

S-1RW5

Omni-Directional 850~950MHz Fiberglass Antenna

CELLULAR

SIGFOX

The S-1RW5 is a Omni-Directional 850~950MHz Fiberglass Antenna with a wide band and high efficiency. Operating at 868MHz, this antenna offers a compact size (380 × 23.5 mm) and easy installation for hassle-free integration into your IoT devices.

The S-1RW5 provides a gain of 2.5 DBi and efficiency of 58.5%~78.7%. Whether you're expanding your network or enhancing data transmission, the S-1RW5 Sigfox Antenna delivers top-notch performance while saving you valuable space.



380 × 23.5 mm

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Document Information

Product	S-1RW5
Part Number	S-1RW5
Description	Omni-Directional 850~950MHz Fiberglass Antenna
Version	2.0 (current)
Date	18-Sep-2023
Status	Released

Revision History

Version	Date	Author	Changes
1.0	16-Dec-2020	Amy Li	Initial Release
2.0	18-Sep-2023	Ivy Liao	New layout and design

Product Overview

Product Description

The S-1RW5 is a Omni-Directional 850~950MHz Fiberglass Antenna with a wide band and high efficiency. Operating at 868MHz, this antenna offers a compact size (380 × 23.5 mm) and easy installation for hassle-free integration into your IoT devices.

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Key Features

- Support 868MHz
- Small and exquisite
- High Reliability/Sensitivity
- Compact Size, Easy to install
- IP Rating 67
- RoHS Compliant

Applications

- ISM Outdoor
- Gateways
- Set-Top Boxes
- Security
- Signal repeater
- Smart agriculture

Electrical Specifications

Frequency			VSWR	Peak Gain	Efficiency
LORA	850 - 950	MHz	≤2.0	2.5 d Bi	58.8%~78.7%
Frequency Range			850 – 950 MHz	Radiation	Omnidirectional
Impedance	50 Ω			Polarization	Linear
Maximum input power (W)	100			Lightning protection	DC Ground

Mechanical Specifications

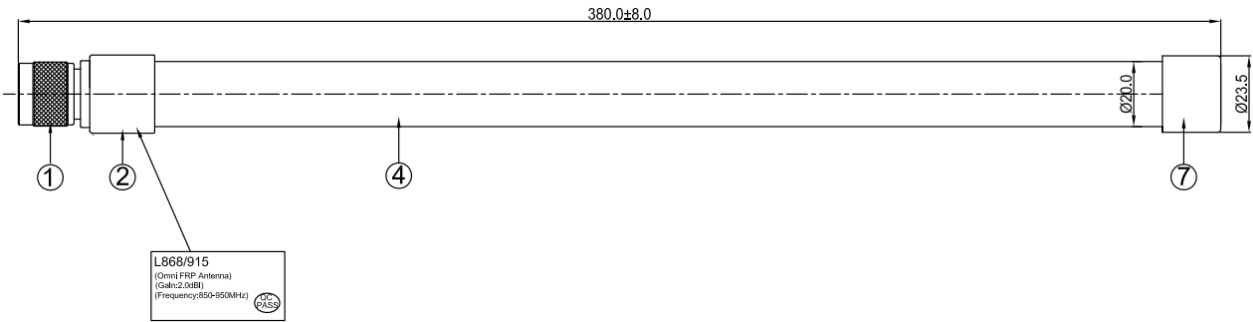
Dimensions	380 × 23.5 mm	Color	Gray
Connector (Termination)	N Male	Material	Fiberglass
Rated Wind Velocity (m/s)	60		

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

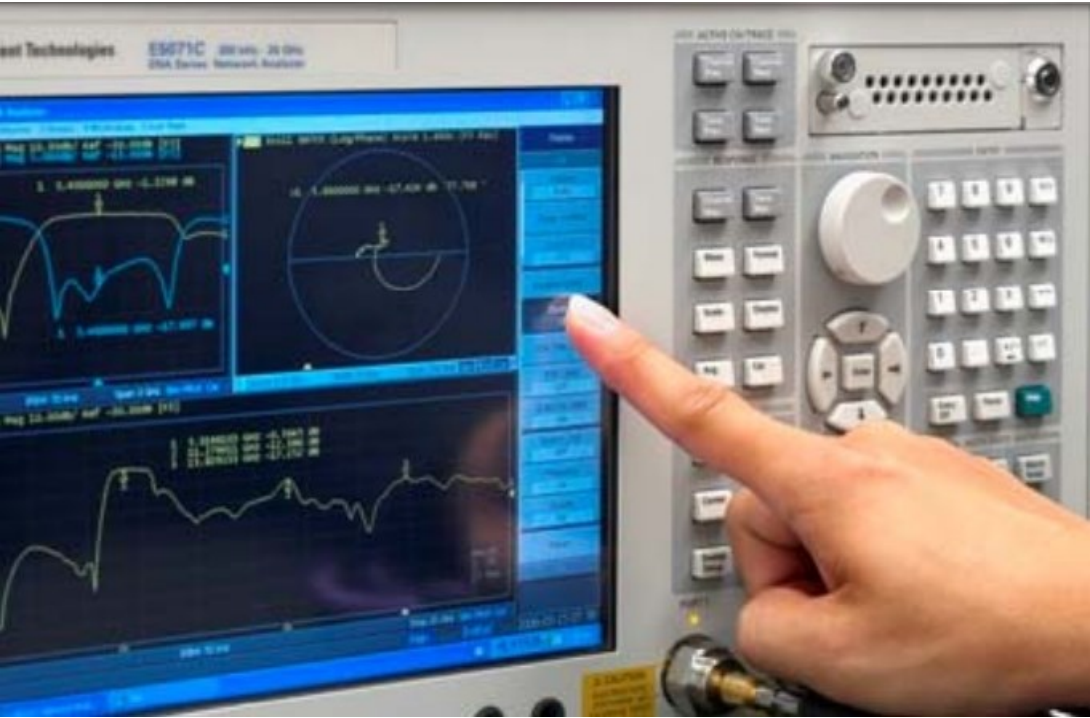




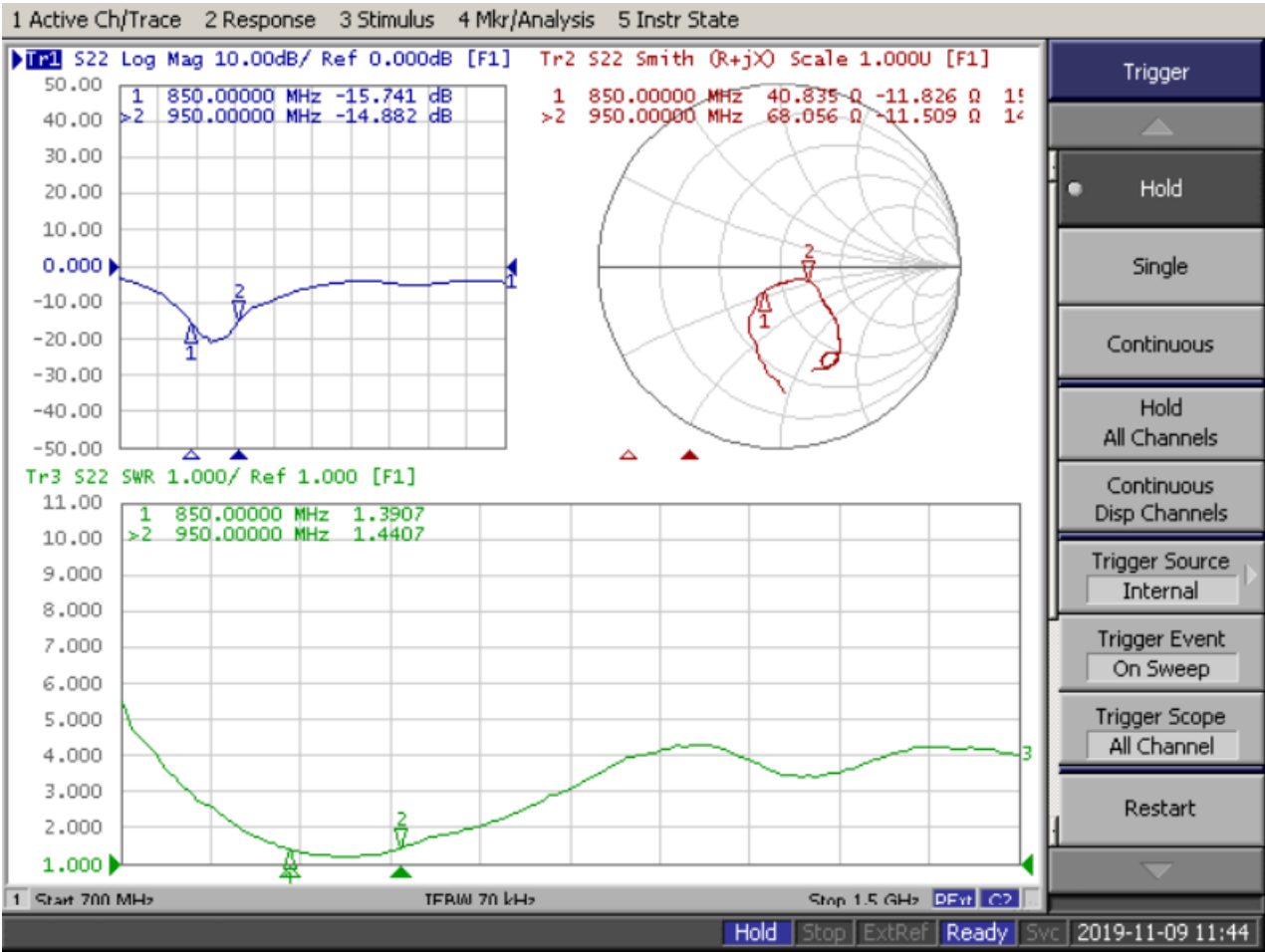
Antenna Datasheet

Antenna Performance Test

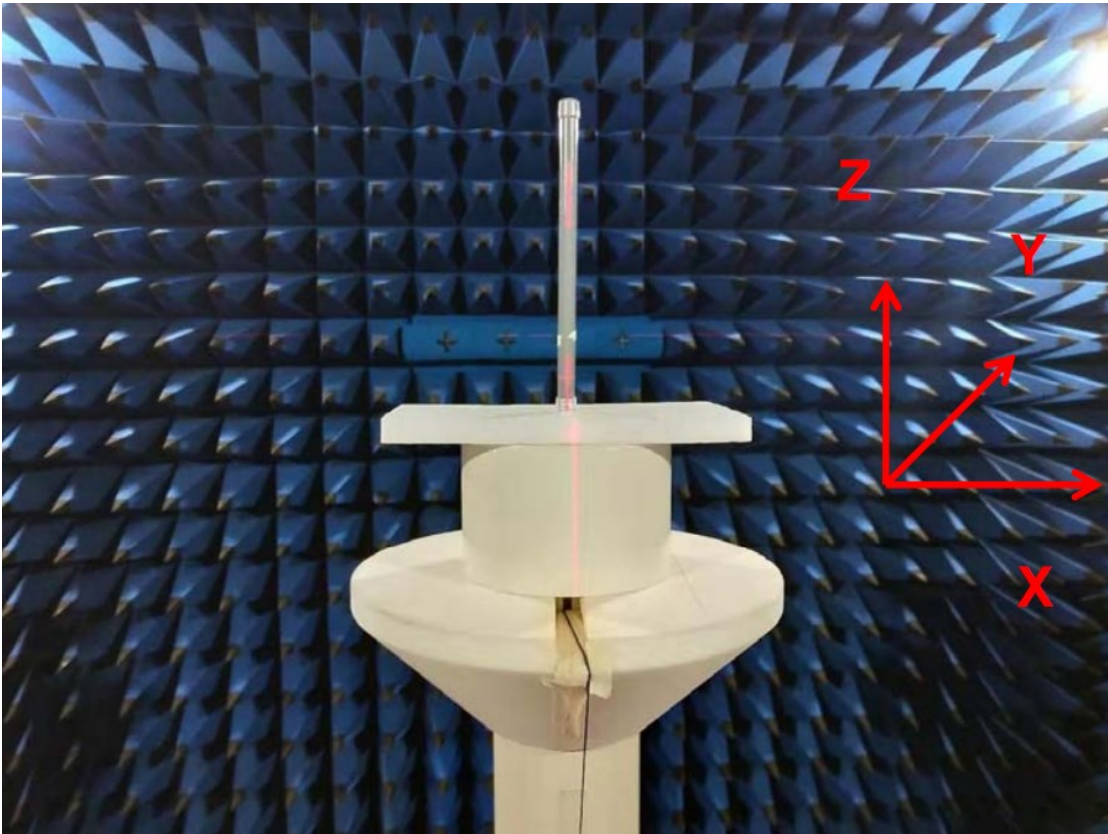
Agilent E5071B



S Parameter Test//850-950MHz



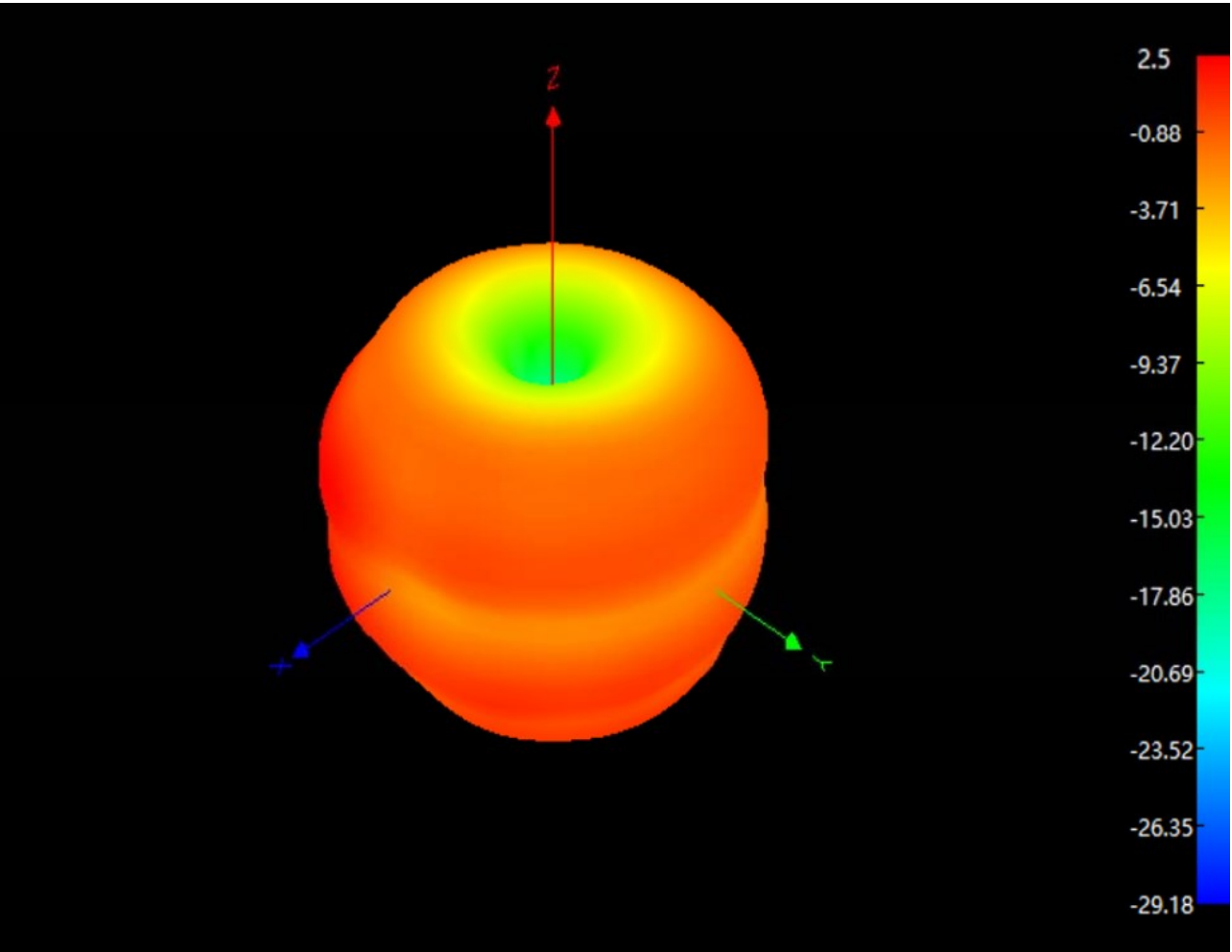
Antenna Passive Test



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.

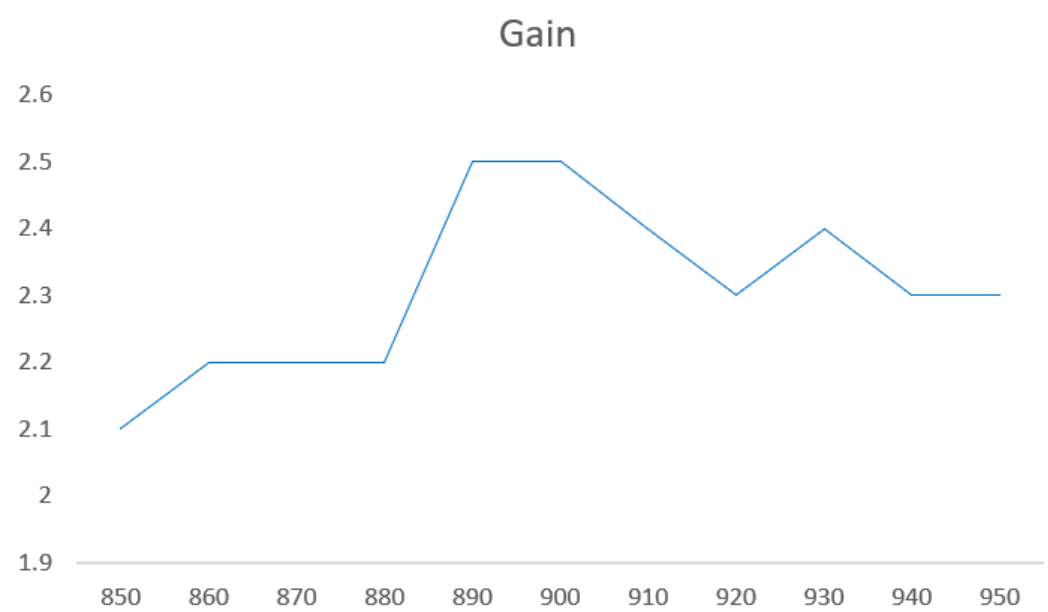
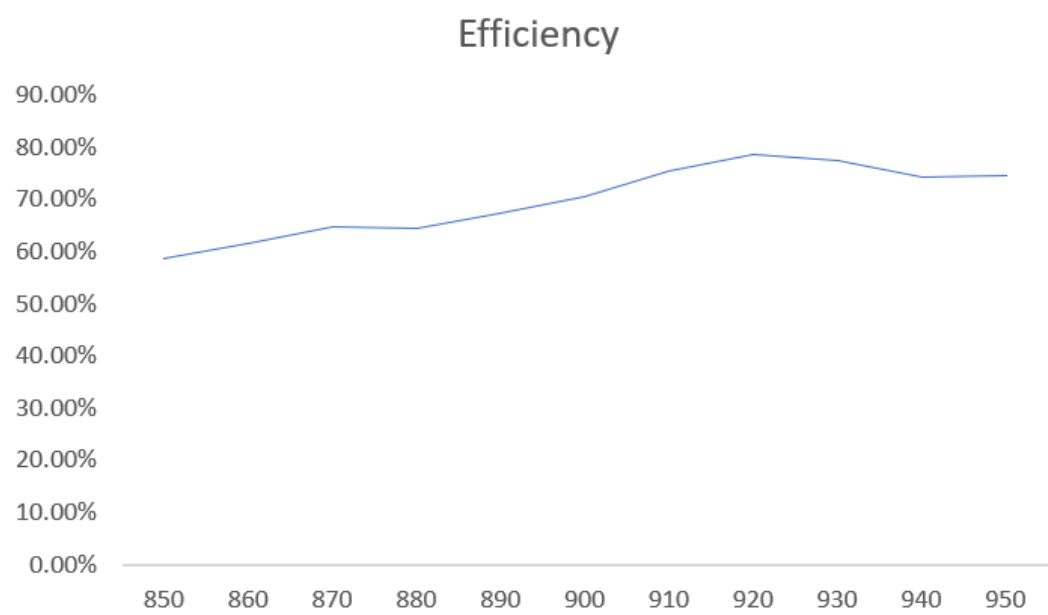
By understanding the information provided by a radiation pattern, it is possible to optimize the design and performance of an antenna for specific applications.



Antenna Efficiency and Gain

Frequency		Efficiency	Gain
850	MHz	58.8 %	2.1
860	MHz	61.7 %	2.2
870	MHz	64.9 %	2.2
880	MHz	64.4 %	2.2
890	MHz	67.5 %	2.5
900	MHz	70.5 %	2.5

Frequency		Efficiency	Gain
910	MHz	75.5 %	2.4
920	MHz	78.7 %	2.3
930	MHz	77.5 %	2.4
940	MHz	74.3 %	2.3
950	MHz	74.5 %	2.3



Environmental Data

Operating Temperature	-40 °C to +85 °C
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Compliance	RoHS
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Ordering Information

Product Variants

Part Number	Description
S-1RW5	Omni-Directional 850~950MHz Fiberglass 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.

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