

ANTENNA PRODUCTS

DATA SHEET

GPS Active Antenna (19*19*5 mm)

2007, March Rev.2

GPS active antenna (19*19*5 mm)				CAN 431343795158 1B				—	1	Oct, 06	
								▶	2	March, 2007	
								—	3		
BY / 製定者	Sunwiun Hu	SUPER / 原圖編號	C.T.Lee	TLL. SH/ 共頁	10	PAGE/ 頁	1	SH nr.	—	4	
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**GPS ACTIVE ANTENNA
FOR GLOBAL POSITIONING SYSTEMS (1.575G Hz)**

Product Specification

Ceramic Patch Antenna

Outline Dimension:	18*18*2 mm (Ceramic Patch)
Ground Plane	18.5*18.5*0.15 mm
Central Frequency	1575 +/- 3MHz
Impedance	50 Ohm
Gain	+1 dBi (Elevation 90 degree)
VSWR	2.0 max
Polarization	Right Hand Circular Polarization
Axis Ratio	3dB max. (Elevation 90 degree)

LNA

Central Frequency	1575 +/- 3 MHz
Gain	30 +/- 1 dB (at f_c , without SAW filter)
Noise Figure	1.5 dB typ. (at f_c , 1.8dB Max)
Output VSWR	2.0 (at f_c)
Supply Voltage	3.3 +/- 5% V
Current Consumption	6 mA
Output Impedance	50 Ohm
Operating Temperature/Humidity	-30 - +85 °C ; < 95%
Storage Temperature	-40 - +125 °C

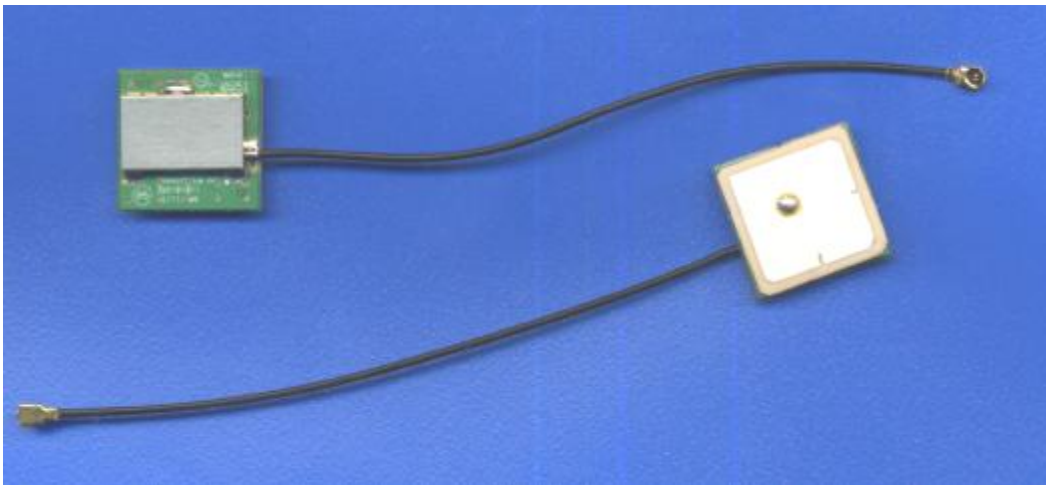
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Description:

Yageo provides an ideal active GPS antenna for your embedded system applications. With 19 x 19 x 5.5 mm in size, it best fit into your GPS system with maximum performance.

Key Features:

- Small form factor: 19 x 19 x 5.5 mm
- Lead-Free – RoHS/WEEE compliant
- High gain up to 30dB
- Low power consumption
- I-Pex, Horise, MMCX connector are available.

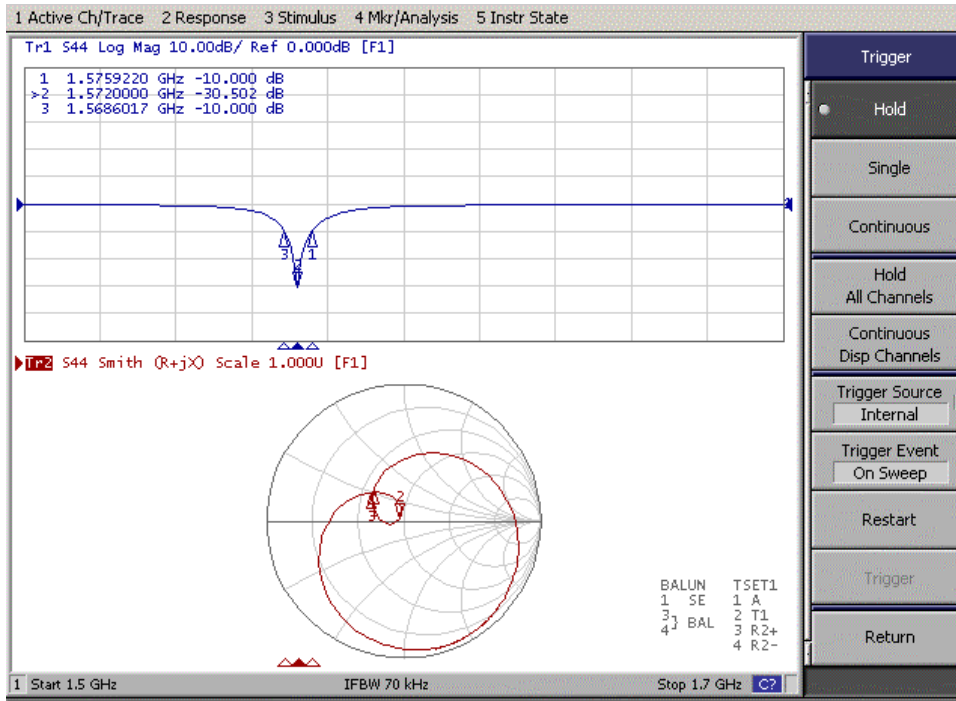


Applications:

- Handheld devices
- Automotive and Marine Navigation
- Automotive Navigator Tracking
- Emergency Locator
- Geographic Surveying
- Personal Positioning
- Sporting and Recreation
- Embedded applications: PDA, DSC, Smart phone, UMPC, PND, MP4

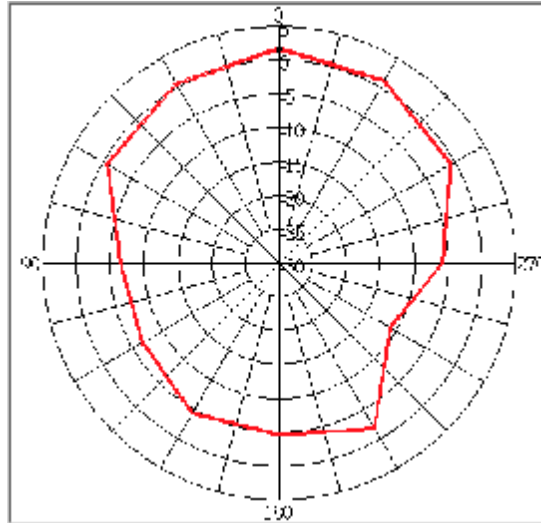
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Antenna Return Loss and Impedence (with 50 * 50 mm square Ground Plane)

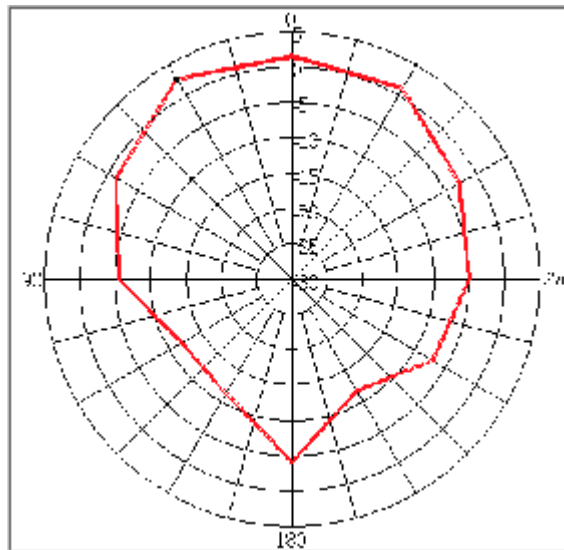


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Radiation Pattern (based on 50x50 mm ground plane)



Circular gain 2D x-z plane pattern



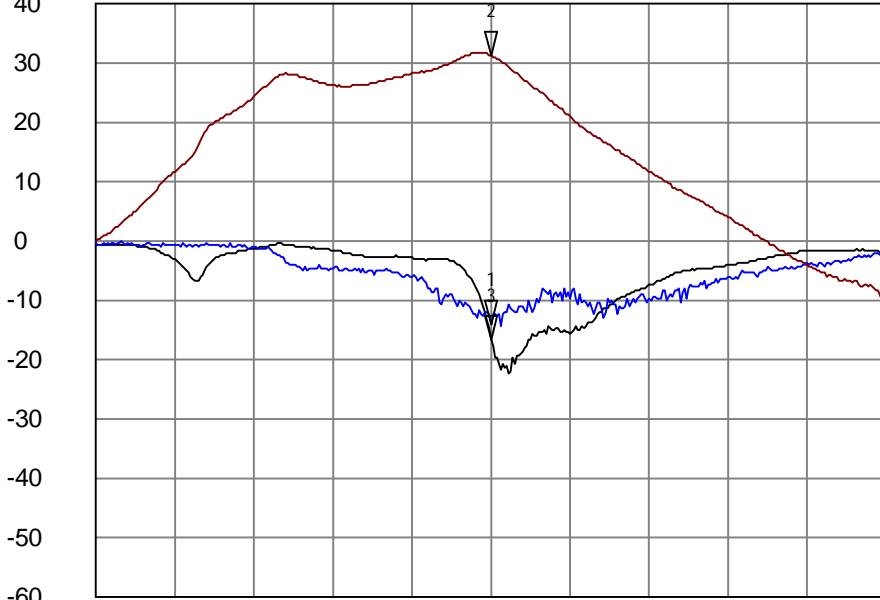
Circular gain 2D y-z plane pattern

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The Characteristics of LNA

NF=1.42Db ; P1dB=-0.6dBm

SoftPlot for Microwave Office
 S22 S11 S21



- 1 S11
 ▽ 1.575420 GHz
 -13.8790 dB
- 2 S21
 ▽ 1.575420 GHz
 31.3480 dB
- 3 S22
 ▽ 1.575420 GHz
 -16.7240 dB

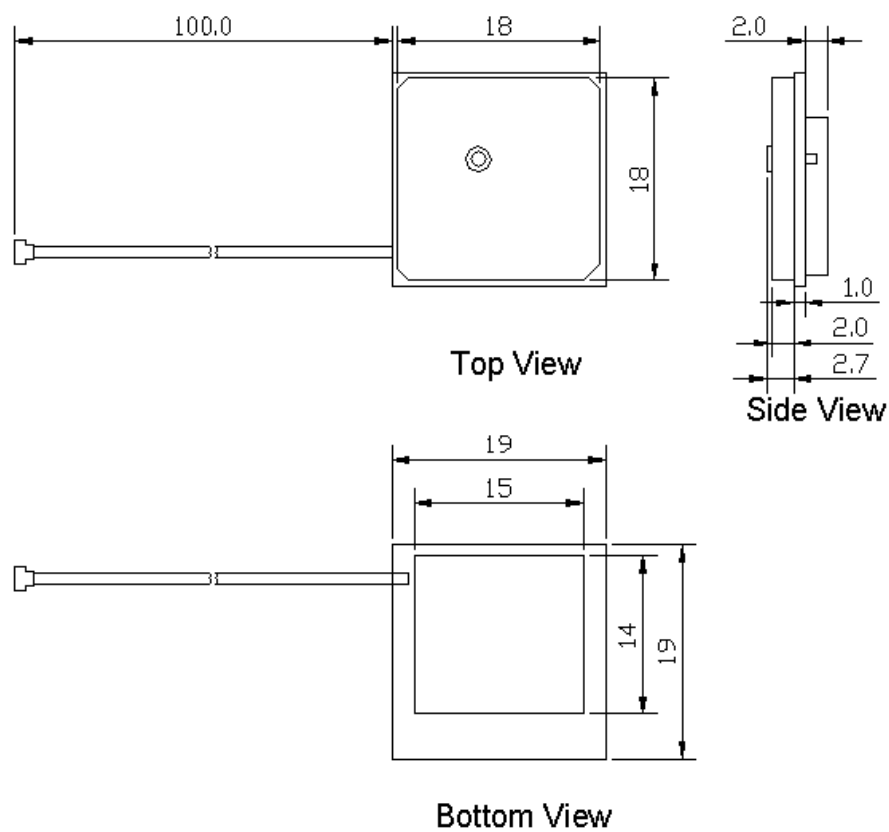
Start: 575.420000 MHz Stop: 2.575420 GHz
 2006/11/29 PM 02:28:03 active ant_4_2g.spt 8757D

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Outlines and Dimension

Dimension

Length	19.0 +/- 0.5 mm
Width	19.0 +/- 0.5 mm
Thickness	5.5 +/- 0.5 mm
Cable	Diameter D = 1.13 mm; Length L = 100 mm
Connector	I-pex
Shielding Case	15*14*2 mm



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ORDERING INFORMATION:

The active antennas may be ordered by using the Yageo ordering code. These code numbers can be determined by the following rules:

CAN43 13 4 37 95 158 1B
F C M S T A P

F. Family Code

CAN 43 = Antenna

C. Packing Type Code

13 = bulk packaging

M. Materials Code

4 = Microwave Ceramic Material

S. Size code

37 = 19*19 mm

T. Type

95 = GPS active antenna, type 95

A. Working Frequency

158 = 1.575 GHz, GPS application

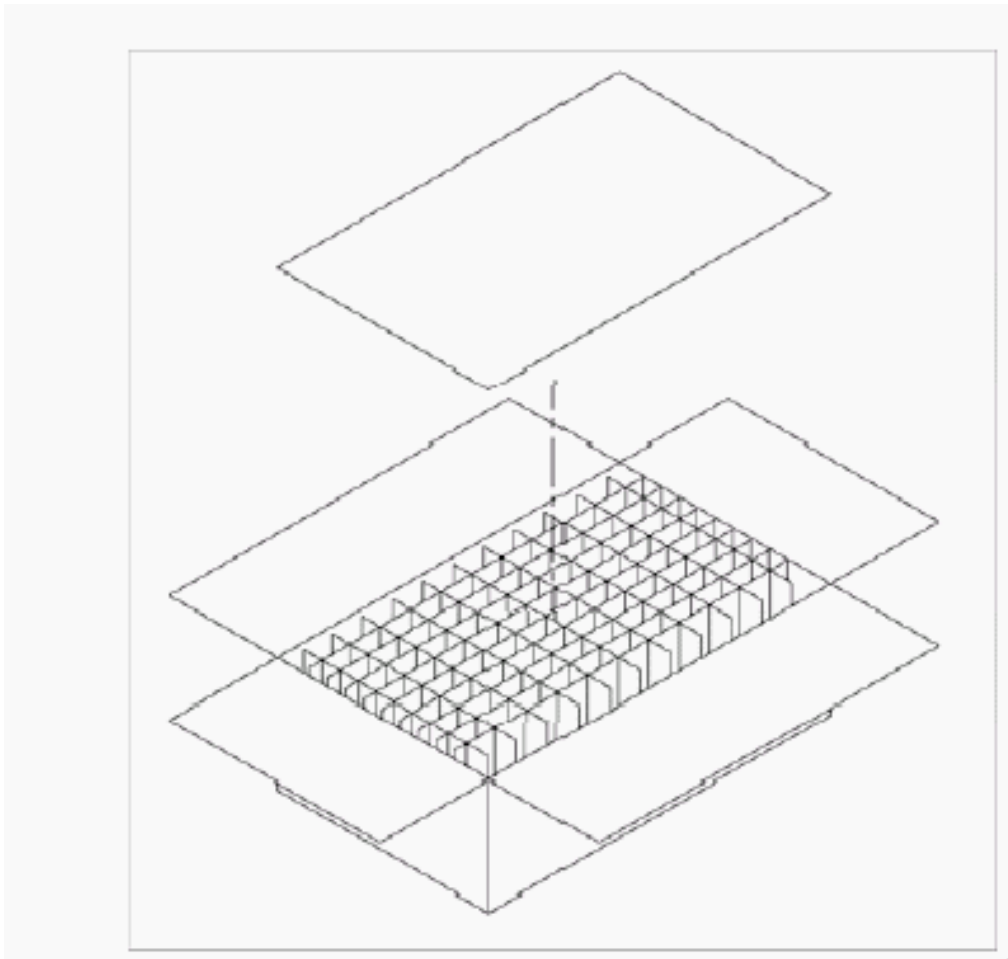
P. Packing Type Code

1B = bulk packaging

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Packing information

1. Each unit into individual compartment. Two layers of compartment.
2. 100 units per compartment layer. 200 units into one carton.
3. Cartoon dimension: 493*257*167 mm
4. Cover upper and lower sides of the box with a cardboard.



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Revision Control:

Revision	Date	Content	Remark
1	Oct, 2006	New Issued	
2	March, 2007	Add radiation pattern of patch antenna	

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