

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 :



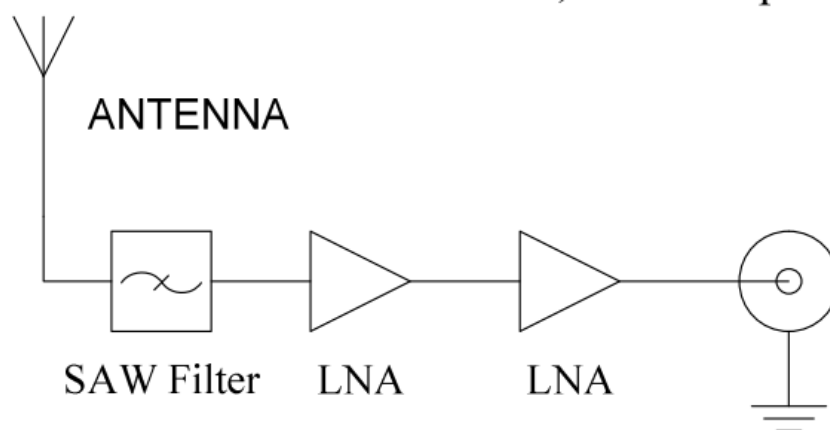
1.0 Introduction

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 pattern and axial ratio at GPS and Glonass centre frequencies.

The AGGP.25F also 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.



2.0 Specification

Patch Antenna

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

LNA

Parameter	Specification
Frequency	1574~1610MHz
Outer Band Attenuation	1592±140MHz 15dB min.
Output Impedance	50Ω
Output VSWR	2.0 Max
Pout at 1dB Gain	Typ. -2dBm
Compression point	Min. -6dBm

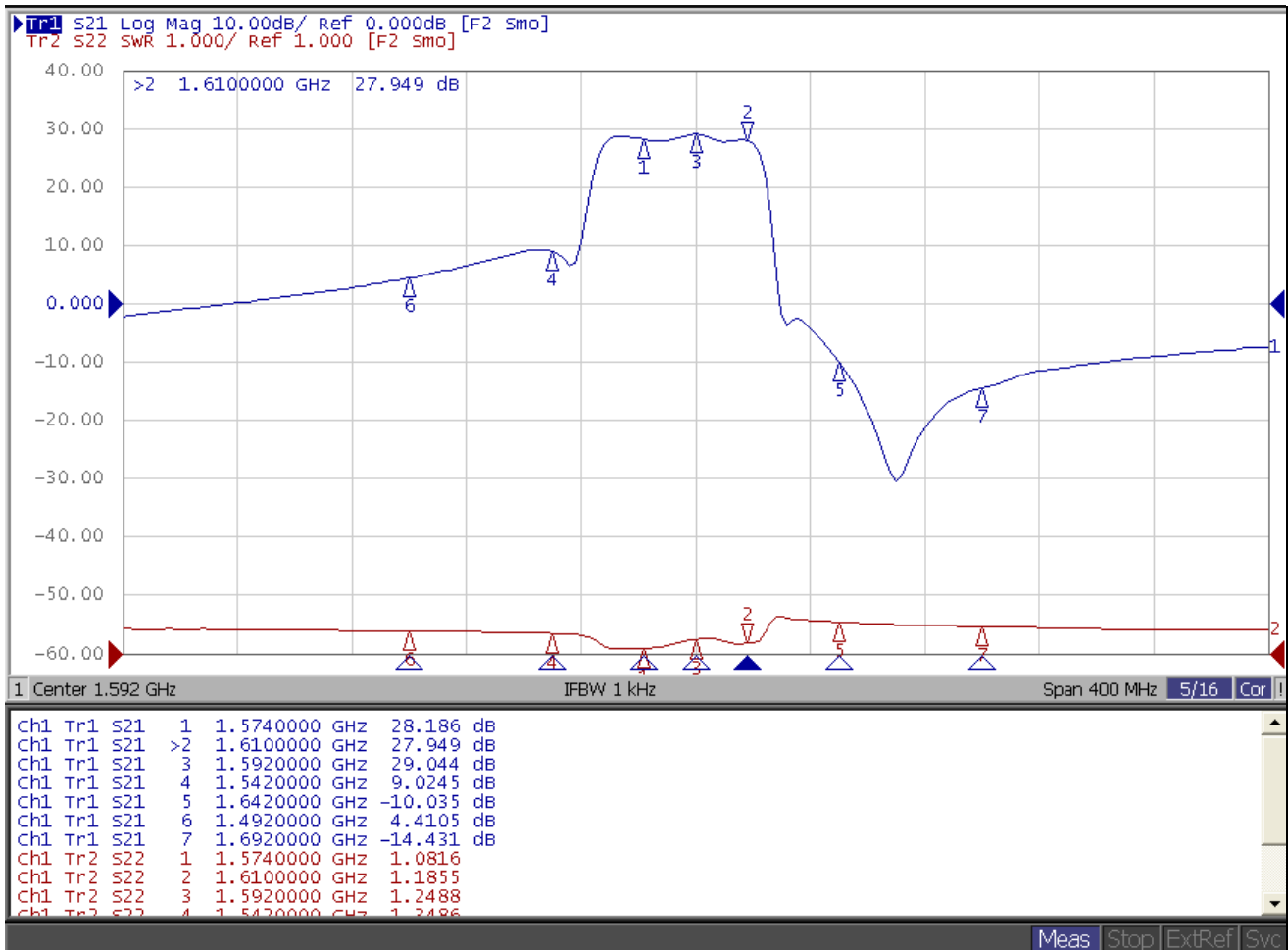
LNA Gain, Power Consumption and Noise Figure

Voltage	LNA Gain	Power Consumption (mA) Typ	Noise Figure
	(Typ)		Typ
Min. 1.8V	22dB	5mA	2.6dB
Typ. 3.0V	28dB	10mA	2.6dB
Max. 5.5V	31dB	23mA	2.9dB

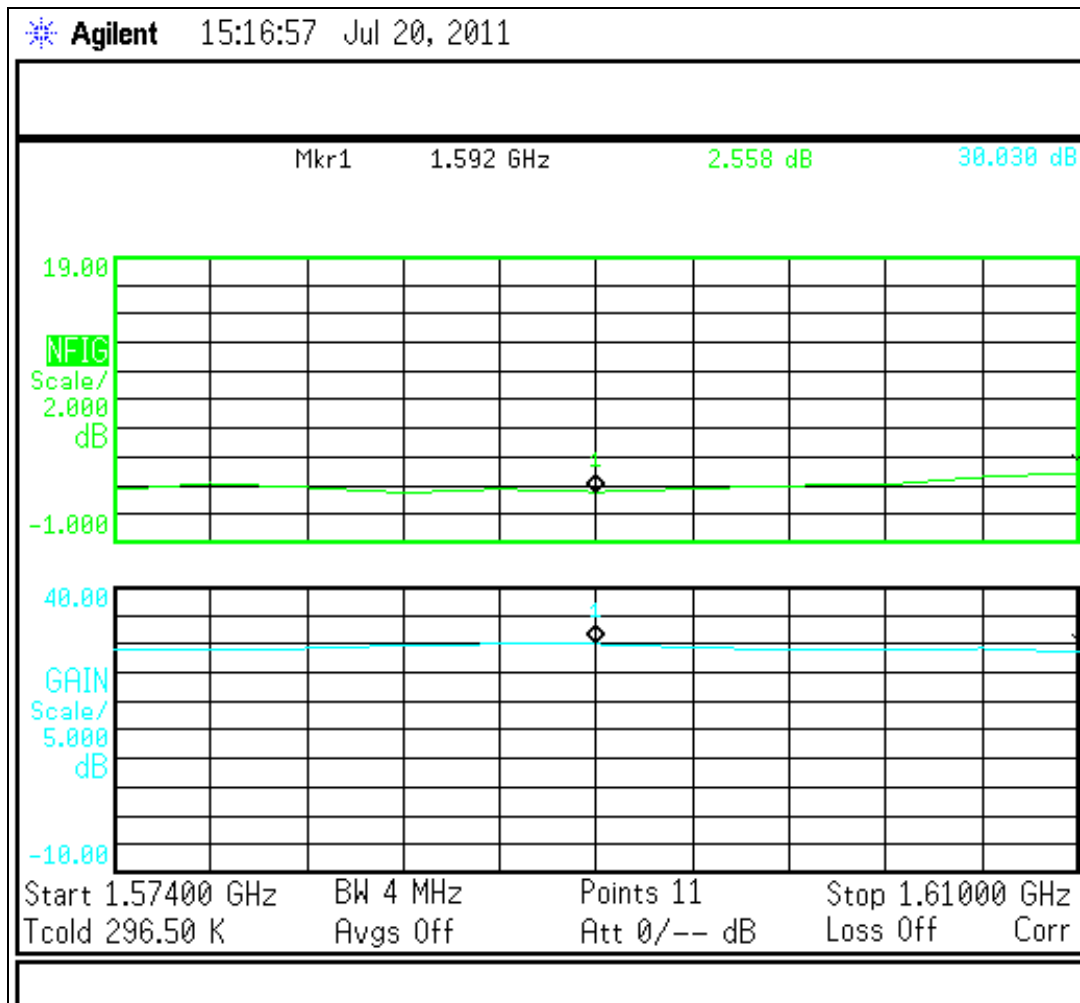
Cable* & Connector

Parameter	Specification
RF Cable	Coaxial Cable $\varnothing 1.13 \pm 0.1\text{mm}$, length $60 \pm 2.5\text{mm}$
Connector	IPEX MHFI (U.FL)

3.0 LNA Gain and Out Band Rejection @3.0V



4.0 LNA Noise Figure @3.0V

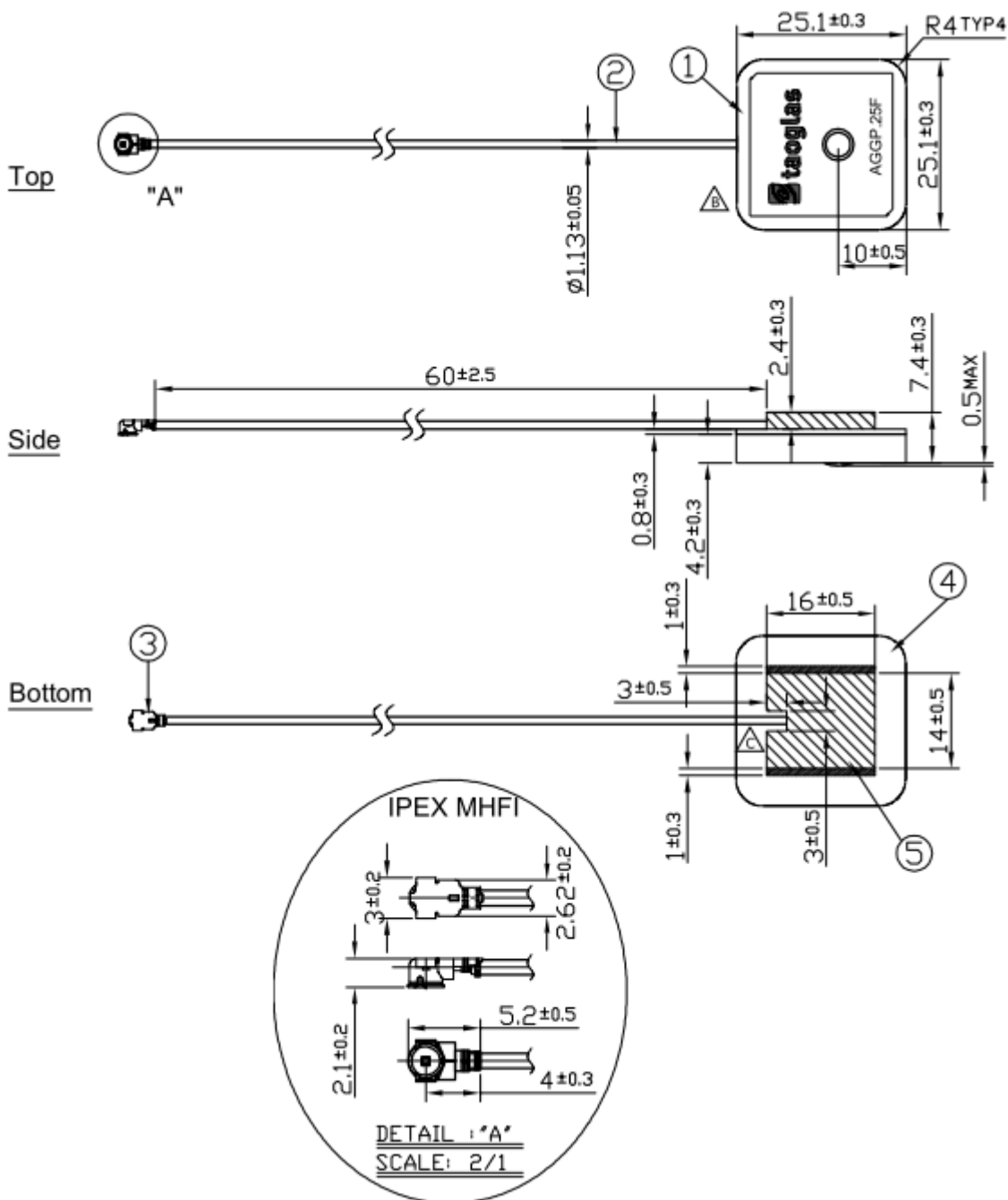




5.0 Total Specification

(through Antenna, LNA, Cable and Connector)

Parameter	Specification
Frequency	1574~1610MHz
Gain at 90°	1575.42MHz: 26.5 ± 3dBic 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

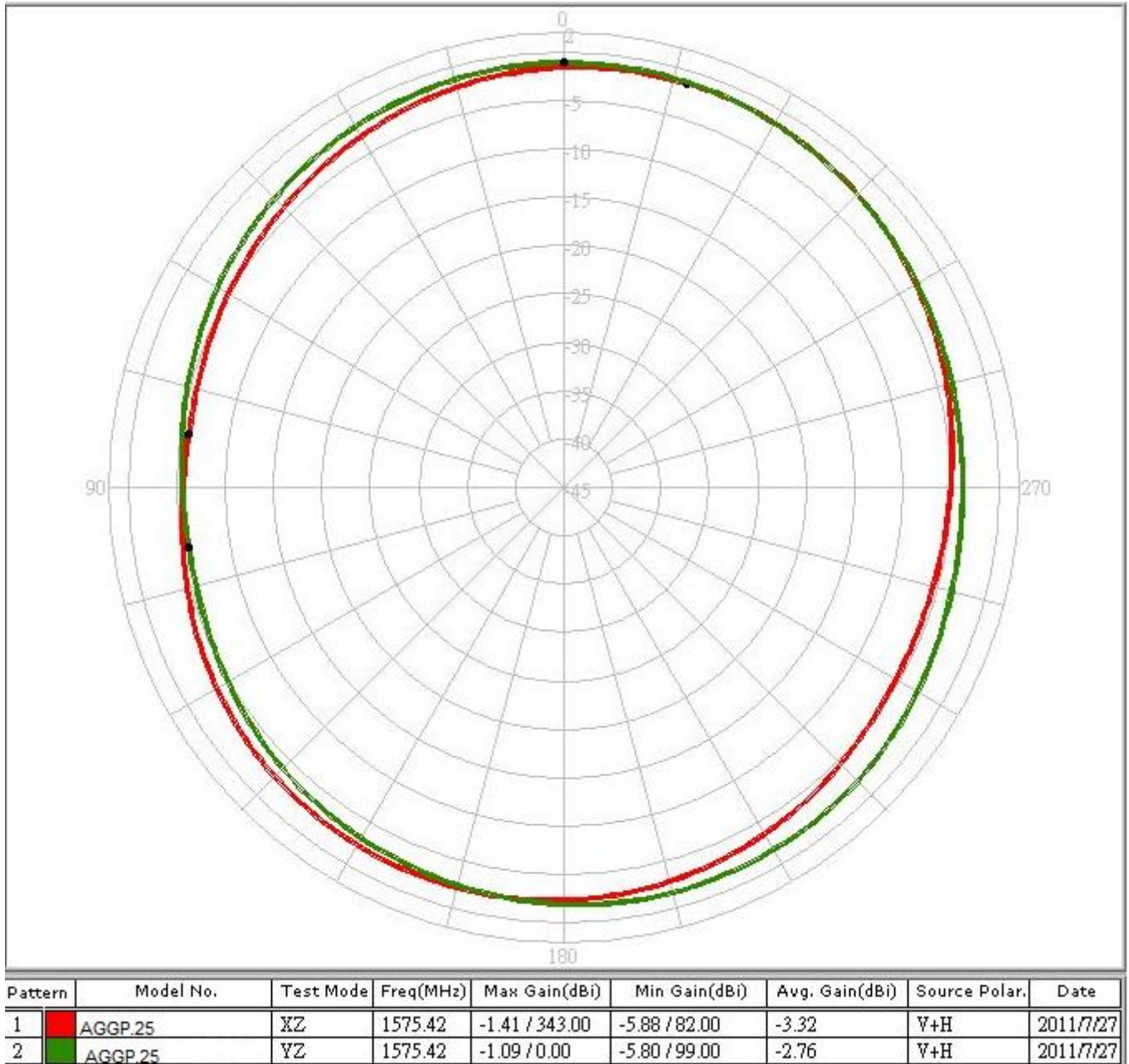
6.0 Technical Drawing



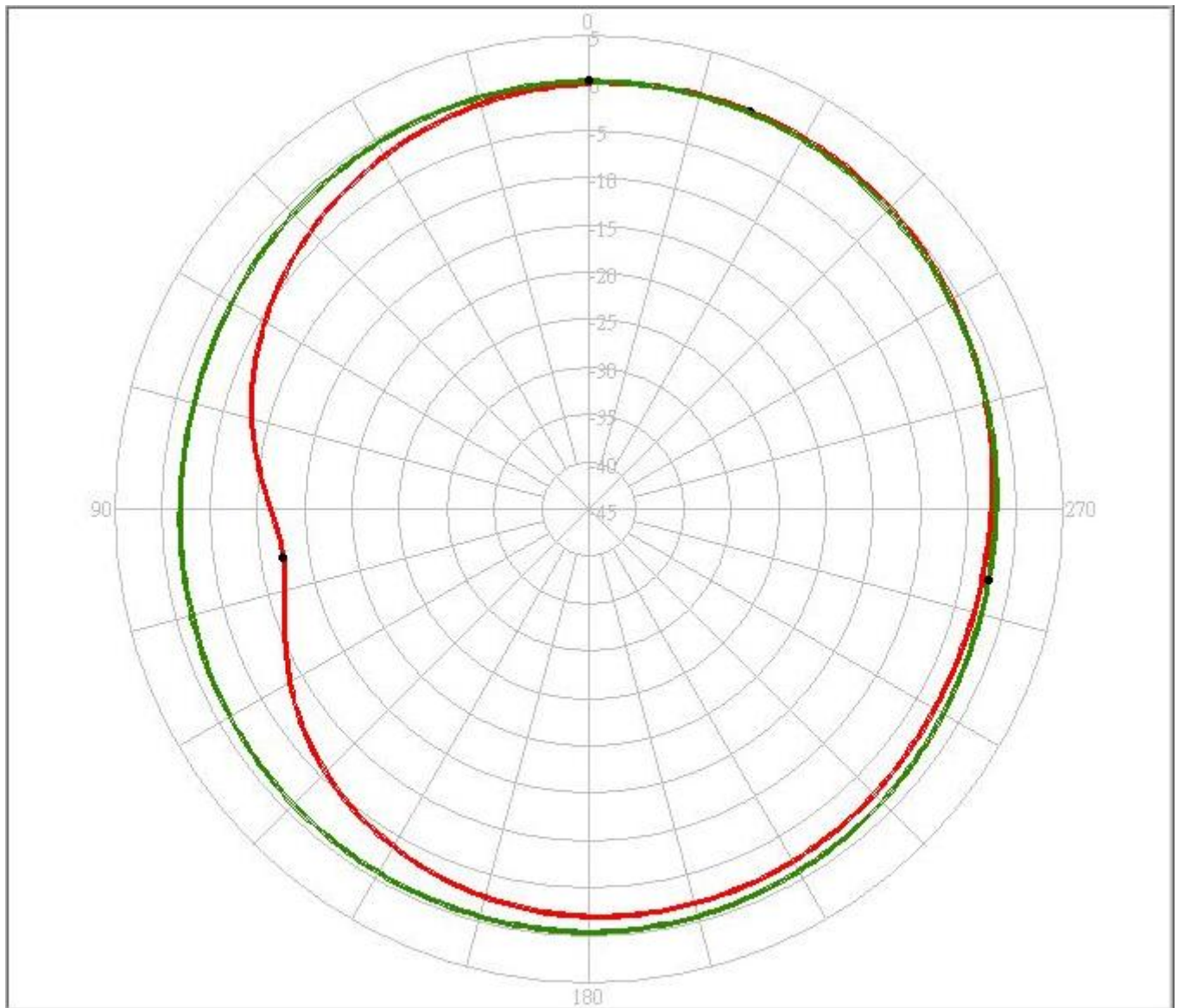
NOTE:	Name	P/N	Material	Finish	QTY
1. Soldered area 	1 AGGP.25F Patch(25*25*4.2mm)	AGGP.25F	Ceramic	Clear	1
2. Shielding case area 	2 1.13 Coaxial Cable	OD.113.CM	FEP	Gray	1
3. All material must be RoHS compliant.	3 IPEX MHF1 Connector	IPEX.MHF1.113	Brass	Gold	1
4. The connector orientation has a fixed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

7.0 Radiation Patterns

7.1 1575.42MHz XZ & YZ Plane



7.2 1602MHz XZ &YZ Plane

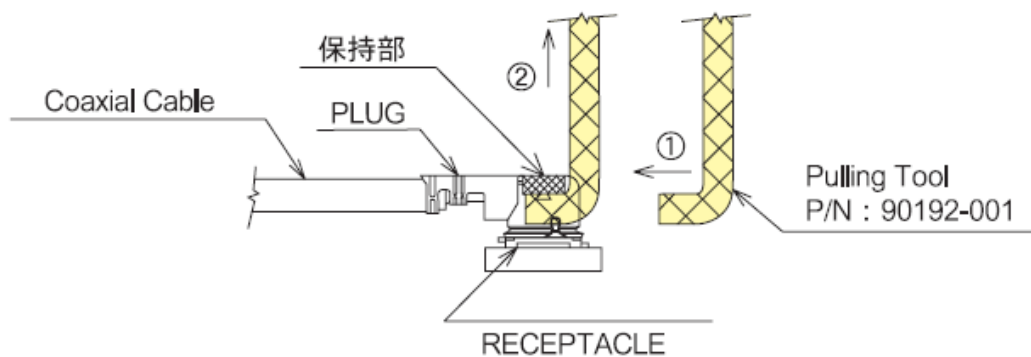


Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.	Date
1	AGGP.25	XZ	1602.00	0.28 / 338.00	-12.36 / 99.00	-2.49	V+H	2011/8/1
2	AGGP.25	YZ	1602.00	0.19 / 0.00	-2.17 / 260.00	-0.91	V+H	2011/8/1

8.0 Plugs Usage Precautions

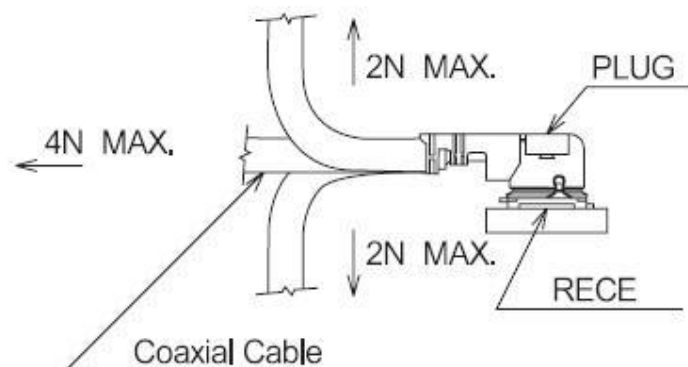
8.1 Mating / unmating

- (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.

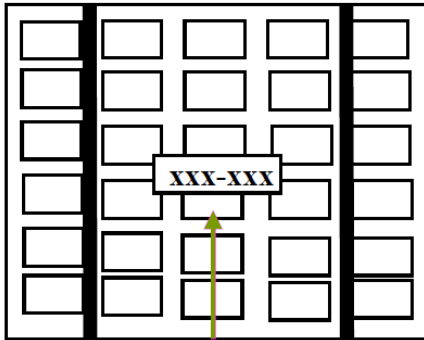


8.2 Pull forces on the cable after connectors are mated

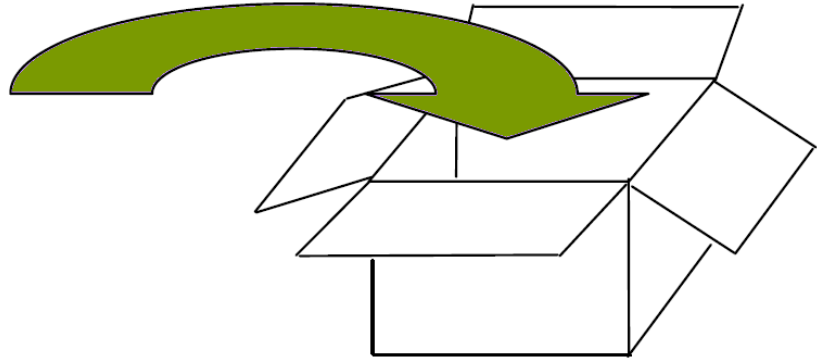
After the connectors are mated, do not apply a load to the cable in excess of the values indicated in the diagram below.



9.0 Packaging



- *Packaged in Tray with Foam
- *One Tray = 60 pieces
- *6 Trays per Section = 360 pcs



- *Each Carton contains 3 Sections
- *1080 pieces per Carton