

G-2RE9

GPS Internal Active Antenna

Adhesive

GNSS

The G-2RE9 is a high-performance embedded active antenna designed specifically for GPS/GNSS applications. With a 28 dB gain and high gain characteristics, it ensures excellent signal reception and accuracy in challenging environments. The G-2RE9 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-2RE9 active antenna is an ideal choice for applications that require robust GPS/GNSS performance and high signal gain to ensure accurate and reliable positioning.



18 x 18 x 8 mm

Document Information

Product	G-2RE9
Part Number	G-2RE9
Description	GPS Internal Active Antenna
Version	2.0 (current)
Date	13-Sep-2023
Status	Released

Revision History

Version	Date	Author	Changes
1.0	16-Dec-2020	Amy Li	Initial Release
1.1.	03-Jul-2023	Hazel Xu	New layout and design
2.0	13-Sep-2023	Ivy Liao	New layout and design

Product Overview

Product Description

The G-2RE9 is a high-performance embedded active antenna designed specifically for GPS/GNSS applications. With a 28 dB gain and high gain characteristics, it ensures excellent signal reception and accuracy in challenging environments. The G-2RE9 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-2RE8 active antenna is an ideal choice for applications that require robust GPS/GNSS performance and high signal gain to ensure accurate and reliable positioning.

Key Features

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

Applications

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

Electrical Specifications

Antenna

Frequency Range	1575.42 MHz	Bandwidth	5 MHz
Impedance	50 Ω	Gain (Zenith@90°)	1dB
Polarization	RHCP	VSWR at CF	1.5

LNA

Gain	28 $\pm$ 2dB	Noise Figure	2
VSWR	2	Ex-band Attenuation	30dB@ CF $\pm$ 40MHz
Supply Voltage	3V~5V DC	Current Consumption	5~10 mA

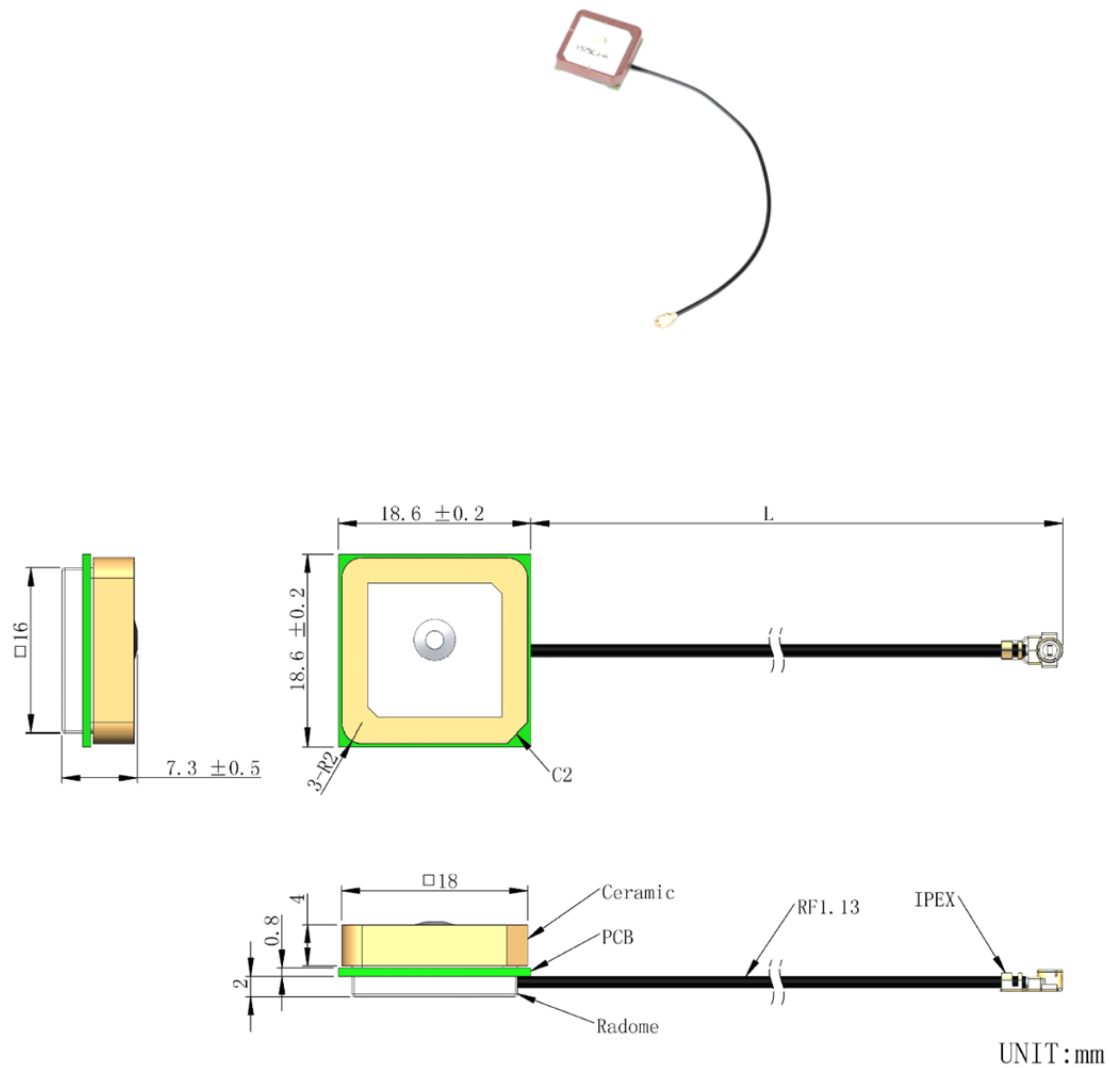
Mechanical Specifications

Type	Internal	Casing	NA
Dimensions	18x 18 x 8mm	Connector (Termination)	IPEX1 or others
Connector (Termination)	IPEX1 or others	Cable	RF1.13 or others

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



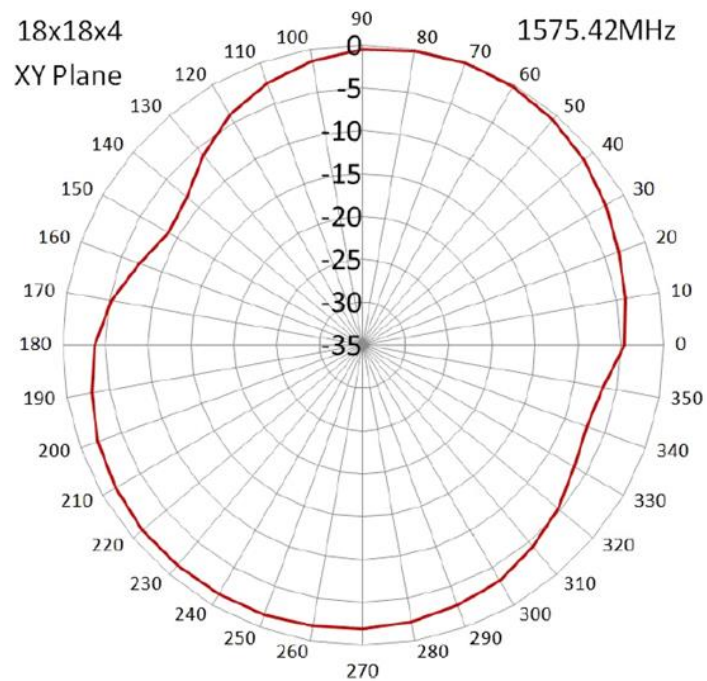
Radiation Pattern

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.

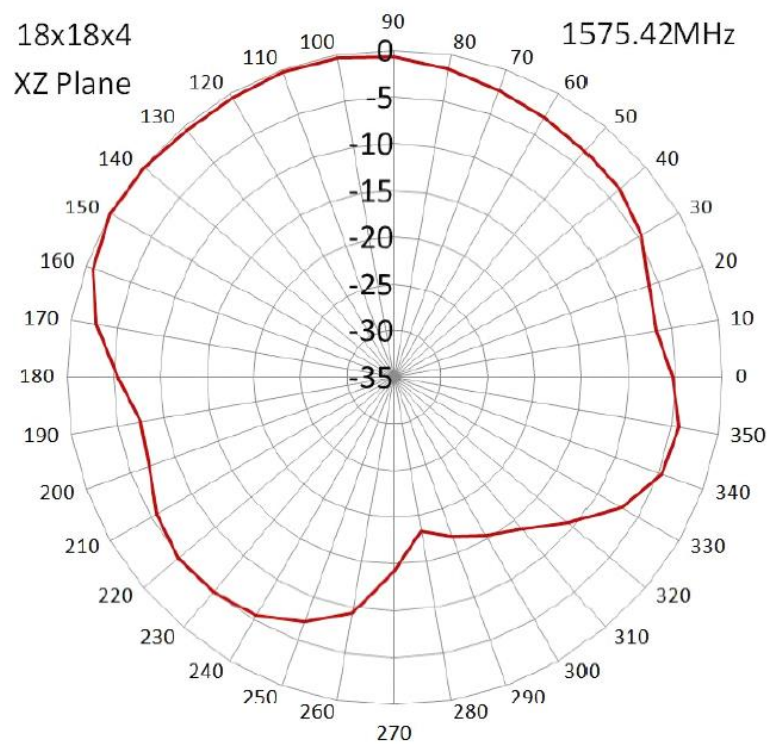
XY Plane (H)

1575.42 MHz

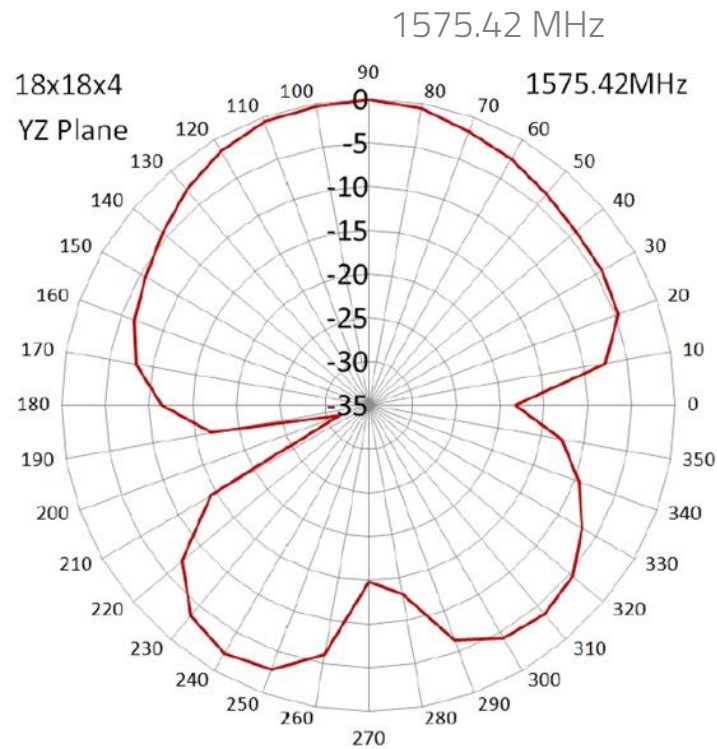


XZ Plane (E1)

1575.42 MHz



YZ Plane (E2)



Environmental Data

Operating Temperature	-40 °C to +85 °C
Relative Humidity	Up to 75%
Vibration	10 to 55Hz with 1.5mm amplitude 2hours
Compliance	RoHS

Ordering Information

Product Variants

Part Number	Description
G-2RE9	GPS Internal 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.mioticsolutions.com
Email: info@miotsolutions.com

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