Datasheet

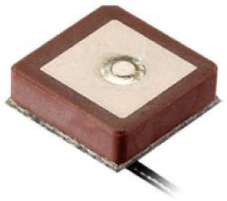
G-2RE7

GPS/GNSS Low Noise Embedded Active Antenna

Adhesive | GNSS

The G-2RE7 is a high-performance embedded active antenna designed specifically for GPS/GNSS applications. With a 22 dB gain and low noise characteristics, it ensures excellent signal reception and accuracy in challenging environments. The G-2RE7 is optimized for GPS/GNSS frequencies, allowing for reliable positioning and navigation capabilities.

As an embedded antenna, it offers a compact and integrated solution for easy integration into various devices, such as navigation systems, tracking devices, and IoT applications. The G-2RE7 active antenna is an ideal choice for applications that require robust GPS/GNSS performance and high signal gain to ensure accurate and reliable positioning.



13 x 13 x 6 mm

www.miotsolutions.com
info@miotsolutions.com

Document Information

Product	G-2RE7
Part Number	G-2RE7
Description	GPS/GNSS Low Noise Embedded Active Antenna
Version	2.0 (current)
Date	04-July-2023
Status	Released

Revision History

Version	Date	Author	Changes
1.0	16-Dec-2020	Amy Li	Initial Release
2.0	04-July -2023	Hazel Xu	New layout and design

Product Overview

Product Description

The G-2RE7 is a high-performance embedded active antenna designed specifically for GPS/GNSS applications. With a 22 dB gain and low noise characteristics, it ensures excellent signal reception and accuracy in challenging environments. The G-2RE7 is optimized for GPS/GNSS frequencies, allowing for reliable positioning and navigation capabilities.

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Key Features

- High Gain
- Compact Size and Low Profile
- Pin Type
- Customization Available
- RoHS Compliance

Applications

- Automotive navigation
- PND & PDA
- Surveying equipment
- Cell phone
- Laptop
- Healthcare and medical monitoring devices

Electrical Specifications

Frequency			VSWR	Peak Gain	Efficiency
GNSS	1575.42	MHz	1.5	5 d Bi	40%

Antenna

Frequency Range	1575.42 MHz	Axial Ratio	5dB(max)
Impedance	50 Ω	Radiation Pattern	Hemispherical
Polarization	RHCP		

LNA

Gain	22±2dB	Noise Figure	<1.5
Filter Insertion Loss	<3dB	Ex-band Attenuation	30dB@ CF±40MHz
Supply Voltage	3.3V DC	Current Consumption	9 mA

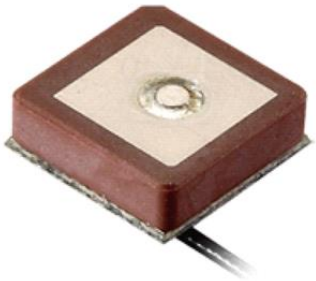
Mechanical Specifications

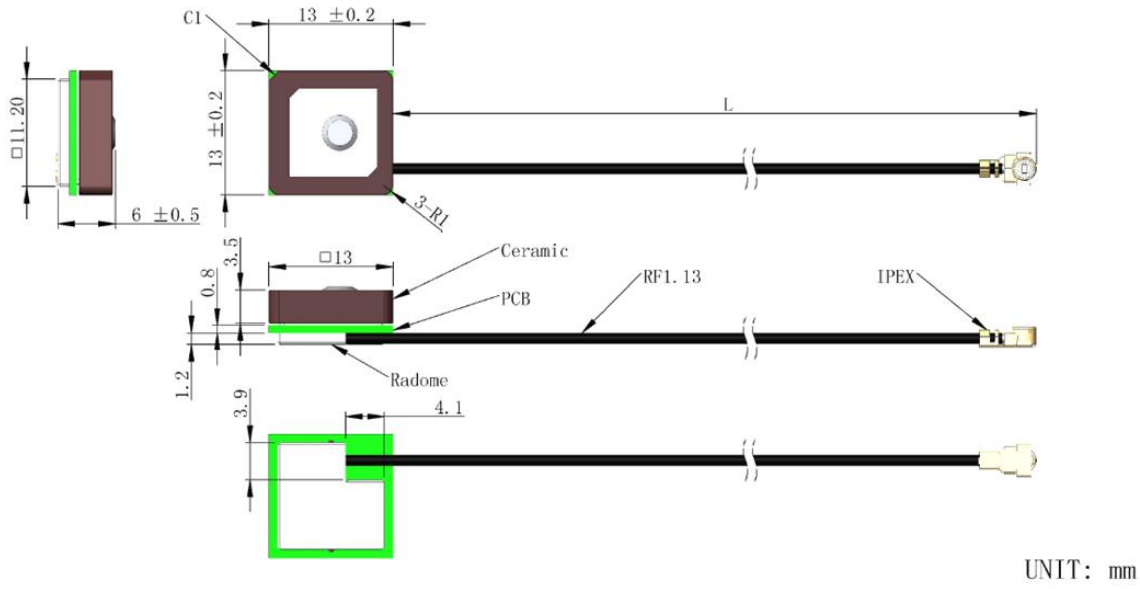
Type	Internal	Casing	NA
Dimensions	13 x 13 x 6 mm	Color	Yellow
Connector (Termination)	IPEX or others	Material	Ceramic
Cable	RF1.13 or others	Cable Length	10cm (default)
Mounting Type	Cable	Weight	TBC (to be confirmed)

Caution:

1. Do not apply excess mechanical stress to the component body or terminations. Do not attempt to re-form or bend the components, as this will cause damage to the component.
2. Do not expose the component to an open flame.
3. This specification applies to the functionality of the component as a single unit. Please ensure the component is thoroughly evaluated in the application circuit.

Product Image and Dimensions





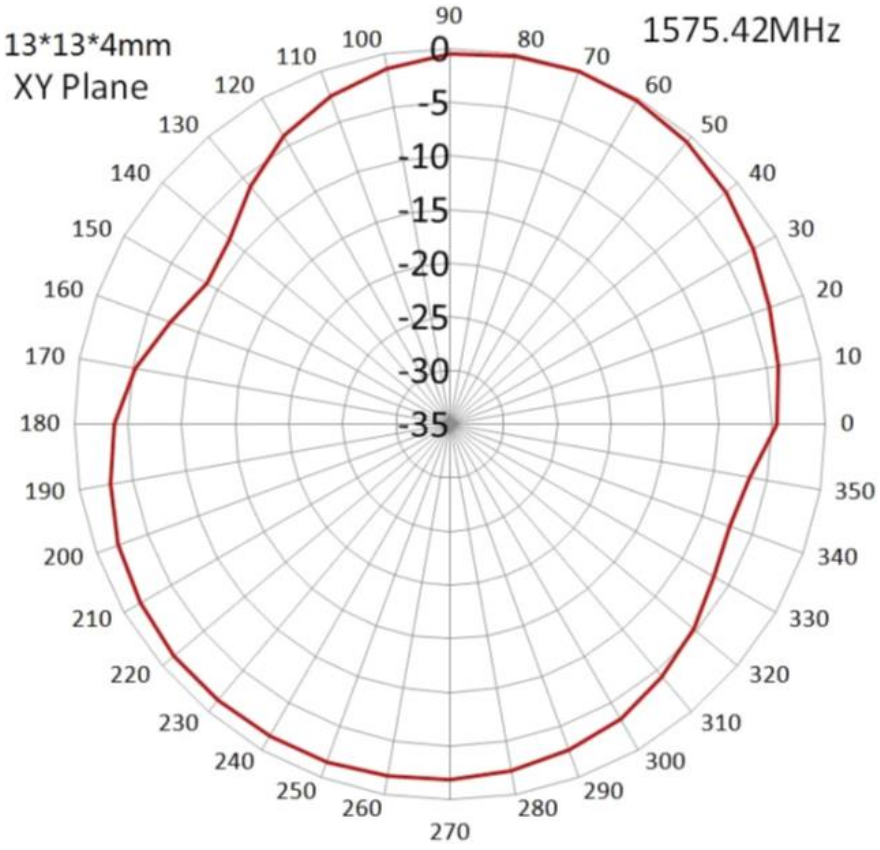
Radiation Pattern

A radiation pattern is a graphical representation of the directional properties of an antenna. It shows how electromagnetic waves are distributed in space in relation to the direction of propagation.

By understanding the information provided by a radiation pattern, it is possible to optimize the design and performance of an antenna for specific applications.

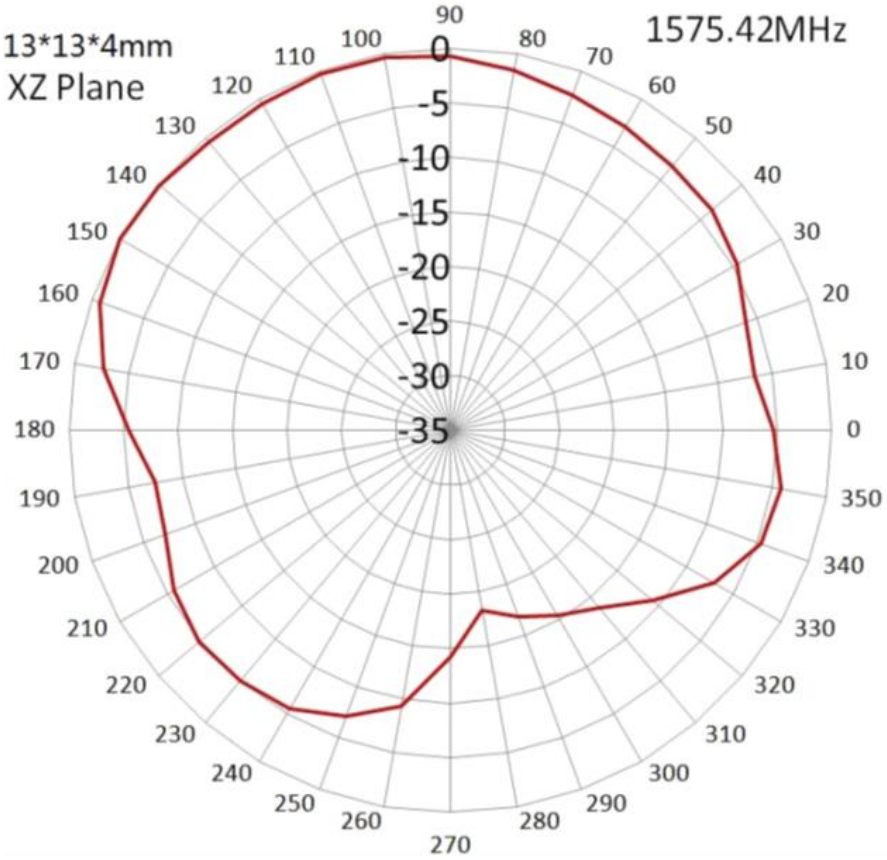
XY Plane (H)

1575.42 MHz



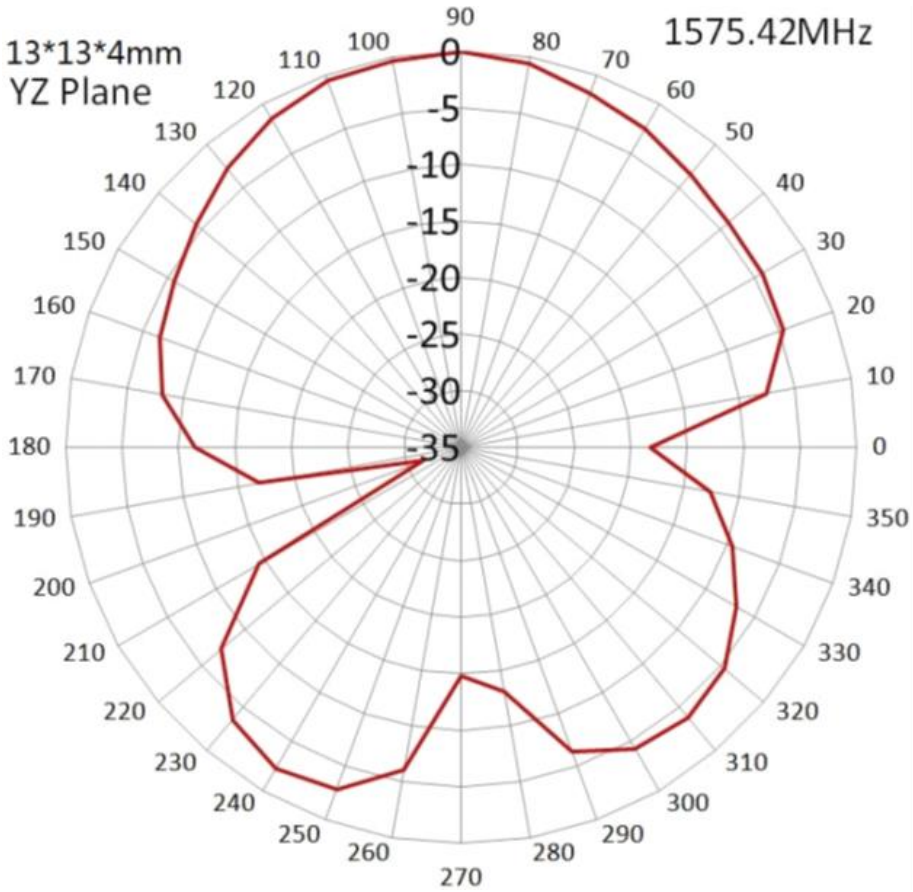
XZ Plane (E1)

1575.42 MHz



YZ Plane (E2)

1575.42 MHz



Environmental Data

Operating Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
IP Rating	NA
Compliance	RoHS

Ordering Information

Product Variants

Part Number	Description
G-2RE7	GPS/GNSS Low Noise Embedded Active Antenna

About MIOT

Miot Wireless Solutions, headquartered in Suzhou, China, was established in 2017. It has subsidiaries in Canada, the United States, Brazil, and EMEA. MIOT is a professional designer and manufacturer of Antennas and IoT PCBA products, providing turn-key service to customers worldwide.

Our talented R&D team has experienced antenna, hardware, and software engineers who can participate in your new project, from something simple like antenna/selection and design, to complete turn-key services, which entails taking your concept and ideas through design, prototyping, debugging, certification, and manufacturing. Miot offers reliable products at reasonable prices with fast delivery times to help you get ahead in the market.

Contact

MIOT Wireless Solutions Co. Ltd.
120-5800 Ambler Dr, MISSISSAUGA
ONTARIO L4W 4J4
Canada

Website: www.miotsolutions.com
Email: info@miotsolutions.com

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