

SPECIFICATION

Part No. : **AGGP.25F.07.0060A**

Product Name : 25mm Two Stage GPS-Glonass- GNSS Active Patch

Antenna Module with Front-end Saw Filter

Features : Industry leading GPS~GLONASS antenna performance

25.1*25.1*7.4mm (Ground Plane) 60mm Ø1.13 IPEX MHFI (U.FL)

28dB LNA

Wide Input Voltage 1.8V to 5.5V

Low Power Consumption

ROHS Compliant

Photo :



SPE-12-8-015/B/SS Page 1 of 11



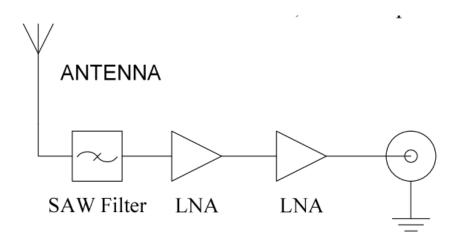
1.0Introduction

The AGGP.25F GPS – Glonass- GNSS active patch antenna (along with the AGGP.35 model) is the best choice to use as an embedded antenna with the latest generation of GPS-Glonass-GNSS receivers. It utilizes a 25.1*25.1*4mm advanced wide-band ceramic patch antenna with optimized gain, radiation patttern and axial ratio at GPS and Glonass centre frequencies.

The AGGP.25F aslo includes a two stage LNA and a front-end SAW filter to reduce out of band noise such as from nearby cellular transceiver, and improve probability of the wireless device passing radiated spurious emissions certification. Produced in TS16949 automotive quality approved facility and 100% tested for gain (S21), return loss (S11) to ensure total consistency of performance.

Cable type, length and connectors can be customized and samples offered according to requirement, subject to minimum order quantities in production. Taoglas also offers custom tuning service based on minimum order quantities, contact your local regional sales office for details.

The AGGP.25F consists of 2 functional blocks – the LNA and also the patch antenna.



SPE-12-8-015/B/SS Page 2 of 11



2.0 Specification

Patch Antenna

Parameter	Specification		
Frequency	1574~1610MHz		
Gain @ Zenith	1575.42MHz 1.5 dBic Typ. @ Zenith		
Gain @ Zeniin	1602MHz +0 dBic Typ. @ Zenith		
Polarization	RHCP		
Axial Ratio	3.0dB max@Zenith		
Patch Dimension	25.1*25.1*4mm		

LNA

A								
Parameter		Specification						
Frequency		1574~1610MHz						
Outer Band Attenuation		1592±140MHz 15dB min.						
Output Impedance	50Ω							
Output VSWR	2.0 Max							
Pout at 1dB Gain	Typ2dBm							
Compression point	Min6dBm							
LNA Gain, Power Consumption and Noise Figure								
	LNA Gain		Noise Figure					
Voltage	(Typ)	Power Consumptio (mA) Typ	Тур					
Min. 1.8V	22dB	5mA	2.6dB					
Typ. 3.0V	28dB	10mA	2.6dB					
Max. 5.5V	31dB	23mA	2.9dB					

Cable* & Connector

Parameter	Specification		
RF Cable	Coaxial Cable Ø1.13 ± 0.1mm, length 60 ± 2.5mm		
Connector	IPEX MHFI (U.FL)		

SPE-12-8-015/B/SS Page 3 of 11



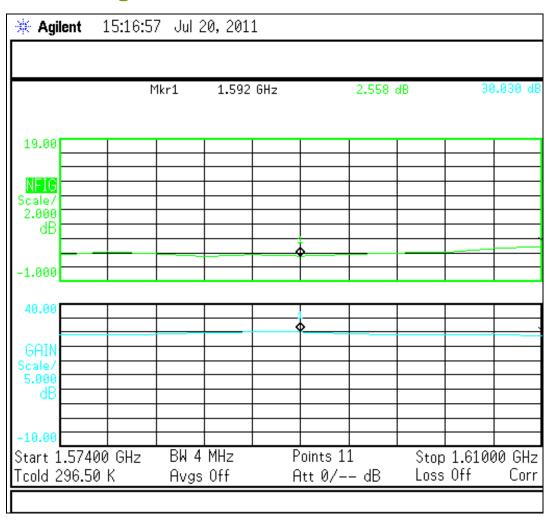
3.0 LNA Gain and Out Band Rejection @3.0V



SPE-12-8-015/B/SS Page 4 of 11



4.0 LNA Noise Figure @3.0V



SPE-12-8-015/B/SS Page 5 of 11



5.0 Total Specification

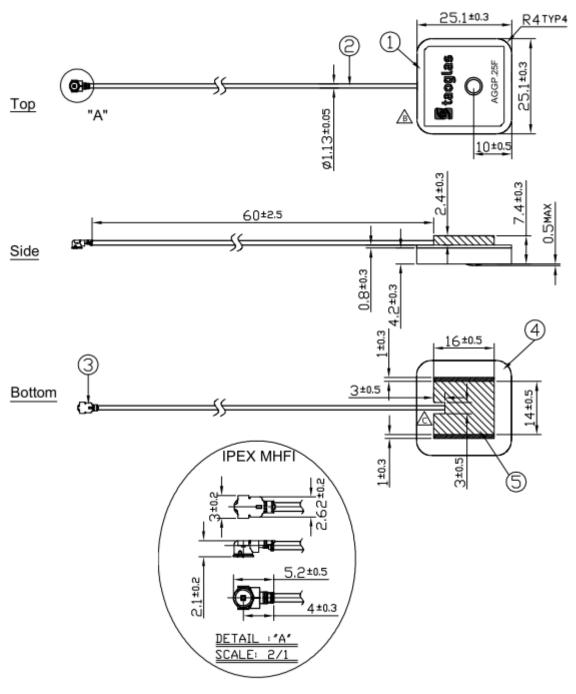
(through Antenna, LNA, Cable and Connector)

Parameter	Specification
Frequency	1574~1610MHz
	1575.42MHz: 26.5 ± 3dBic
Gain at 90°	1602MHz: 28 ± 3dBic
Output Impedance	50Ω
Polarization	RHCP
Output VSWR	Max 2.0
Operation Temperature	-40°C to + 85°C
Storage Temperature	-40°C to + 85°C
Relative Humidity	40% to 95%
Input Voltage	Min:1.8V Typ. 3.0V Max:5V
Antenna	25.1*25.1*7.4mm

SPE-12-8-015/B/SS Page 6 of 11



6.0 Technical Drawing



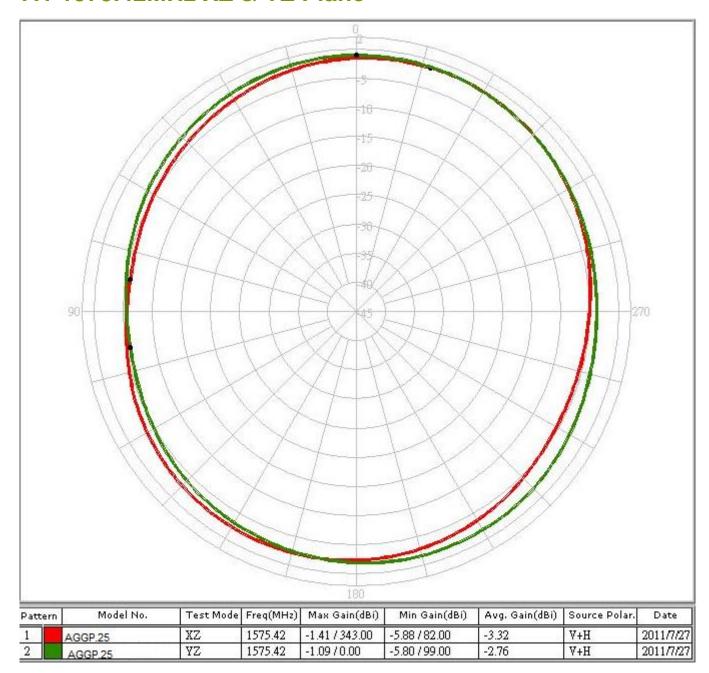
NOTE: 1. Soldered area 2. Shielding case area 3. All material must be RoHS compliant. 4. The connector orientation has a fixed position to the antenna as per drawing.		Name	P/N	Material	Finish	QTY
	1	AGGP.25F Patch(25*25*4.2mm)	AGGP.25F	Ceramic	Clear	1
	2	1.13 Coaxial Cable	OD.113.CM	FEP	Gray	1
	3	IPEX MHF1 Connector	IPEX.MHFI.113	Brass	Gold	1
	4	PCB		FR4 0.8t	Green	1
	5	Shielding Case		(Tin)SPTE	Tin Plated	1

SPE-12-8-015/B/SS Page 7 of 11



7.0 Radiation Patterns

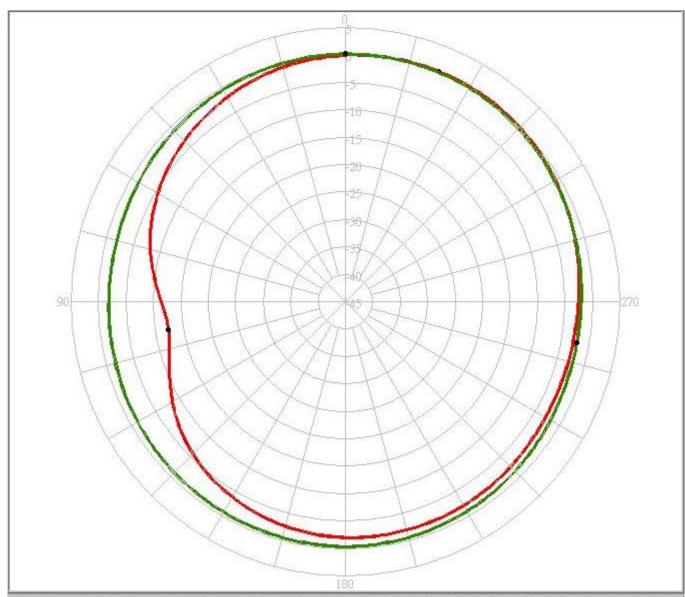
7.1 1575.42MHz XZ & YZ Plane



SPE-12-8-015/B/SS Page 8 of 11



7.2 1602MHz XZ &YZ Plane



Patt	ern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1		AGGP.25	XZ	1602.00	0.28 / 338.00	-12.36 / 99.00	-2.49	V+H	2011/8/1
2		AGGP.25	YZ	1602.00	0.19 / 0.00	-2.17 / 260.00	-0.91	V+H	2011/8/1

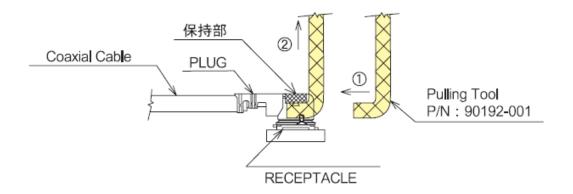
SPE-12-8-015/B/SS Page 9 of 11



8.0 Plugs Usage Precautions

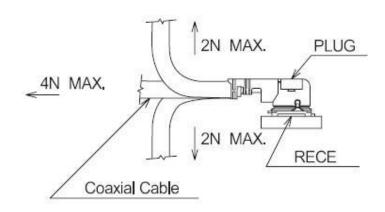
8.1 Mating / unmating

- (1) To disconnect connectors, insert the end portion of I-PEX under the connector flanges and pull off vertically, in the direction of the connector mating axis.
- (2) To mate the connectors, the mating axes of both connectors must be aligned and the connectors can be mated. The "click" will confirm fully mated connection. Do not attempt to insert on an extreme angle.



8.2 Pull forces on the cable after connectors are mated

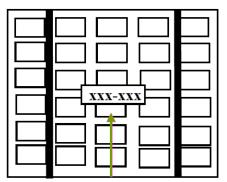
After the connectors are mated, do not apply a load to the cable in excess of the values indicated in the diagram below.



SPE-12-8-015/B/SS Page 10 of 11

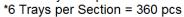


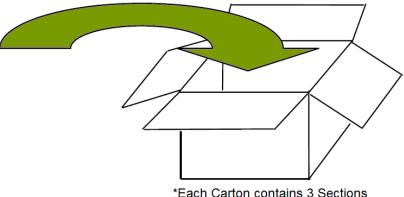
9.0 Packaging



*Packaged in Tray with Foam

^{*}One Tray = 60 pieces





*Each Carton contains 3 Sections *1080 pieces per Carton

SPE-12-8-015/B/SS Page 11 of 11