

L-1RS5

4G/3G/2G Ultraband Hinged Monopole Whip Antenna

CELLULAR

4G

The L-1RS5 is a type of connector mount antenna, supporting 4G, 3G, and 2G cellular networks and operates within a frequency range of 698 to 2170MHz.

With its wide frequency range, the L-1RS5 antenna is compatible with various cellular networks used for voice and data communication. It can be used in applications such as wireless communication systems, IoT devices, mobile routers, and other wireless devices that require reliable cellular connectivity.



190 x 16 mm

Document Information

Product	L-1RS5
Part Number	L-1RS5
Description	4G/3G/2G Ultraband Hinged Monopole Whip Antenna
Version	2.0 (current)
Date	7-Jul-2023
Status	Released

Revision History

Version	Date	Author	Changes
1.0	16-Dec-2020	Amy Li	Initial Release
2.0	7-Jul-2023	Ivy Liao	New layout and design

Product Overview

Product Description

The L-1RS5 is a type of connector mount antenna, supporting 4G, 3G, and 2G cellular networks and operates within a frequency range of 698 to 2170MHz.

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Key Features

- Operates in 698-894/1710-2170 MHz
- Linear polarization
- High gain of 2 dBi
- VSWR 1.5
- Omni-directional pattern

Applications

- 4G/LTE radios
- Gateways
- Set-Top Boxes
- Security
- Transportation
- Smart agriculture

Electrical Specifications

Frequency			VSWR	Peak Gain	Efficiency
LTE	698 - 894	MHz	1.9	0.9 d Bi	44%
LTE	1710 - 2170	MHz	1.6	1.4 d Bi	50%

Frequency Range 698 – 2170 MHz

Impedance 50 Ω

Polarization Linear

Radiation Omnidirectional

Electrical Type Monopole

Mechanical Specifications

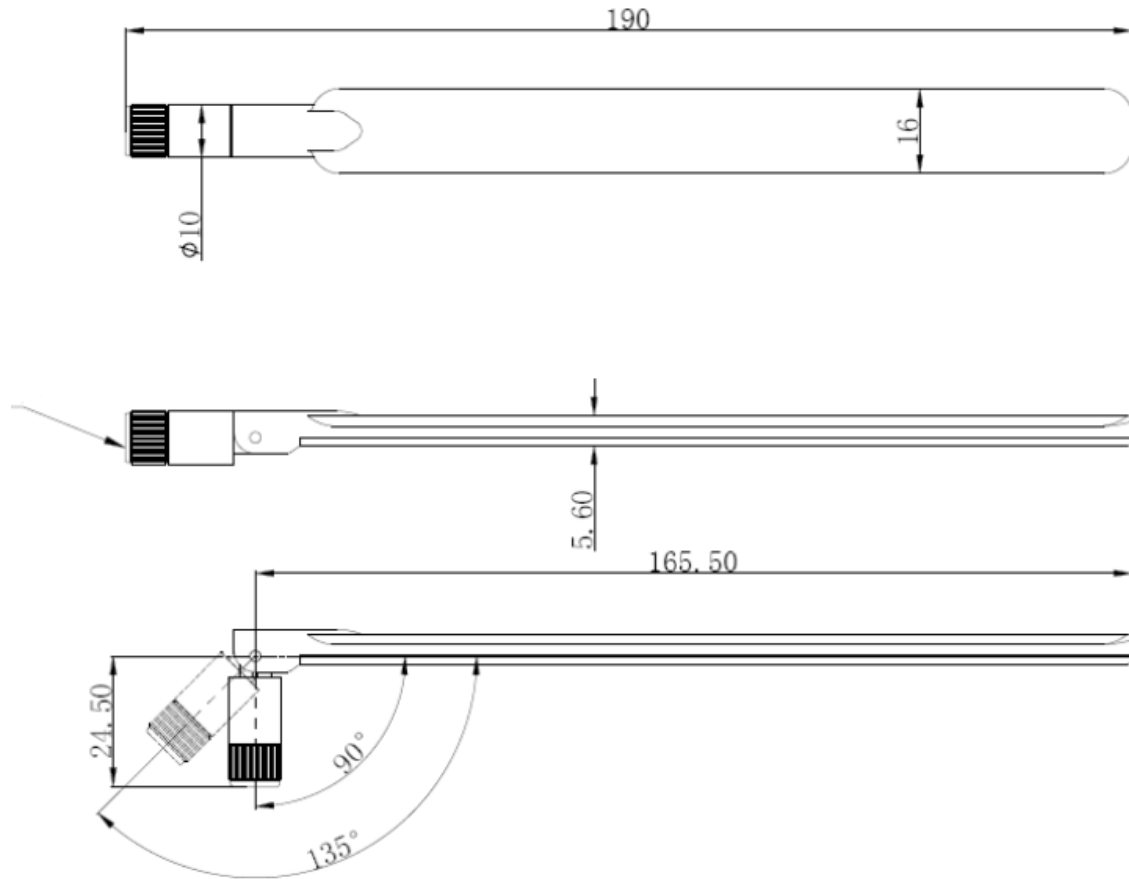
Type	Hinge	Casing	Yes
Dimensions	190 x 16 mm	Color	Black
Connector (Termination)	SMA Plug (male pin)	Material	PC + ABS
Mounting Type	Connector Mount	Weight	TBC (to be confirmed)

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





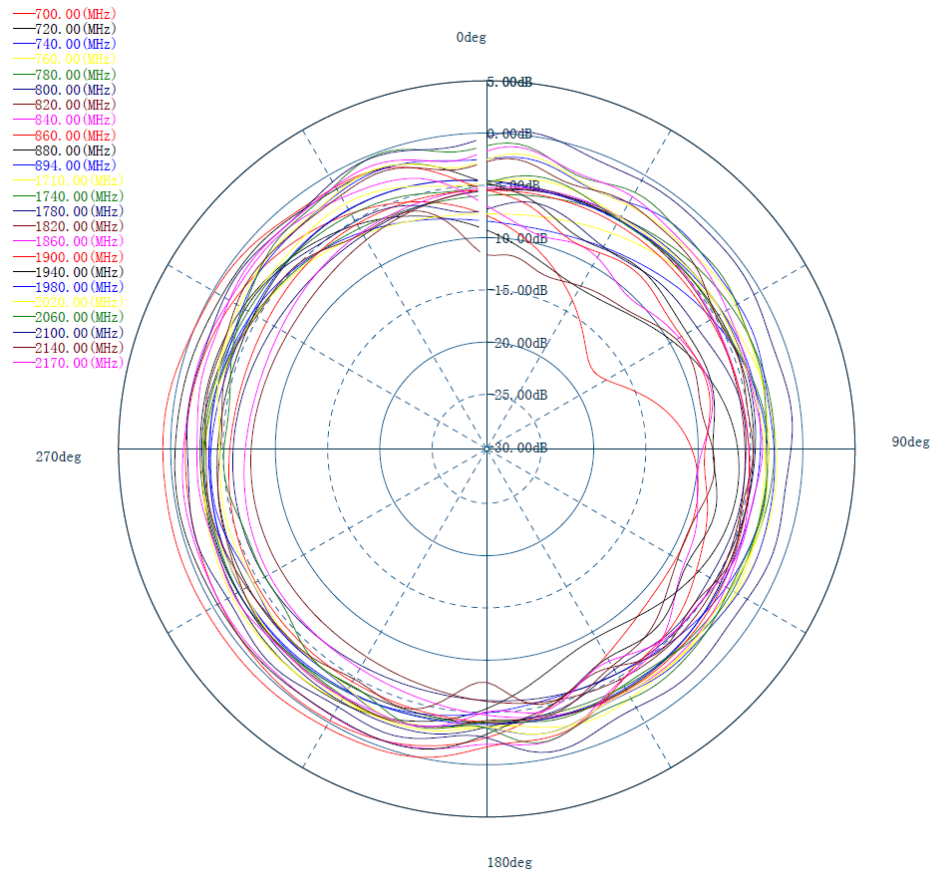
Radiation Pattern

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.

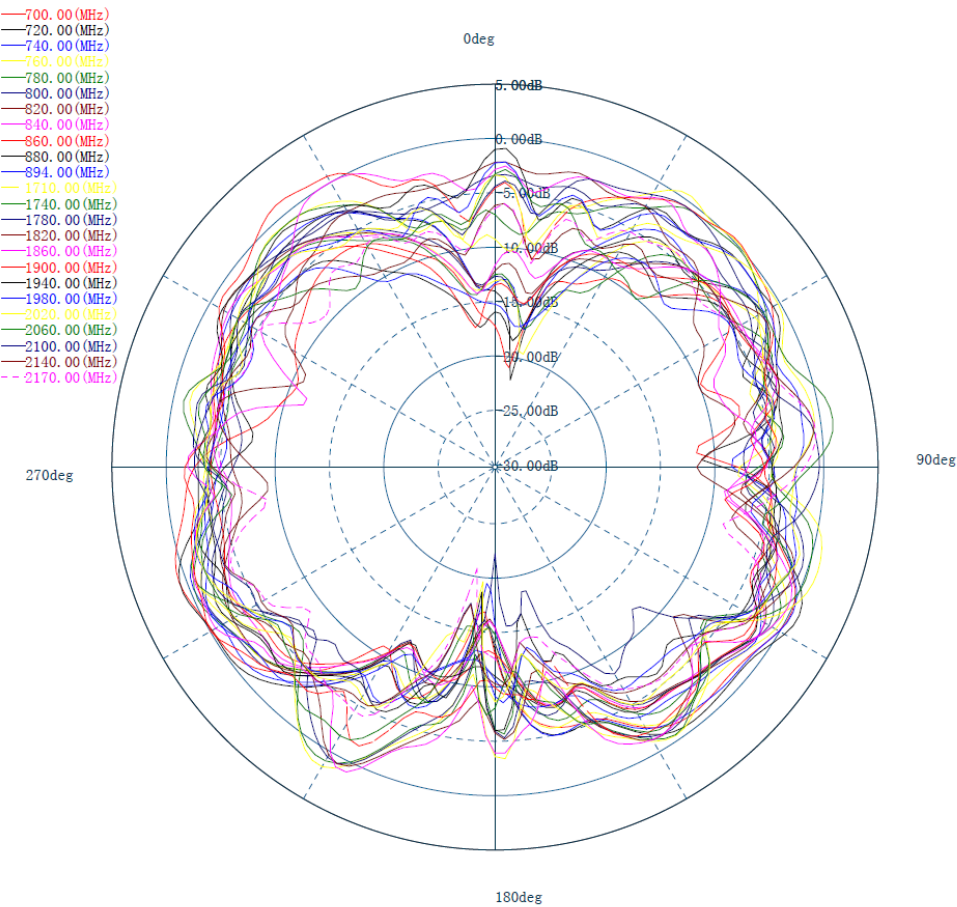
XY Plane (H)

698 – 2170 MHz



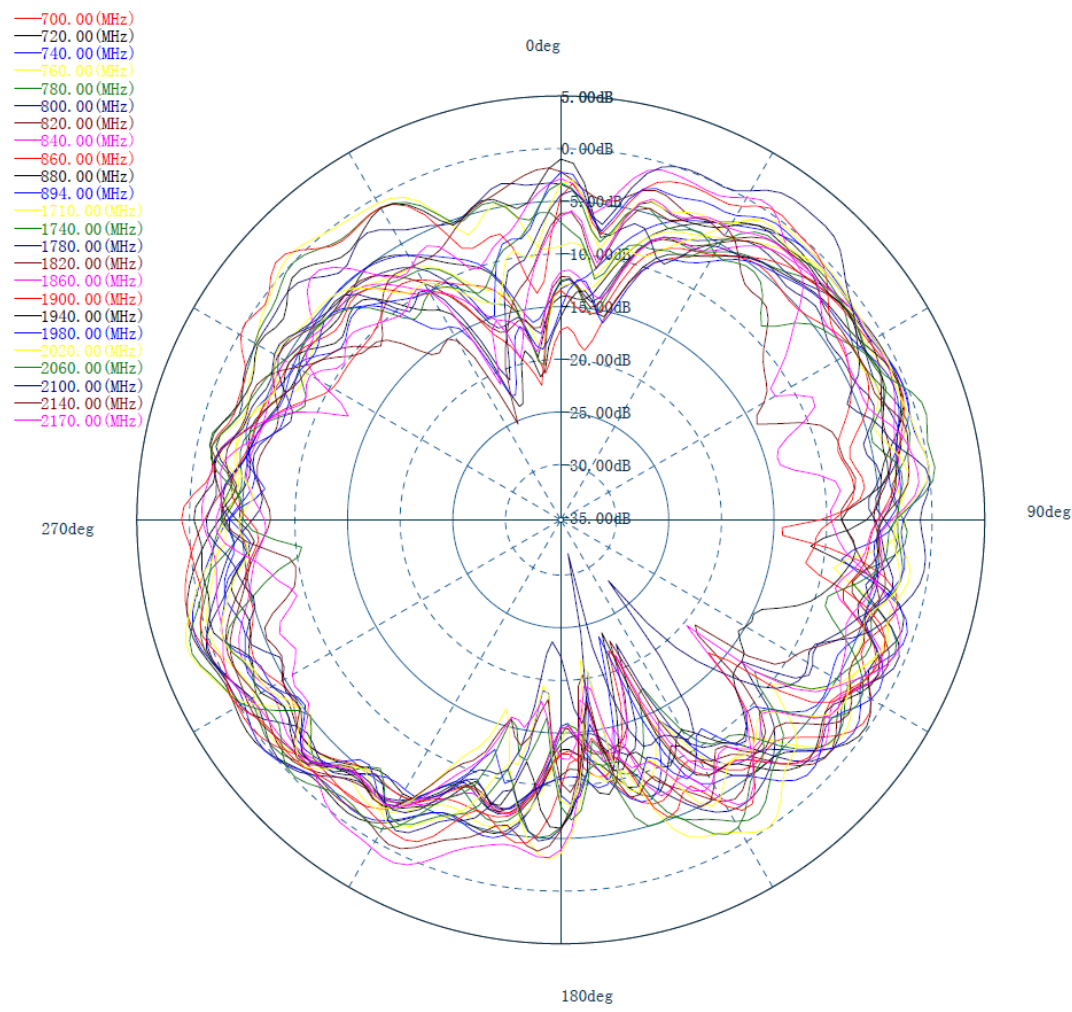
YZ Plane (E1)

698 – 2170 MHz



YZ Plane (E2)

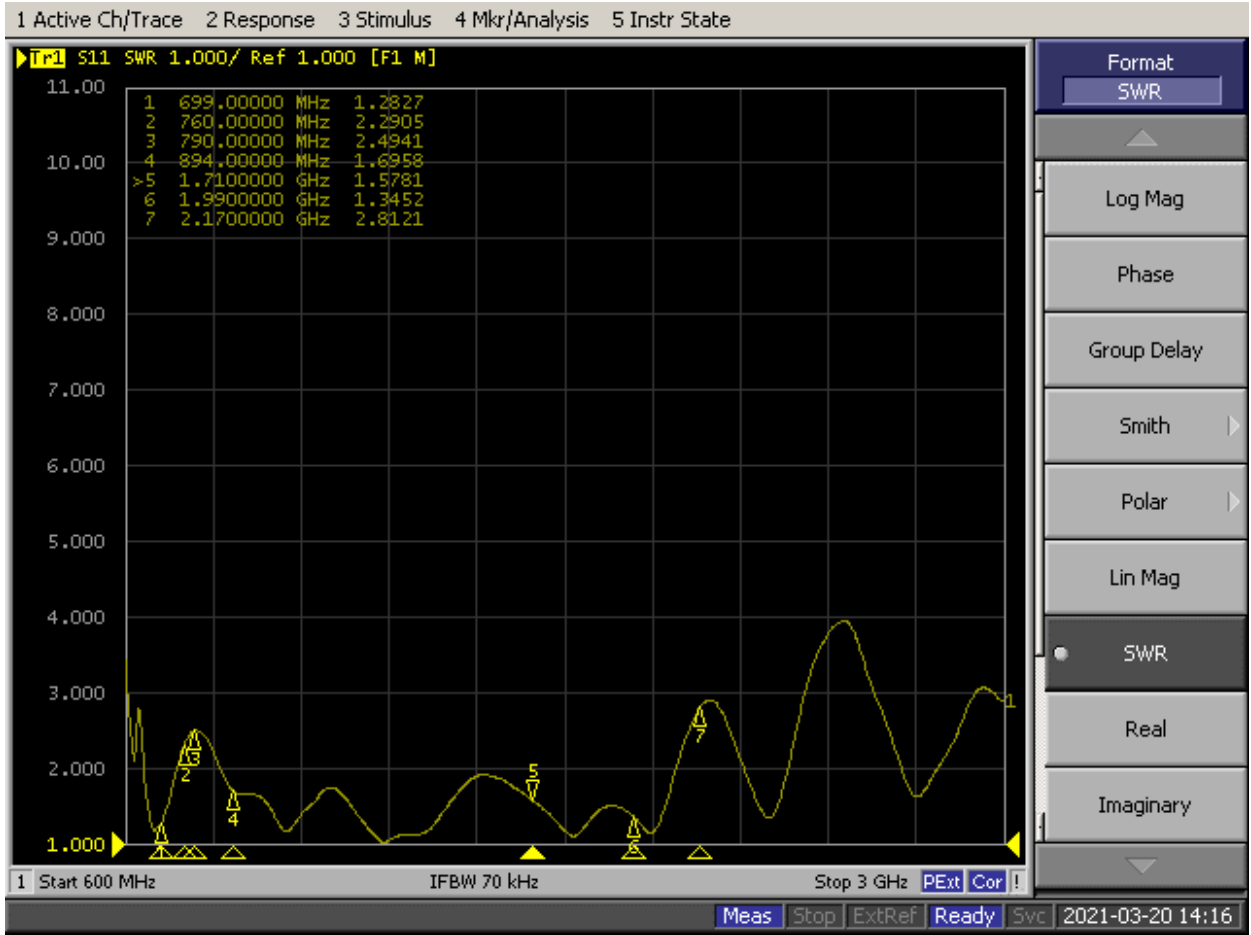
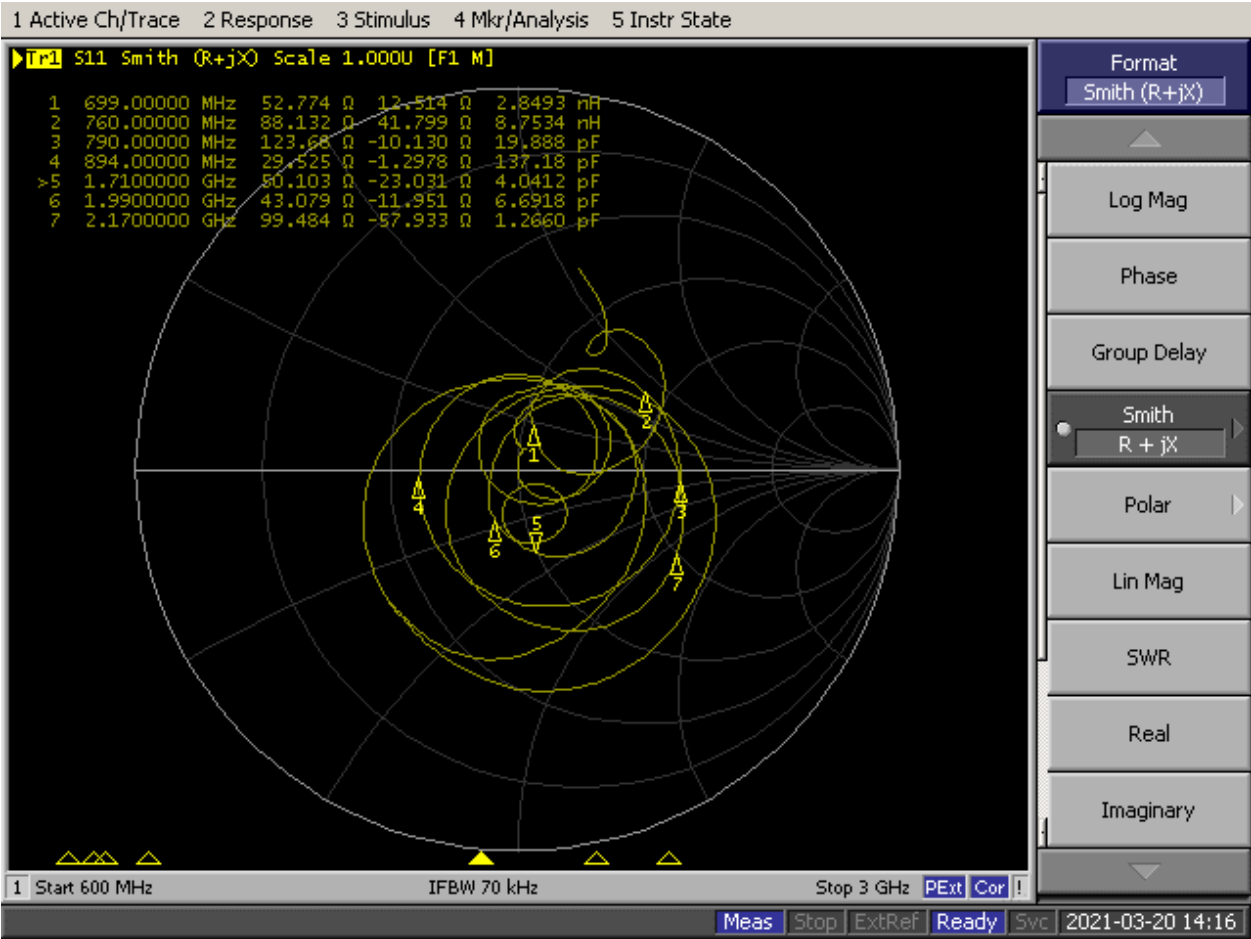
698 – 2170 MHz

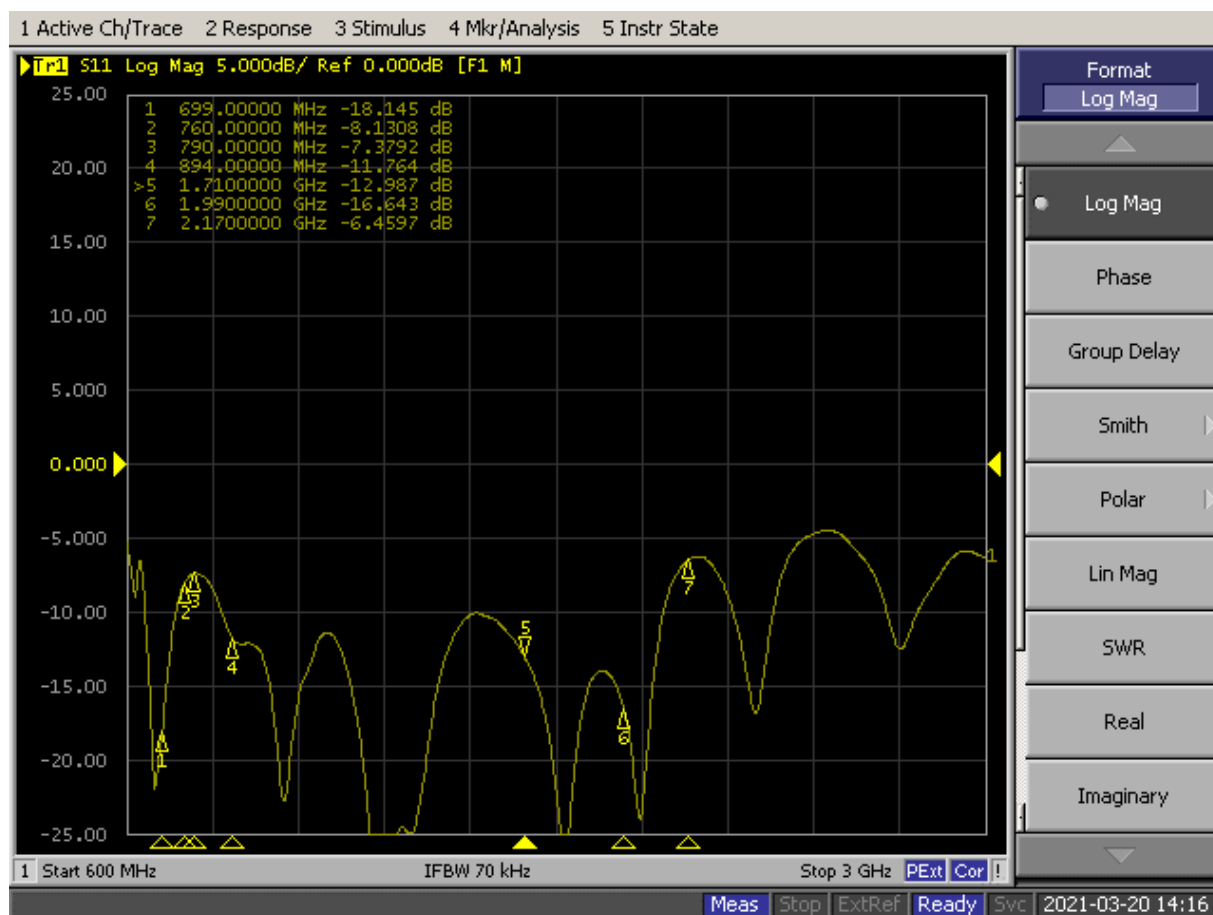


Antenna Smith and VSWR

Frequency		VSWR
699	MHz	1.28
760	MHz	2.29
790	MHz	2.49
894	MHz	1.69

Frequency		VSWR
1710	MHz	1.57
1990	MHz	1.34
2170	MHz	2.81

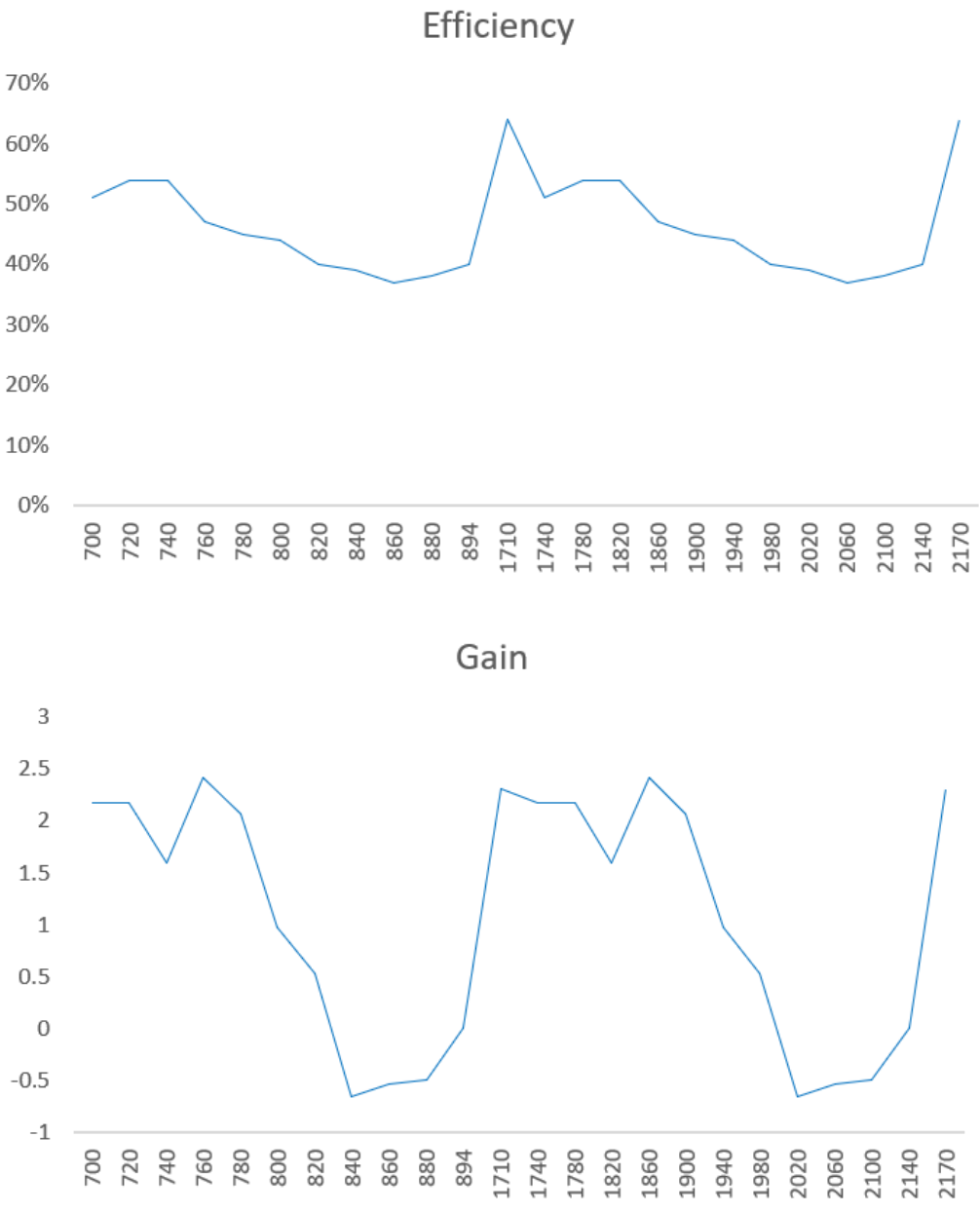




Antenna Efficiency and Gain

Frequency	Efficiency	Gain
700 MHz	51%	2.17
720 MHz	54%	2.18
740 MHz	54%	1.59
760 MHz	47%	2.42
780 MHz	45%	2.07
800 MHz	44%	0.97
820 MHz	40%	0.53
840 MHz	39%	-0.65
860 MHz	37%	-0.53
880 MHz	38%	-0.49
894 MHz	40%	0
1710 MHz	64%	2.31

Frequency	Efficiency	Gain
1740 MHz	51%	2.17
1780 MHz	54%	2.18
1820 MHz	54%	1.59
1860 MHz	47%	2.42
1900 MHz	45%	2.07
1940 MHz	44%	0.97
1980 MHz	40%	0.53
2020 MHz	39%	-0.65
2060 MHz	37%	-0.53
2100 MHz	38%	-0.49
2140 MHz	40%	0
2170 MHz	64%	2.31



Environmental Data

Operating Temperature -20 °C to +80 °C

Compliance RoHS

Ordering Information

Product Variants

Part Number	Description
L-1RS5	4G/3G/2G Ultraband Hinged Monopole Whip 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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