

# **SPECIFICATION**

Part No.	:	AP.12B.07.0046A
Product Name	:	12mm Two Stage Active GPS Patch Antenna
Features	:	Ultra Miniature GPS active patch High performance Ultra low power consumption RoHS compliant
Photo :		





### **1.0 Introduction**

This miniaturised GPS Active Antenna module combines a tiny 12mm squared ceramic patch antenna from Cirocomm with a two stage low noise amplifier. It is available as a 'plug and play' format for onboard integration with GPS receiver modules via ultra thin coaxial cable and connector from IPEX.

Only 5.5mm in height, this new Taoglas active antenna module utilises XtremeGain™ technology for the highest industry sensitivity.

Designed for use with the new generation of GPS receiver modules using chipsets from SiRF, Ublox, Nemerix, Fastrax, Navsync, Falcom, Telit, Tyco, Siemens etc.

## 2.0 Specification

#### Antenna

Frequency	1575.42 ± 1.023MHz			
Antenna Gain	Typ 1.5 dBic @ Zenith(13.4mm*13.4mm Ground Plane)			
Impedance	50 Ω			
Polarization	RHCP			
Axial Ratio	Max 4.0dB @ Zenith			
Patch Dimension	12mm x 12mm x 3.5mm			

#### LNA

Frequency	1575.42 ± 1.023MHz				
Gain	Typ. 25dB @ 25°C ± 5°C				
Noise Figure	Typ. 1.4dB @ 25°C ± 5°C				
	Max 1.8dB @ 85°C				

#### **Cable\* & Connector**

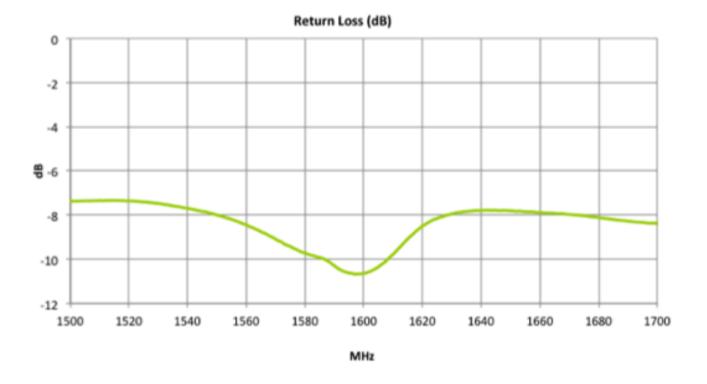
RF Cable	Coaxial Cable $\phi$ 1.13 ± 0.1mm, length 46 ± 2.5mm	
Connector	Ipex MHFI (U.FL)	



### **Total Specification**

Frequency	1575.42 ± 1.023MHz		
Gain	23.5 ± 4dBic @ 90°		
Output Impedance	50 Ω		
Polarization	RHCP		
Output VSWR	Max 2.0		
Input Voltage	Min. 2.5V Typ 3.0V Max. 5.5V		
Power Consumption	At 3.0V Typ. 13mA, Max. 15mA		

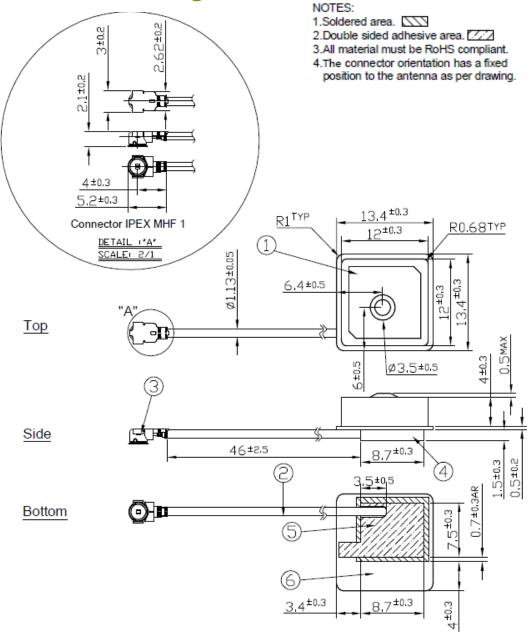
### 3.0 Return Loss



Note: it is expected that the installation of the final device (e.g. proximity to inclosure) will shift the return loss peak down so that it is at or closer to 1575MHz.



## 3.0 Technical Drawing



	Name	Material	Finish	QTY
1	AP.12B Patch(12*12*4mm)	Ceramic	Clear	1
2	1.13 Coaxial Cable	FEP	Gray	1
3	IPEX MHF1 Connector	Brass	Gold	1
4	Shielding Case	Tin (SPTE)	Tin Plated	1
5	Double sided Adhesive	NITTO 5015*2	White Liner	1
6	AP.12B PCB	FR4 0.5t	Green	1