



# Datasheet

## L-2RS4B

### 4G LTE/3G/2G ultra-thin FPC Adhesive Antenna

CELLULAR

FPC

The L-2RS4B is a flexible printed circuit (FPC) antenna designed to operate at frequencies ranging from 698 MHz to 2170 MHz, which offers a space-efficient solution for wireless communication applications.

One of the key advantages of the L-2RS4B is its customizable connector and cable length options, allowing for seamless integration into various devices and configurations. This flexibility enables easy installation and optimal positioning for improved signal reception. Whether you require a specific connector type or a custom cable length, the L-2RS4B FPC antenna can be tailored to meet your unique requirements.



140.5 x 34.45 x 0.2 mm

## Document Information

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Product	L-2RS4B
Part Number	L-2RS4B
Description	4G LTE/3G/2G ultra-thin FPC Adhesive Antenna
Version	2.0 (current)
Date	30-April-2023
Status	Released

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## Revision History

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Version	Date	Author	Changes
1.0	16-Dec-2020	Amy Li	Initial Release
2.0	30-April-2023	Amy Li	New layout and design

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# Product Overview

## Product Description

The L-2RS4B is a flexible printed circuit (FPC) antenna designed to operate at frequencies ranging from 698 MHz to 2170 MHz, which offers a space-efficient solution for wireless communication applications.

One of the key advantages of the L-2RS4B is its customizable connector and cable length options, allowing for seamless integration into various devices and configurations. This flexibility enables easy installation and optimal positioning for improved signal reception. Whether you require a specific connector type or a custom cable length, the L-2RS4B FPC antenna can be tailored to meet your unique requirements.

## Key Features

- Supports LTE, LPWA/NB-IoT/Cat-X-  
Mx-NBx/3G/2G
- Wide band Antenna
- Adhesive Mount Flexible
- Compact Size, Easy to integrate.
- RoHS Compliant

## Applications

- Cellular
- Transportation
- Industrial wearable
- Smart city
- Home automation
- Smart agriculture

# Electrical Specifications

Frequency	VSWR		Peak Gain	Efficiency
LTE	698 - 960	MHz	2.2	1.8 d Bi
LTE	1710 - 2170	MHz	2.0	3.0 d Bi

Frequency Range	698 – 2170 MHz	Radiation	Omnidirectional
Impedance	50 Ω	Electrical Type	Monopole
Polarization	Linear		

# Mechanical Specifications

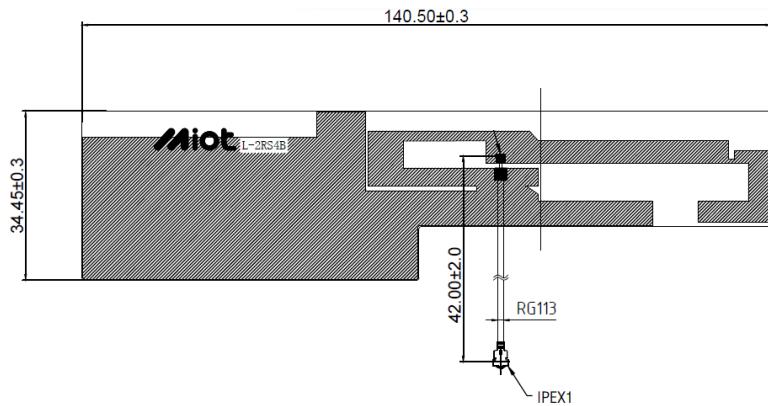
Type	FPC	Casing	NA
Dimensions	140.5 x 34.45 x 0.2 mm	Color	Black
Connector (Termination)	U.FL (standard)	Material	Flexible Polymer
Cable Type	1.13mm (standard)	Cable Length	150mm (standard)
Mounting Type	Adhesive	Weight	TBC (to be confirmed)

## 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





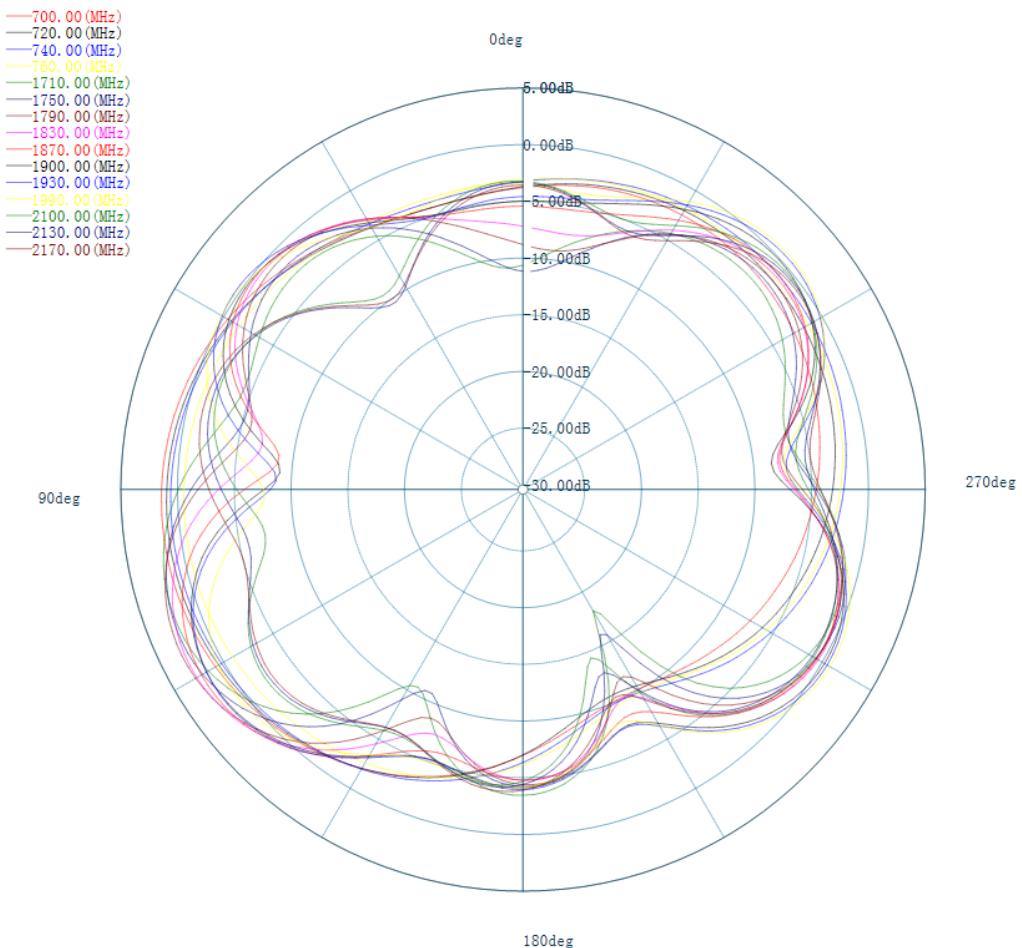
## Radiation Pattern

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.

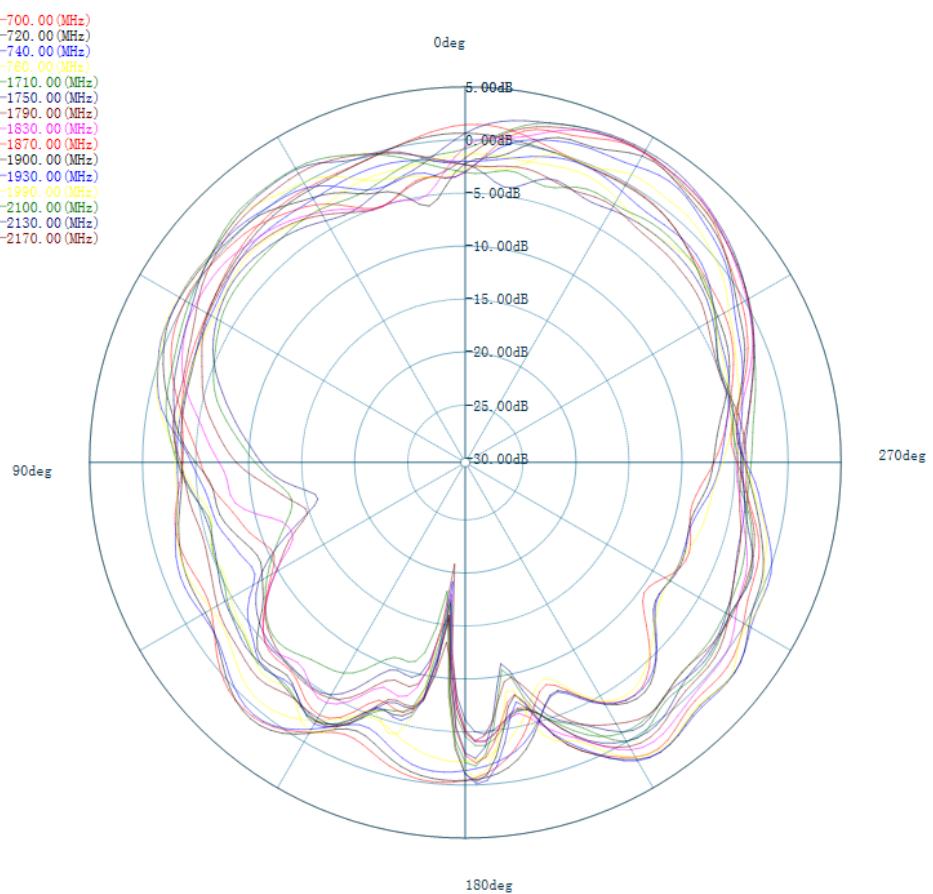
XY Plane (H)

698 – 2170 MHz



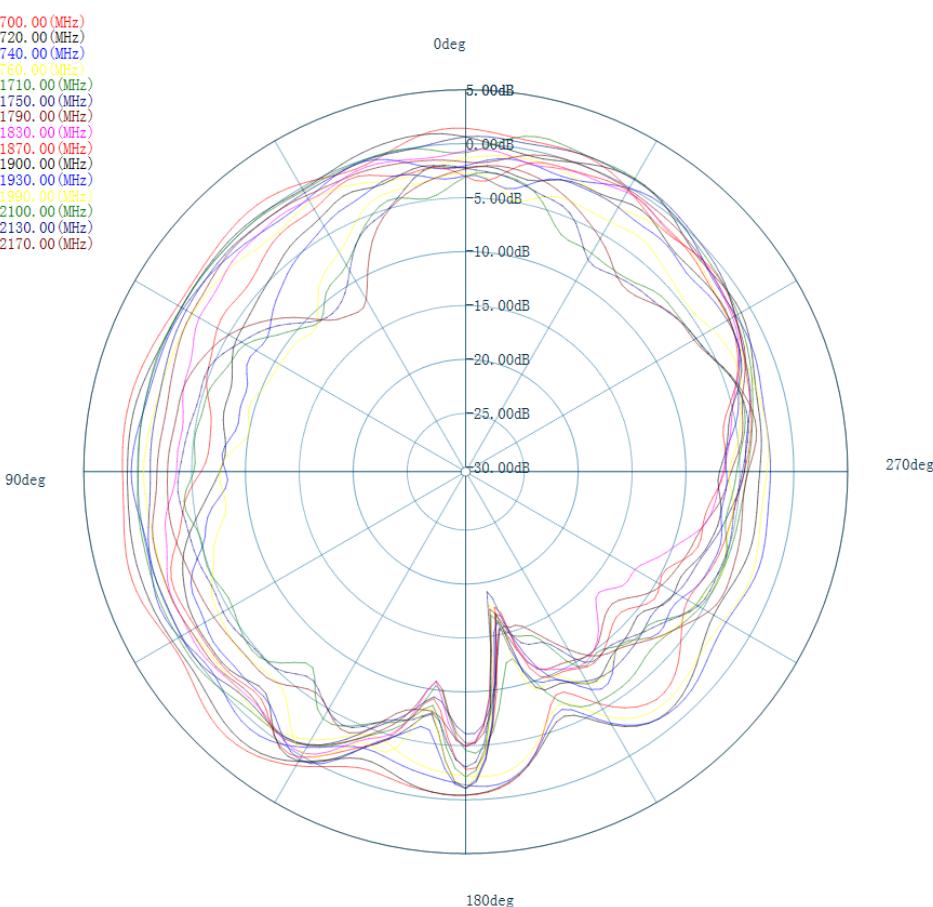
## YZ Plane (E1)

698 – 2170 MHz



## YZ Plane (E2)

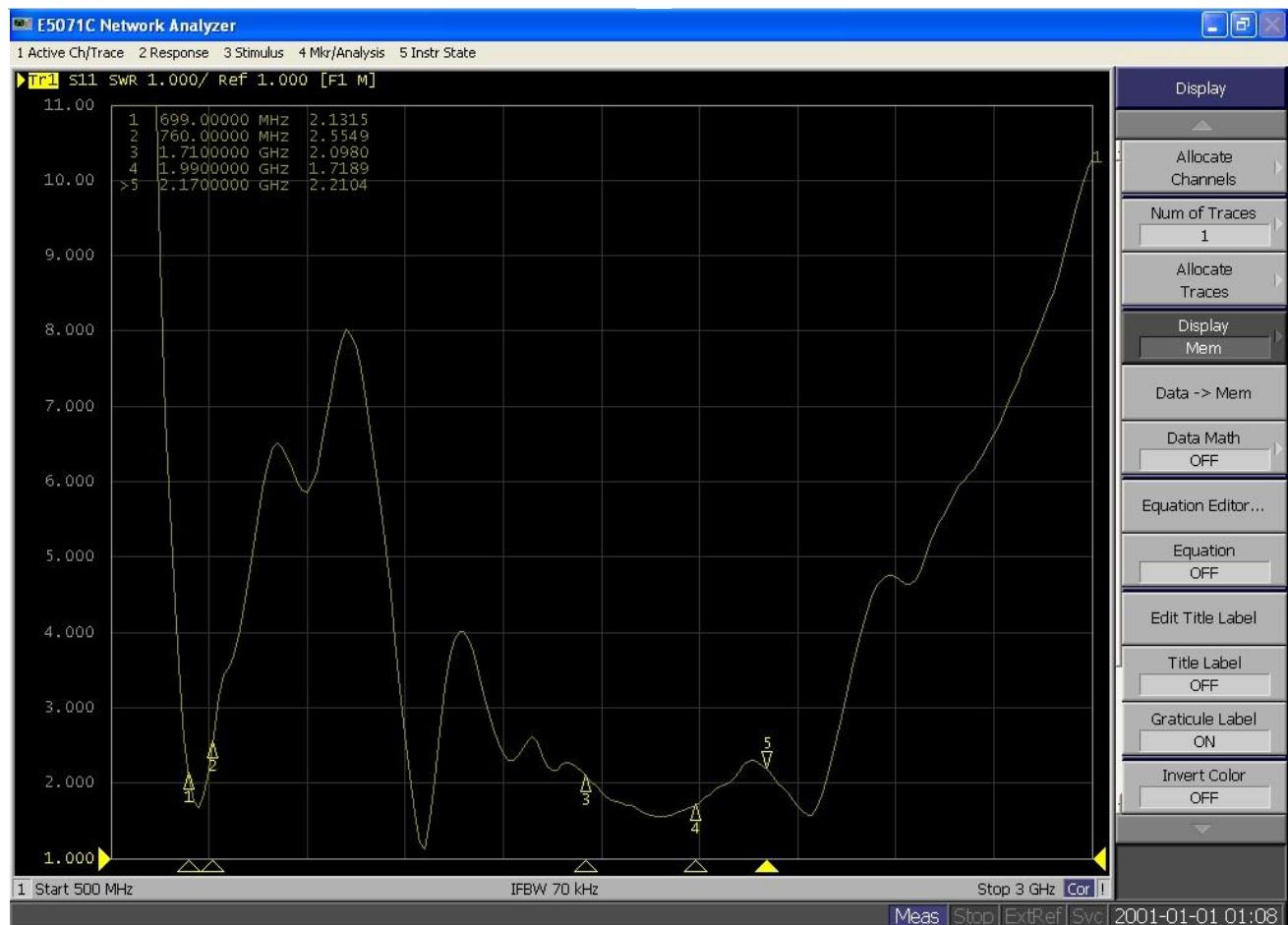
698 – 2170 MHz

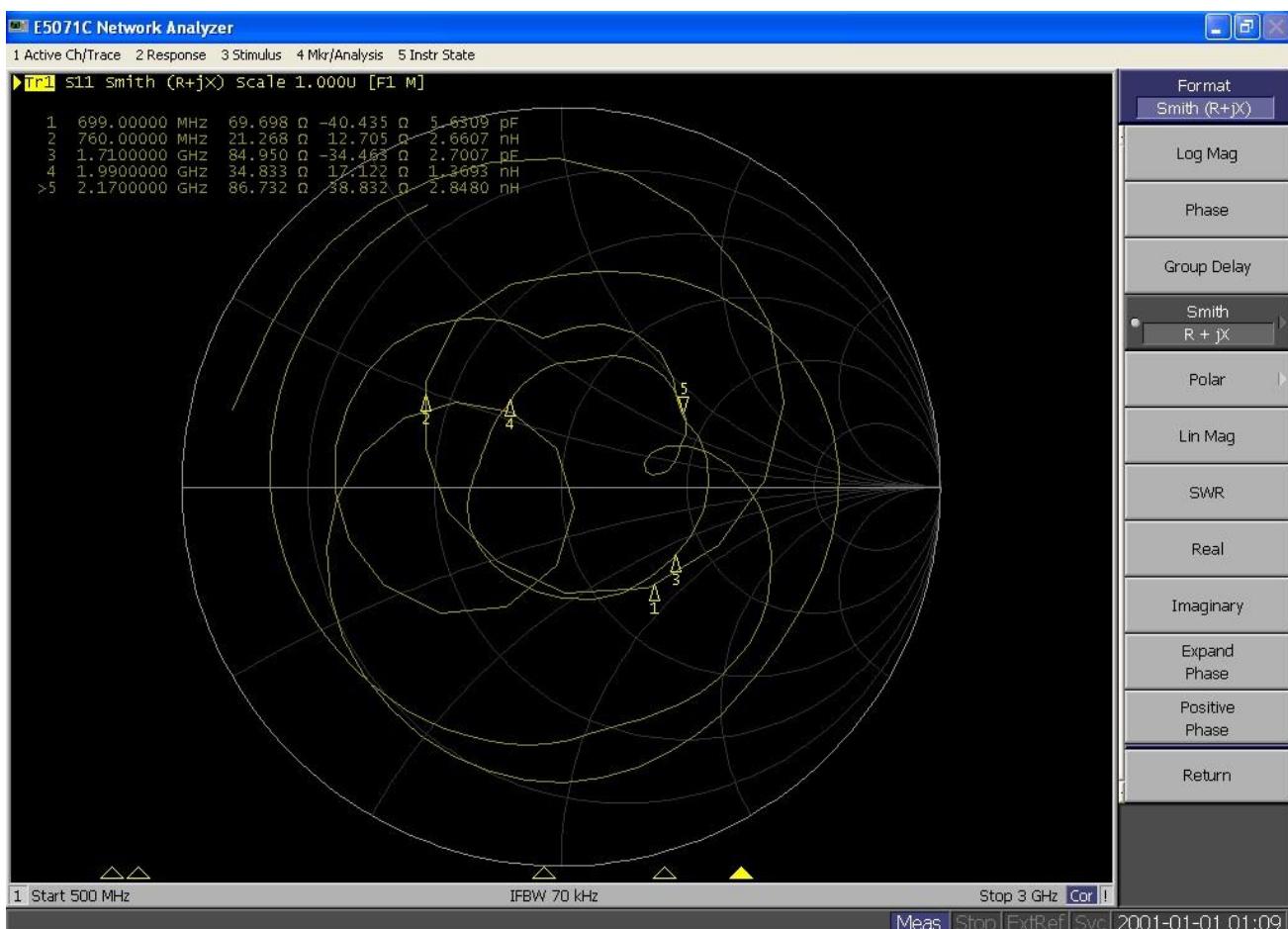


## Antenna Smith and VSWR

Frequency	VSWR
699 MHz	2.13
760 MHz	2.55
1710 MHz	2.10

Frequency	VSWR
1990 MHz	1.72
2170 MHz	2.21





## Antenna Efficiency and Gain

Frequency		Efficiency	Gain
700	MHz	62%	1.844936
720	MHz	62%	1.316853
740	MHz	56%	1.015964
760	MHz	56%	0.337244
1710	MHz	64%	3.002792
1750	MHz	63%	3.107701
1790	MHz	65%	2.901881
1830	MHz	68%	2.940343

Frequency		Efficiency	Gain
1870	MHz	71%	3.153318
1900	MHz	74%	3.695334
1930	MHz	75%	3.467248
1990	MHz	71%	3.212214
2100	MHz	56%	2.365917
2130	MHz	53%	2.196587
2170	MHz	54%	1.717013

## Environmental Data

Operating Temperature -40 °C to +85 °C

IP Rating NA

Compliance RoHS

## Ordering Information

### Product Variants

Part Number	Description
L-2RS4B	4G LTE/3G/2G ultra-thin FPC Adhesive 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](http://www.miotsolutions.com)  
Email: [info@miotsolutions.com](mailto:info@miotsolutions.com)

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