



SPECIFICATION

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

Product Name : Two 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 th 2007	All	New format	TW Product Centre	Ronan Quinlan
02	Feb 11 th 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

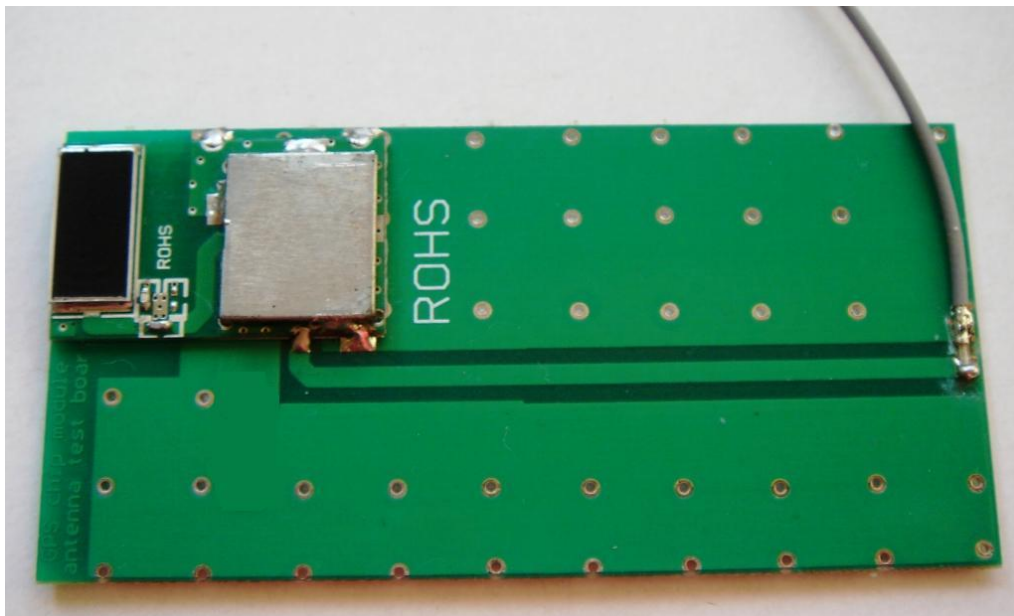
No.	Parameter	Specification
1	Frequency	1575.42MHz ± 1.023MHz
2	Gain	27dB typical (at 3.0V)
3	Noise Figure	0.55dB typical (at 3.0V)
4	Filter (out of band attenuation)	SAW Filter 40dB min fo ± 50MHz 45dB min fo ± 100MHz



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		(fo = 1575.42MHz)
5	Filter (fo insertion loss)	1.3 dB max
5	Output VSWR	2.0 max
6	Voltage	DC = 3.0 ± 0.5V
7	Current	DC = 16.5 mA (at 3v)

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

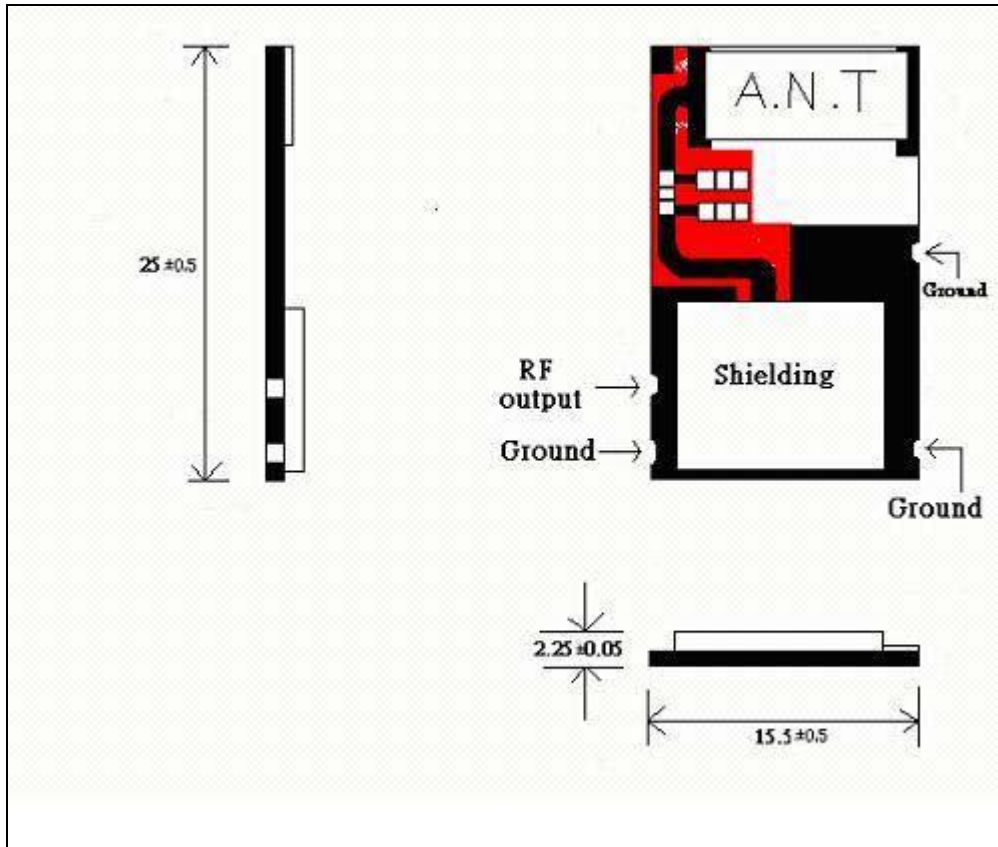


Evaluation board = 69 x 34 x 1.6 mm



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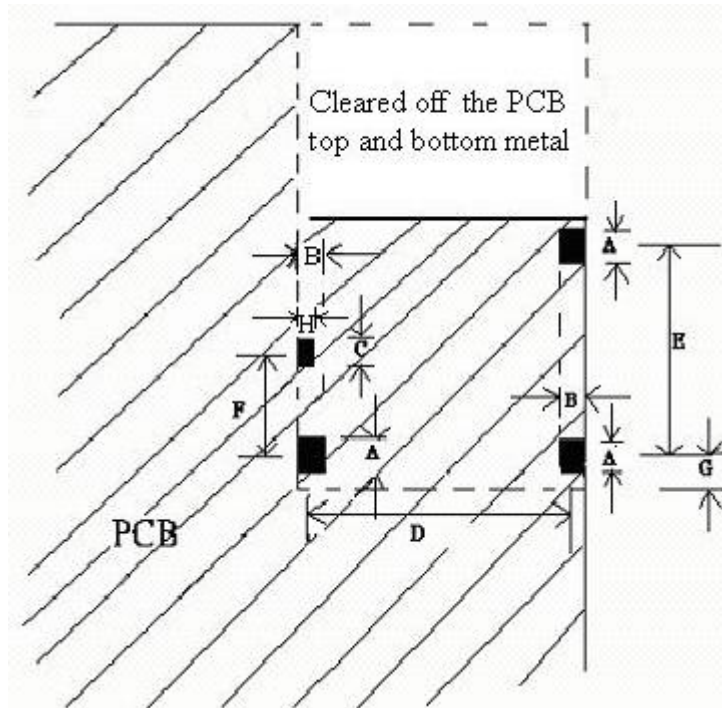
Antenna Module Dimensions





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Required PCB layout

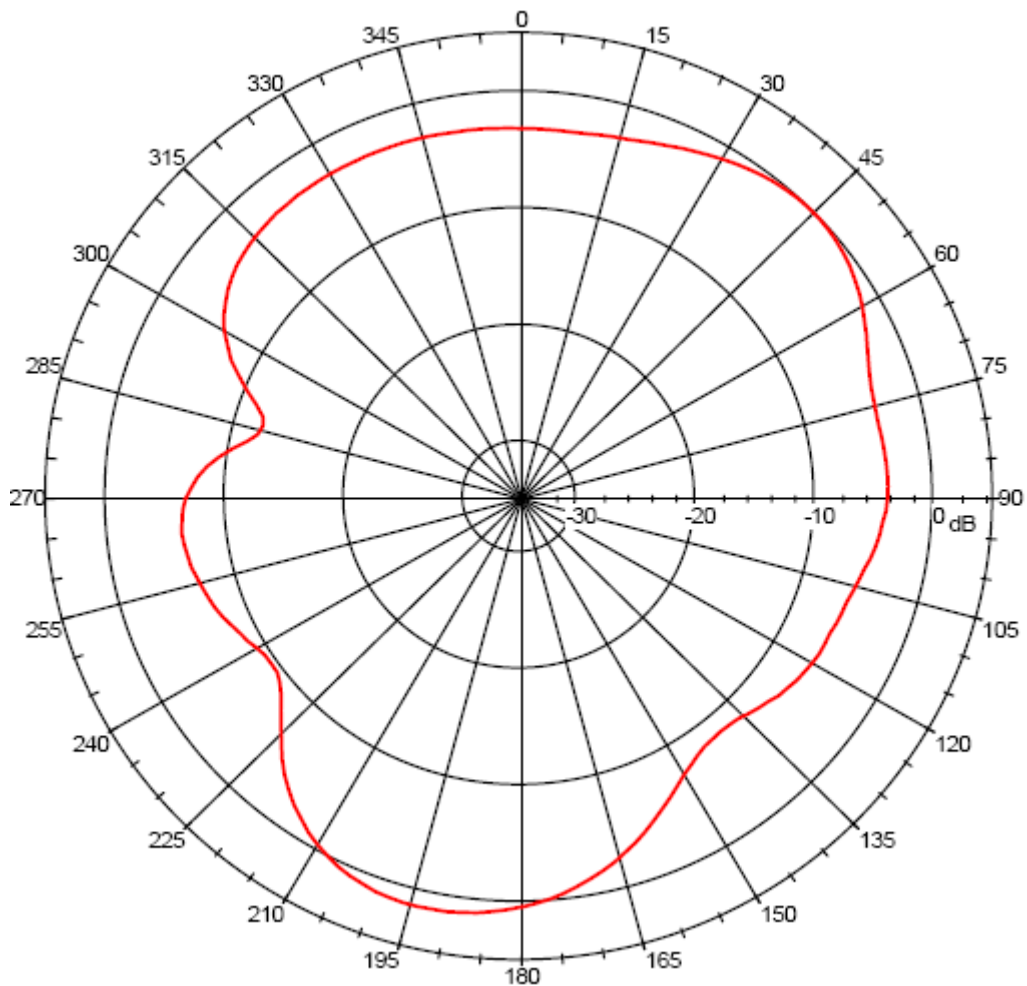


- A: 2.5mm
- B: 2.5mm
- C: 1.42mm
- D: 15.3mm
- E: 11.2mm
- F: 4.2mm
- G: 1.9mm
- H: 1.75mm



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Chip antenna radiation pattern (excluding LNA gain)



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

