



# SPECIFICATION

Part No. : **AC-04b**

Product Name : One Stage Active GPS Chip Antenna Module

Description : GPS on board module for mobile applications



## REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Feb 16 <sup>th</sup> 2007	All	New format	TW Product Centre	Ronan Quinlan
02	Feb 11 <sup>th</sup> 2008	1	New pictures	Ireland	Dermot O'Shea



Specification

**1.0 Scope**

This specification is for a GPS one stage active GPS Chip Antenna module for internal SMT mounting.

**2.0 Electrical Specifications**

The antenna has the electrical characteristics given in Table 1 & Table 2 under the Taoglas standard installation conditions as shown on the Evaluation Board

**TABLE 1 - Chip Antenna**

No.	Parameter	Specification
1	Frequency	1575.42MHz
2	Dimensions	25x15.5x2.25 mm
3	Impedance	50 Ω
4	VSWR	2.0 max
5	Polarization	Linear
6	Peak Gain	1.5dBi max
7	Average Gain	-5dBi
8	Operating Conditions	Temperature -40 to +85 °C Humidity 10 to 95% RH
9	Storage Conditions	Temperature -40 to +90 °C Humidity 10 to 95% RH

**TABLE 2 - LNA**

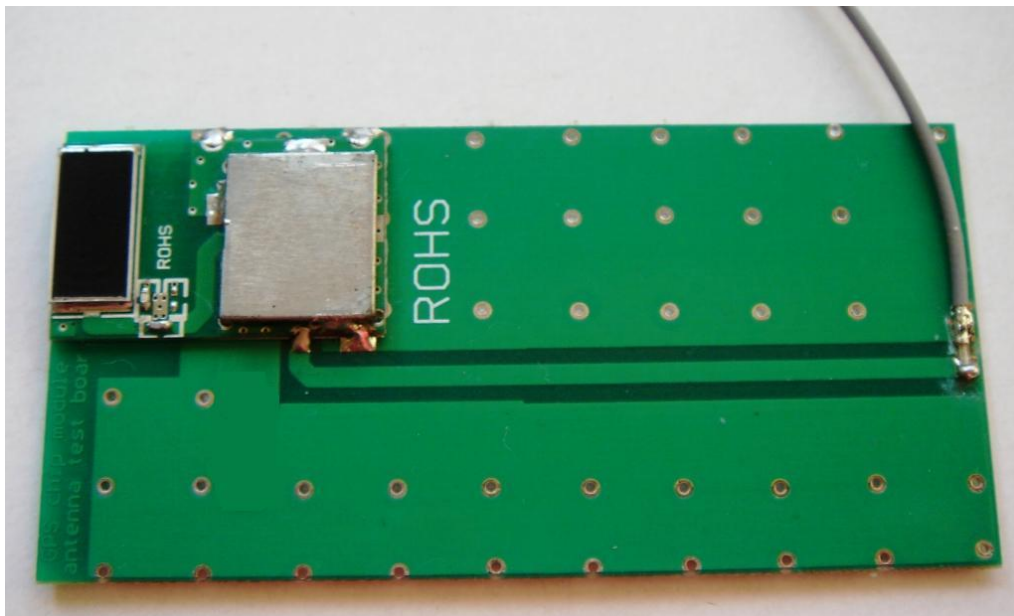
No.	Parameter	Specification
1	Frequency	1575.42MHz ± 1.023MHz
2	Gain	16dB typical (at 3.0V)
3	Noise Figure	0.5 dB typical (at 3.0V)
4	Filter (out of band attenuation)	SAW Filter 40dB min fo ± 50MHz 45dB min fo ± 100MHz (fo = 1575.42MHz)



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5	Output VSWR	2.0 max
6	Voltage	DC = 3.0 ± 0.5V
7	Current	DC = 13mA (at 3v)

\*Data is measured on Taoglas Evaluation Board (reference ground plane) pictured below

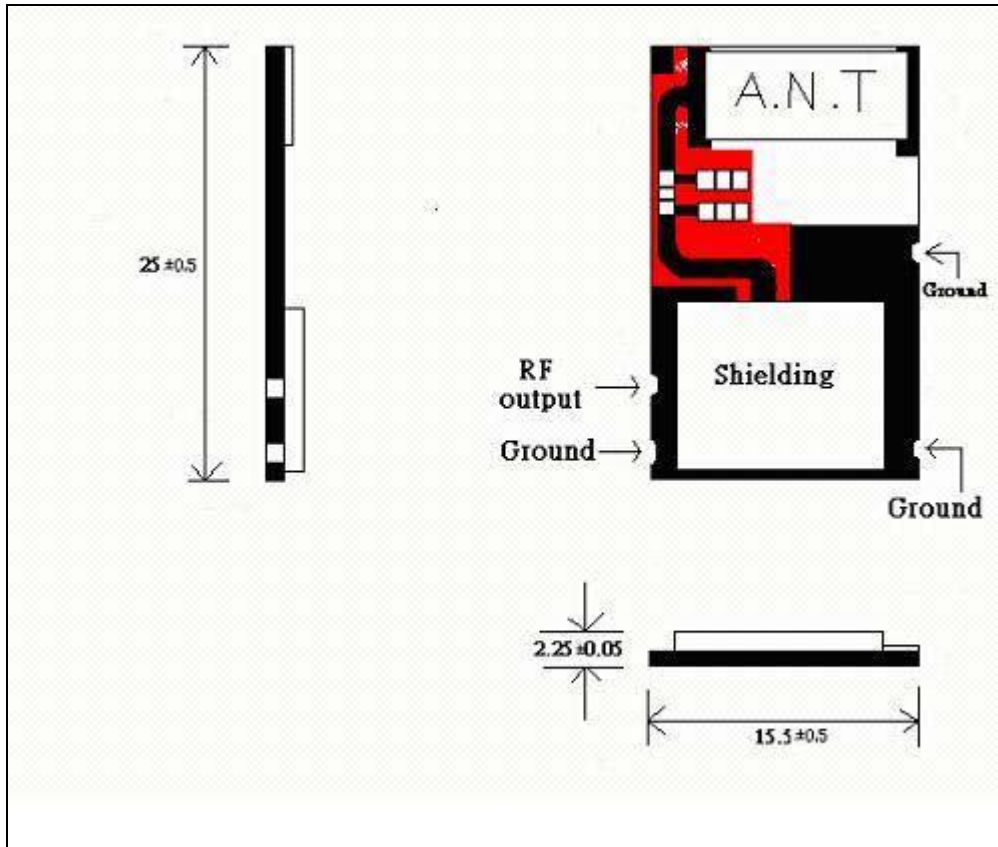


Evaluation board = 69 x 34 x 1.6 mm



Specification

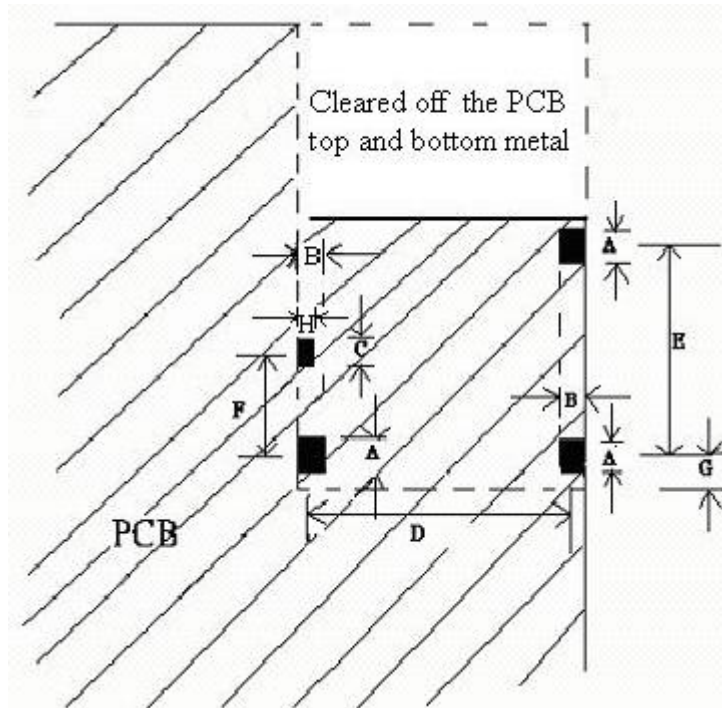
Antenna Module Dimensions





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Required PCB layout

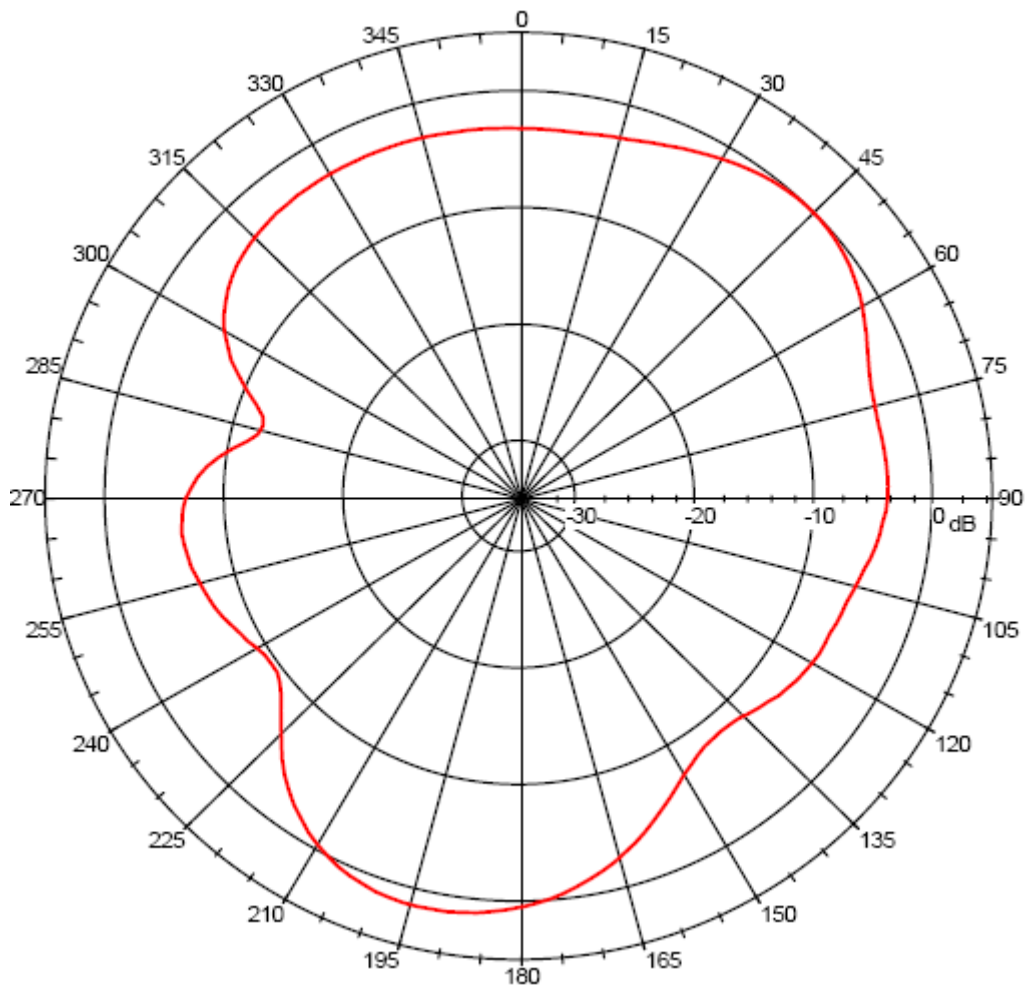


- A: 2.5mm
- B: 2.5mm
- C: 1.42mm
- D: 15.3mm
- E: 11.2mm
- F: 4.2mm
- G: 1.9mm
- H: 1.75mm



Specification

Chip antenna radiation pattern (excluding LNA gain)



Far-field amplitude of 07-05-4.nsi

