



Specification

SPECIFICATION

- Part No. : **AP.25J.01.10000D**
- Product Name : 25mm Three Stage Active GPS Patch Antenna
- Features : Highest Gain 40dB GPS active patch
High performance
1.8-5V
Low power consumption
RoHS compliant

Photo :



REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Apr 9 th 2008	All	New product	TW Product Centre	Zita Lin



Specification

1.0 Introduction

The AP.25J active GPS patch antenna is the highest gain GPS high performance antenna currently available in the world. A 25mm GPS patch antenna with three stage LNA delivers 40dB of gain. This product is suited for applications such as timing applications for base stations or out-building installations which need long cable lengths to the receiver, typically over lengths exceeding 5M at RG174 and over 30M using low loss cable as CFD200 or LMR200.

2.0 Specification

Antenna

Parameter	Specification
Frequency	1575.42 ± 4MHz
Gain	Typ. 4dBic @ Zenith (for 70mm*70mm ground) Typ. 1.5dBic @ Zenith (for 25mm*25mm ground)
Impedance	50Ω
Polarization	RHCP
Axial Ratio	Max 3.0dB @ Zenith (for 70mm*70mm ground)
Dimension	25mm x 25mm x 8.5mm {Patch 25*25*4mm}

LNA

Parameter	Specification
Frequency	1575.42 ± 10MHz
Gain	Typ. 34dB (at 1.8V) Min. 38dB, Typ. 40dB (at 3.0V) Min. 38dB, Typ. 40dB (at 5.0V)
Noise Figure	Max. 1.5dB @ 25°C ± 5°C
Output Impedance	50Ω
Output VSWR	Max. 2.0
Outer Band Attenuation	F0=1575.42MHz F0±50MHz 20dB min F0±100MHz 25dB min



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Cable * & Connector

Parameter	Specification
RF Cable	RG174 , $\phi 2.7 \pm 0.2\text{mm}$, Black, Cable Length 10M \pm 5cm
Connector	SMA(M)

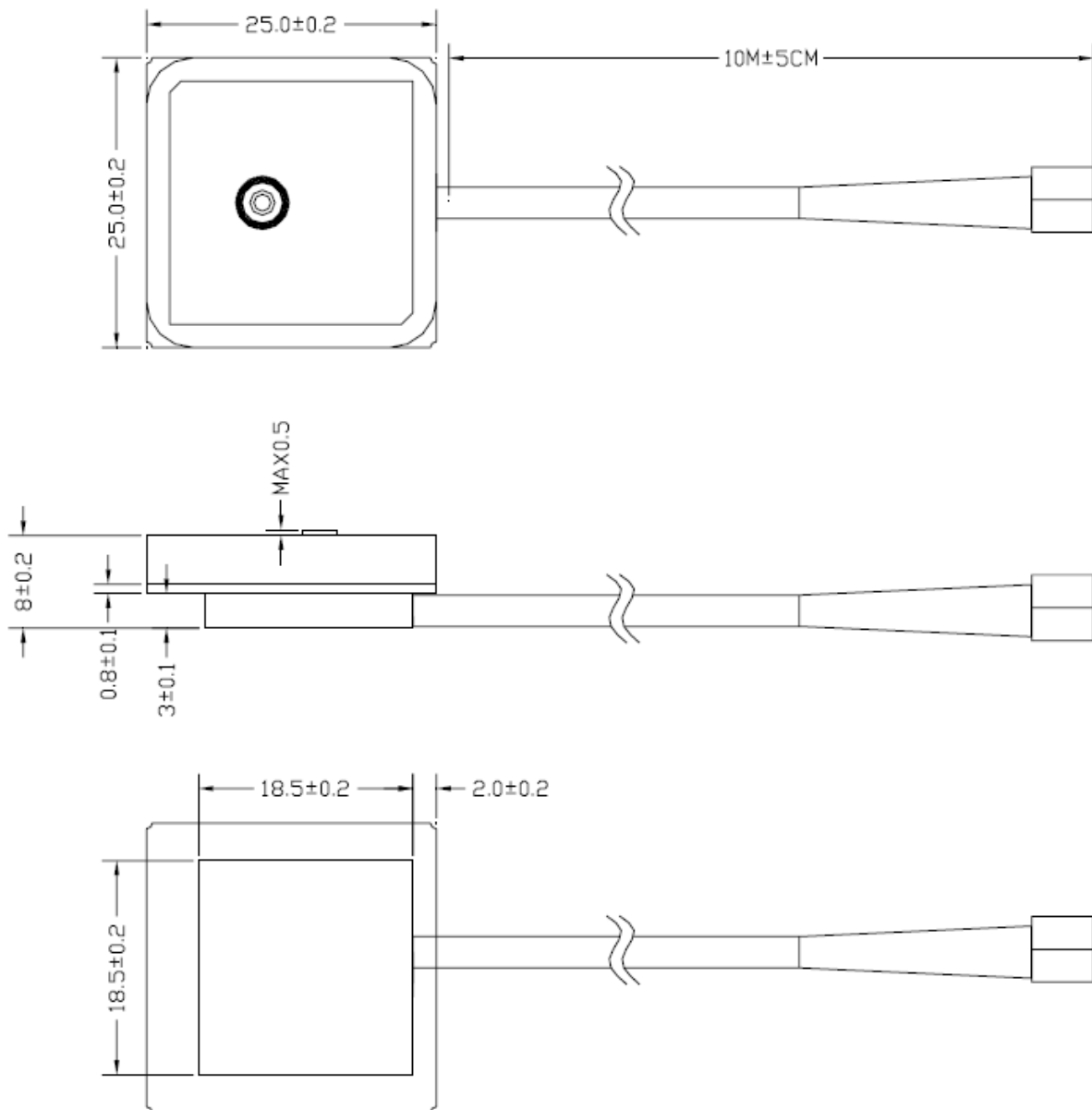
Note 1: Cable Loss = -1.3 dB/M

Total Specification

Parameter	Specification
Frequency	1575.42 \pm 1.023MHz
Gain	44 \pm 3dBic @ 90°
Output Impedance	50 Ω
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
Current	At 1.8V Max. 8mA At 3.0V Max. 10mA At 5.0V Max. 12mA



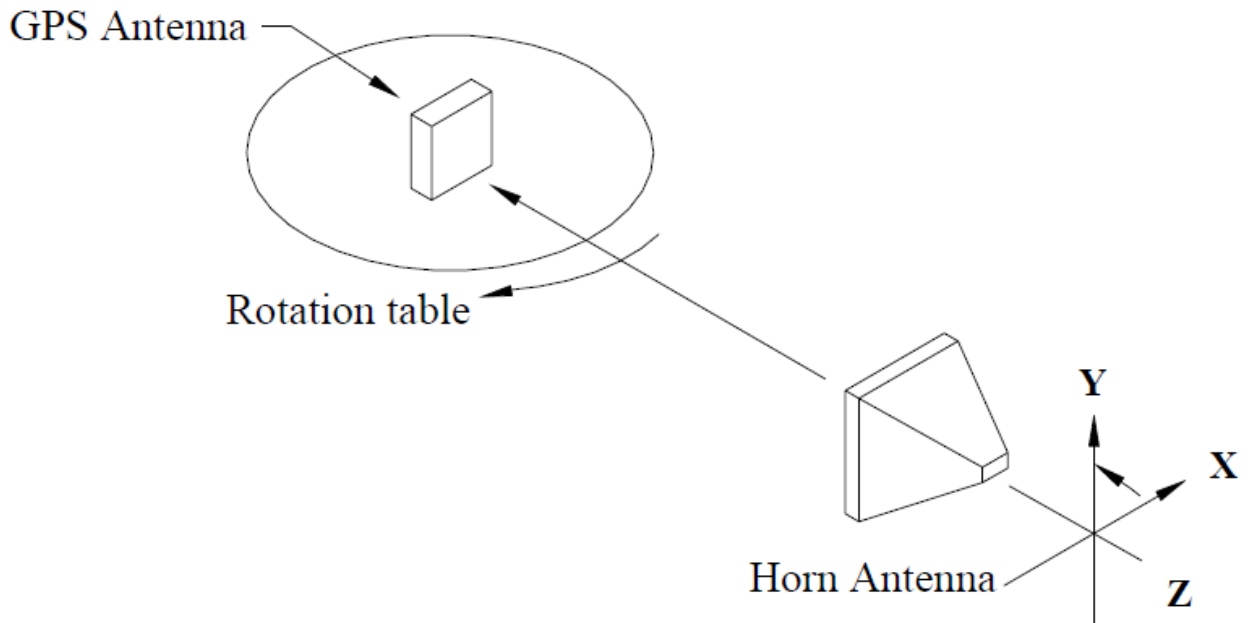
3.0 Technical Drawing



Unit:mm

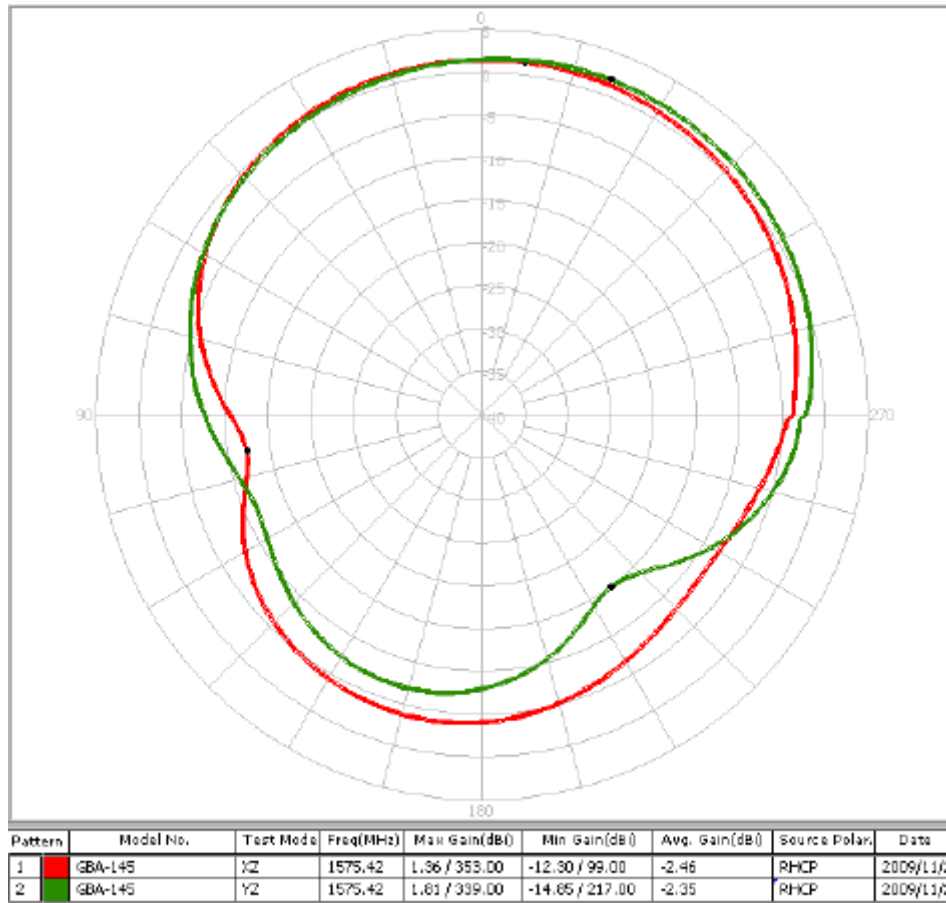


4.0 Performance Measurements





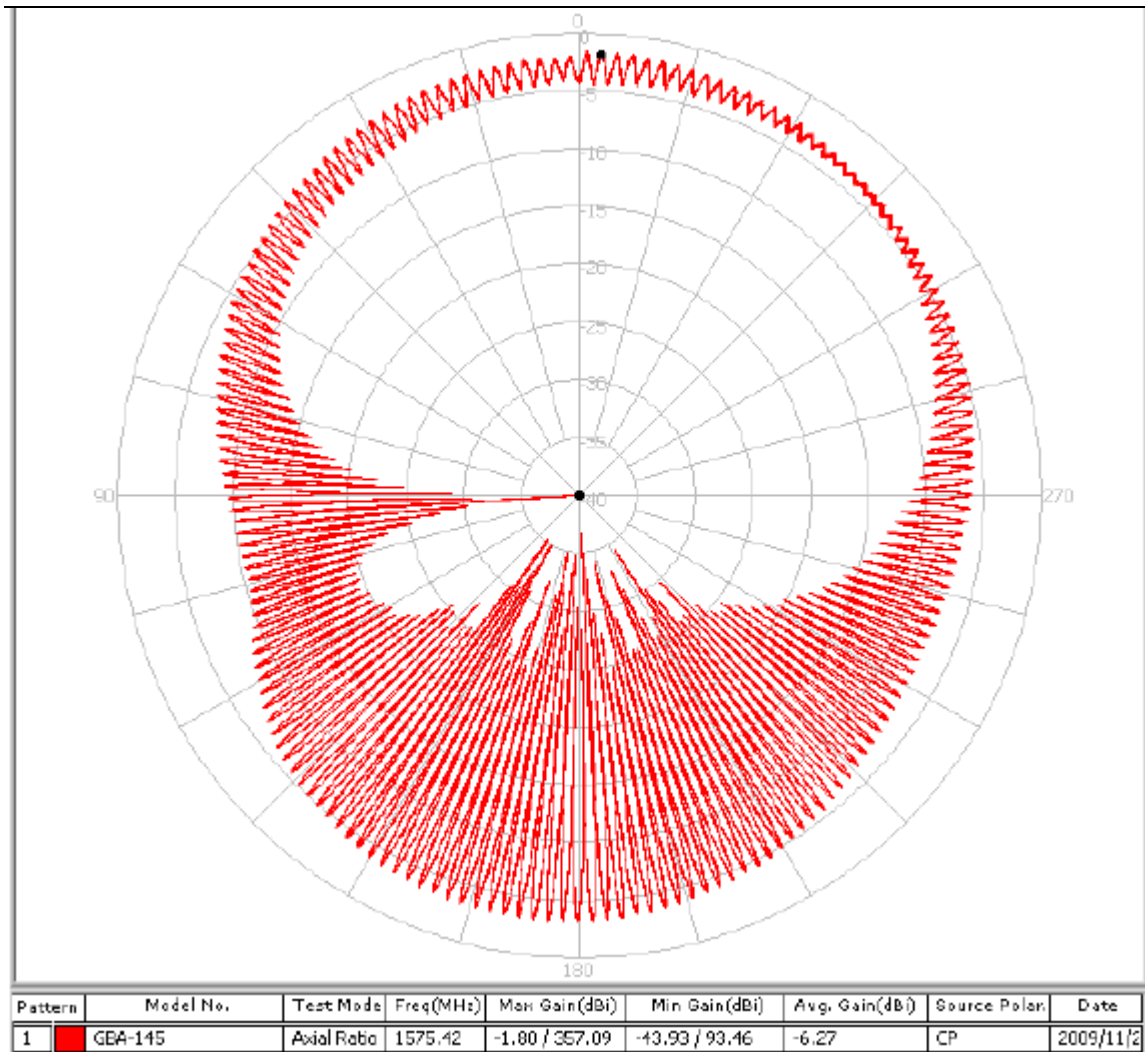
4.1 Radiation Pattern



XY-ZPlan



4.2 Axial ratio





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4.3 VSWR

