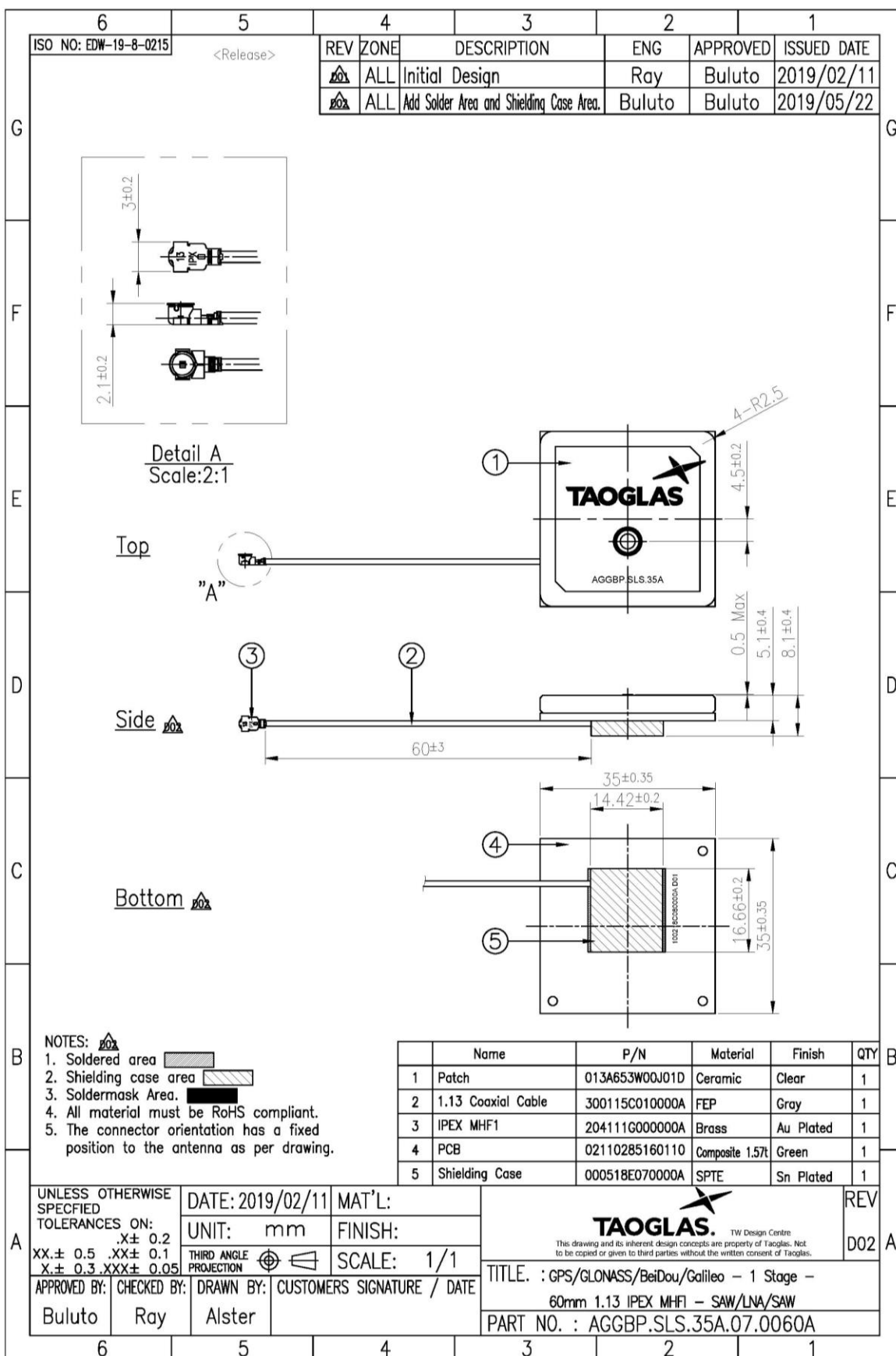
5.1 LNA In-Band S21



5.2 LNA Wideband S21

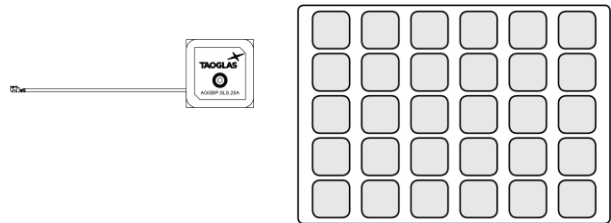


6. Mechanical Drawing (Units: mm)



7. Packaging

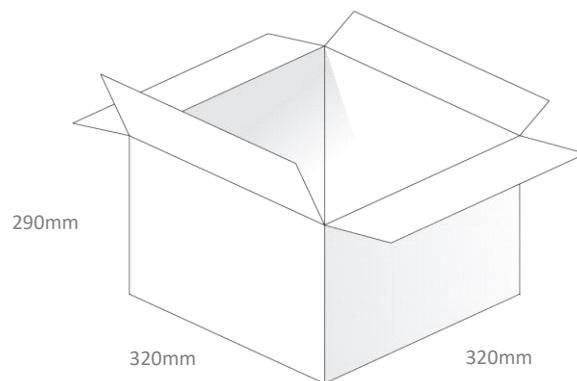
30pcs AGGBP.SLS.35A.07.0060A per Tray
Weight: 870g



180pcs AGGBP.SLS.35A.07.0060A per PE Bag
Bag Dimensions: 365*300*25 mm
Weight: 5.22Kg



540pcs AGGBP.SLS.35A.07.0060A per carton
Dimensions: 390*320*290mm
Weight: 15.66Kg



Changelog for the datasheet

SPE-19-8-079 – AGGBP.SLS.35A.07.0060A

Revision: B (Current Version)

Date:	2022-05-13
Notes:	Updated power consumption in LNA spec table
Author:	Gary West

Previous Revisions

Revision: A (Original First Release)

Date:	2019-06-20
Notes:	
Author:	Jack Conroy



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