

L-1RA10

Multiband 2G 3G 4G/LTE Antenna

CELLULAR

LTE

The L-1RA10 is a type of Multiband 2G 3G 4G/LTE Antenna . It supports 4G, 3G, and 2G cellular networks and operates within a frequency range of 698 to 2700MHz.

With its wide frequency range, the L-1RA10 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.



115 x 10 mm

Document Information

Product	L-1RA10
Part Number	L-1RA10
Description	Multiband 2G 3G 4G/LTE Antenna
Version	2.0 (current)
Date	8-Sep-2023
Status	Released

Revision History

Version	Date	Author	Changes
1.0	16-Dec-2020	Amy Li	Initial Release
1.2	30-June-2023	Ivy Liao	New layout and design
2.0	8-Sep-2023	Ivy Liao	New layout and design

Product Overview

Product Description

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Key Features

- Operates in 698-960/1710-2170 MHz and 2500-2700MHz
- Dual band antenna
- Vertical polarization
- High gain of 6 dBi
- VSWR 1.5
- Omni-directional pattern

Applications

- 4G/LTE radios
- Gateways
- Set-Top Boxes
- Security
- IoT
- M2M
- Transportation
- Smart agriculture

Electrical Specifications

Frequency			VSWR	Peak Gain	Efficiency
LTE	698 - 960	MHz	2.0	2.6 d Bi	36%
LTE	1710 - 2170	MHz	1.7	5.6 d Bi	63%
2.4G WiFi	2500 - 2700	MHz	1.9	5.0 d Bi	61%

Frequency Range 698 – 2700 MHz

Impedance 50 Ω

Polarization Vertical

Radiation Omnidirectional

Electrical Type Monopole

Mechanical Specifications

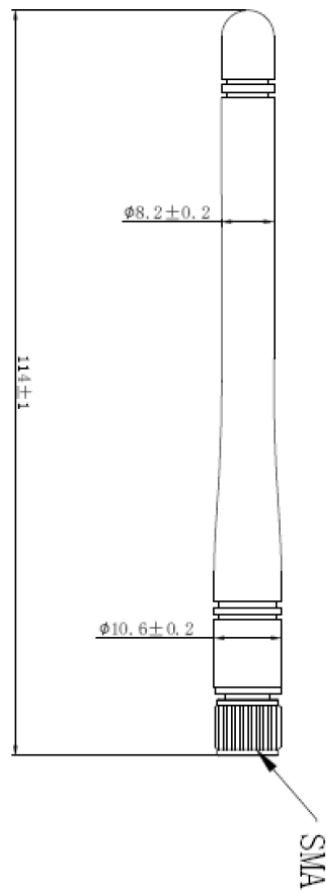
Type	Hinge	Casing	Yes
Dimensions	115 x 10 mm	Color	Black
Connector (Termination)	SMA Plug (male pin)	Material	PBT + PC
Mounting Type	Connector Mount	Weight	TBC (to be confirmed)

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





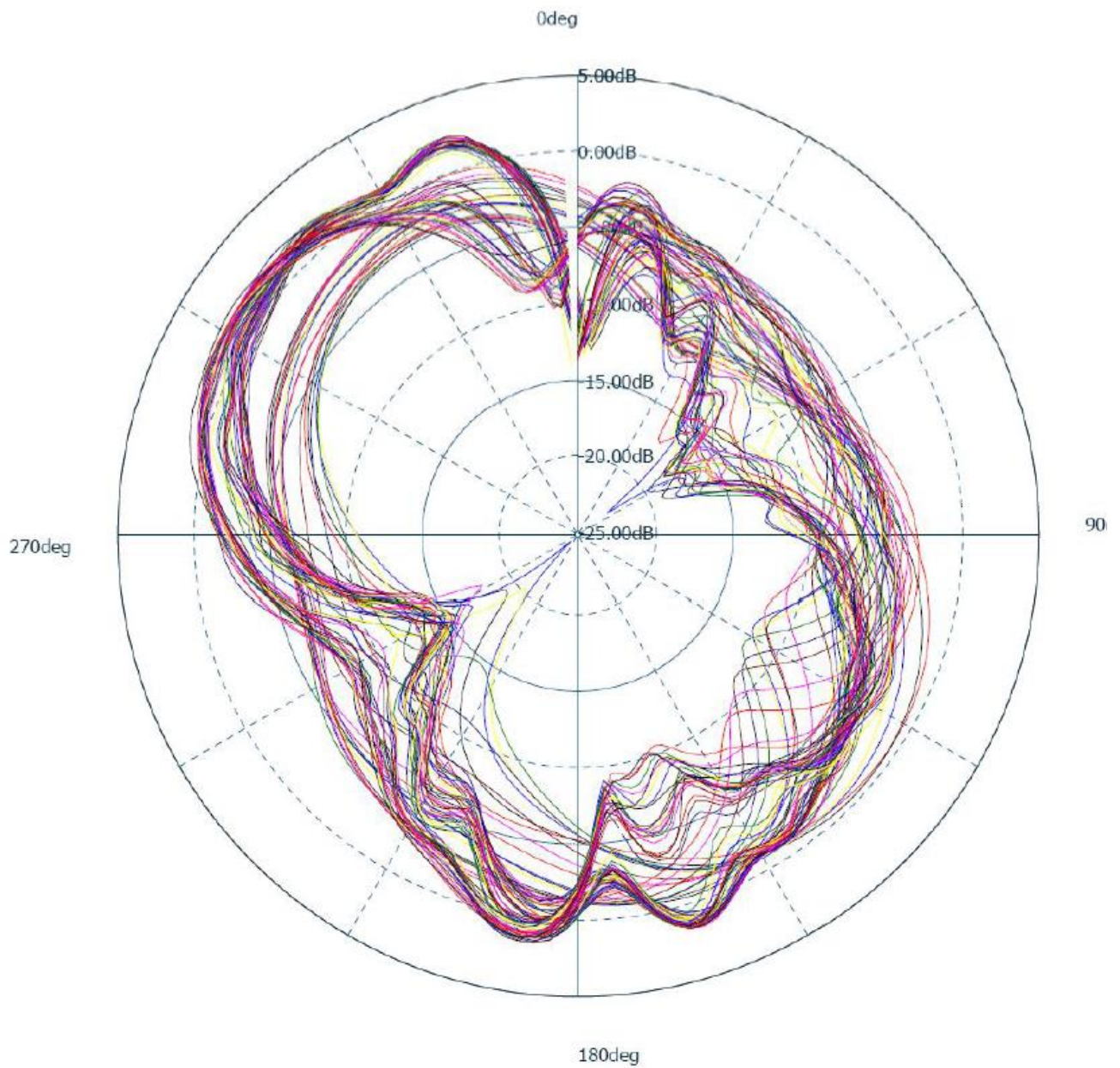
Radiation Pattern

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.

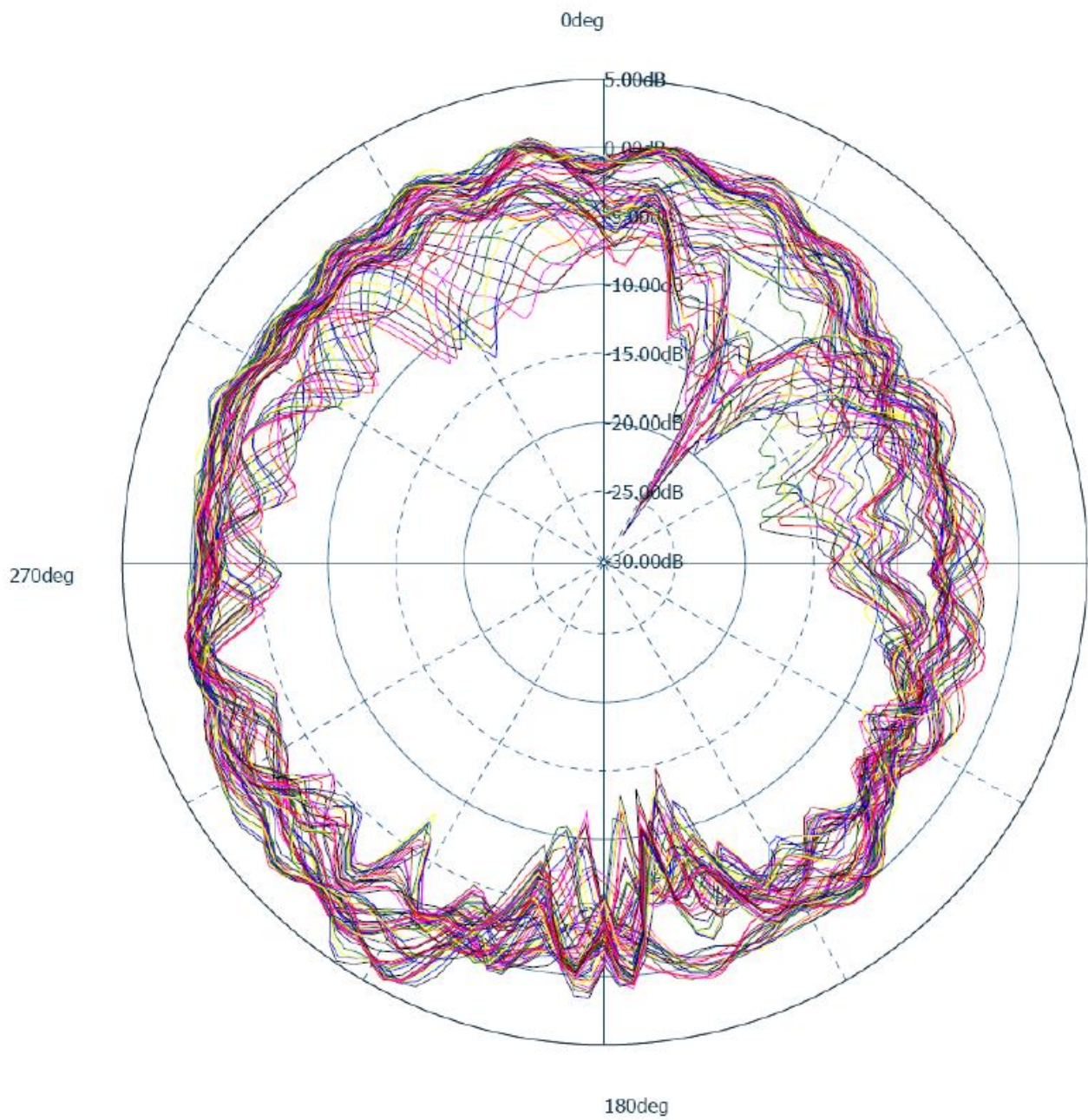
XY Plane (H)

698 – 2700 MHz



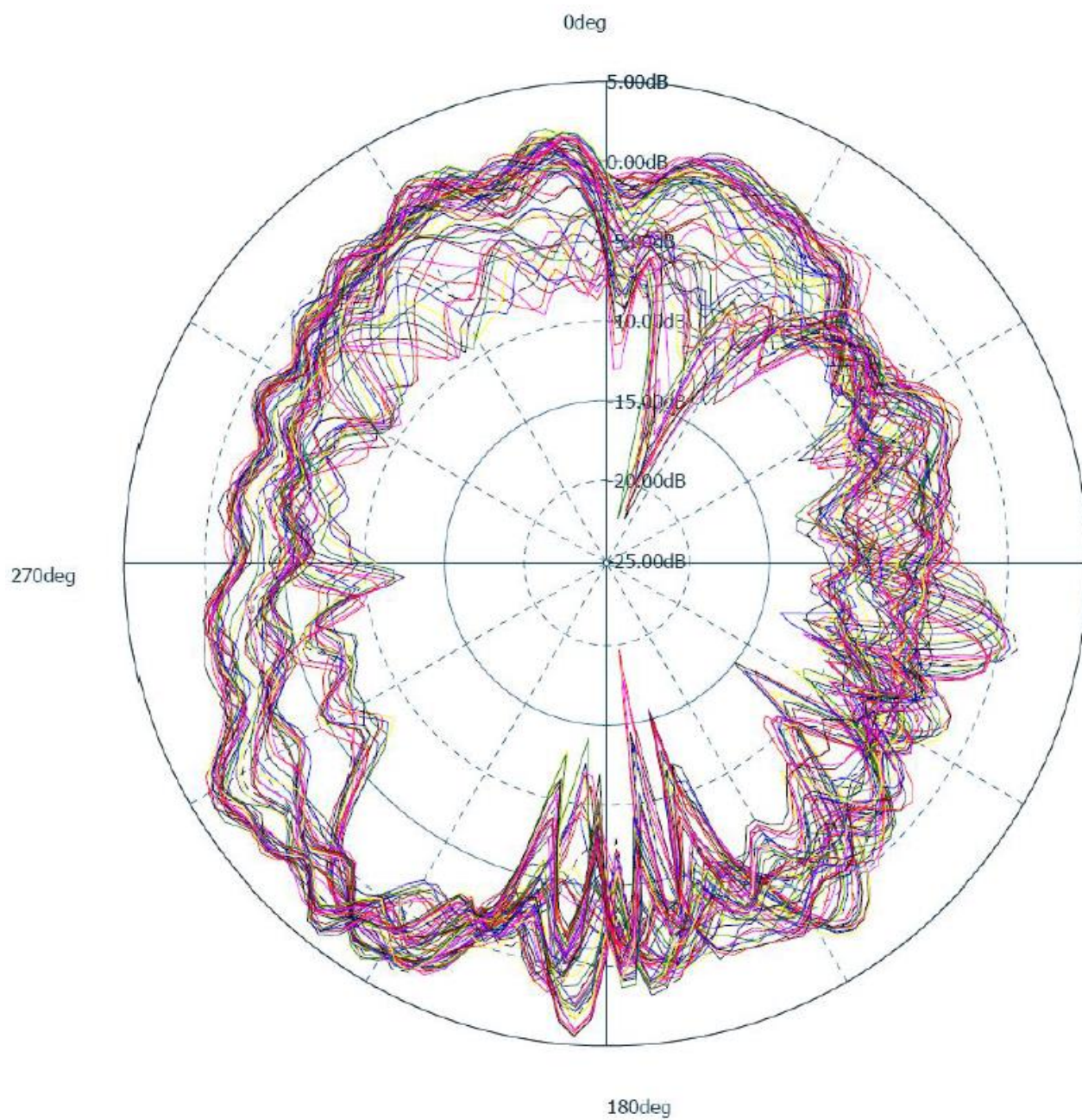
YZ Plane (E1)

698 – 2700 MHz



YZ Plane (E2)

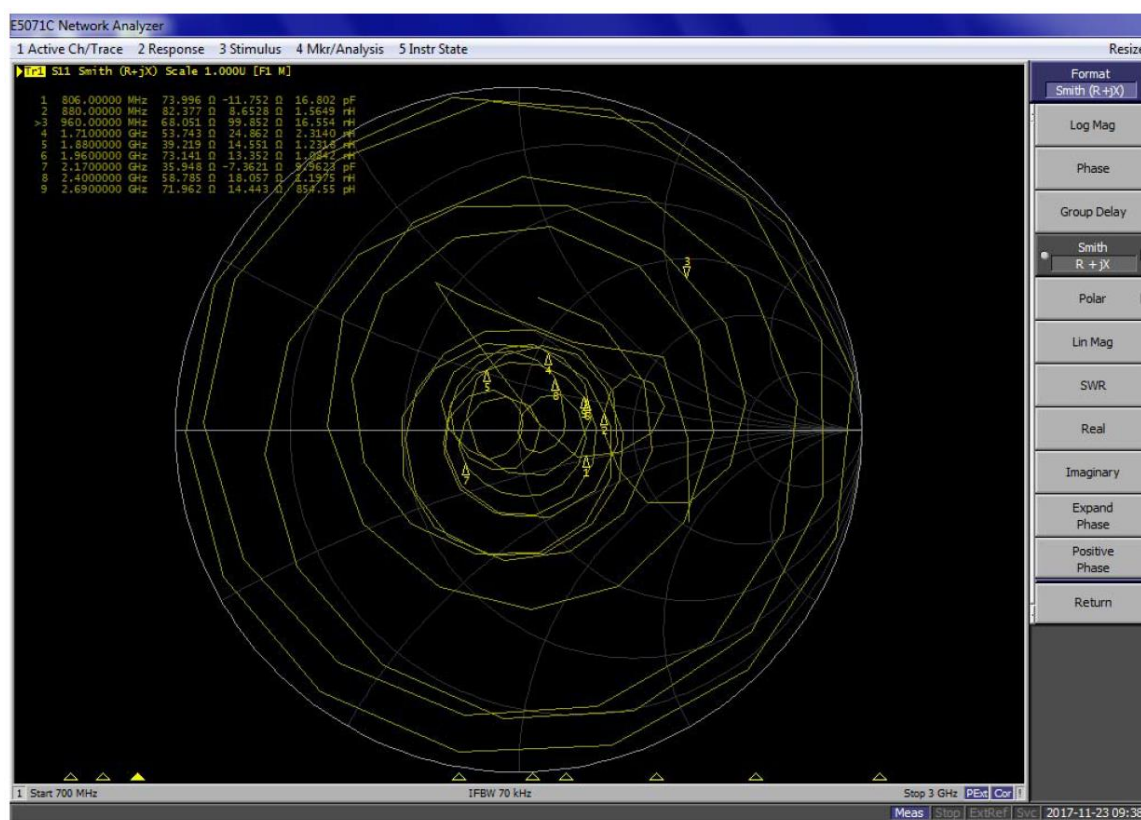
698 – 2700 MHz

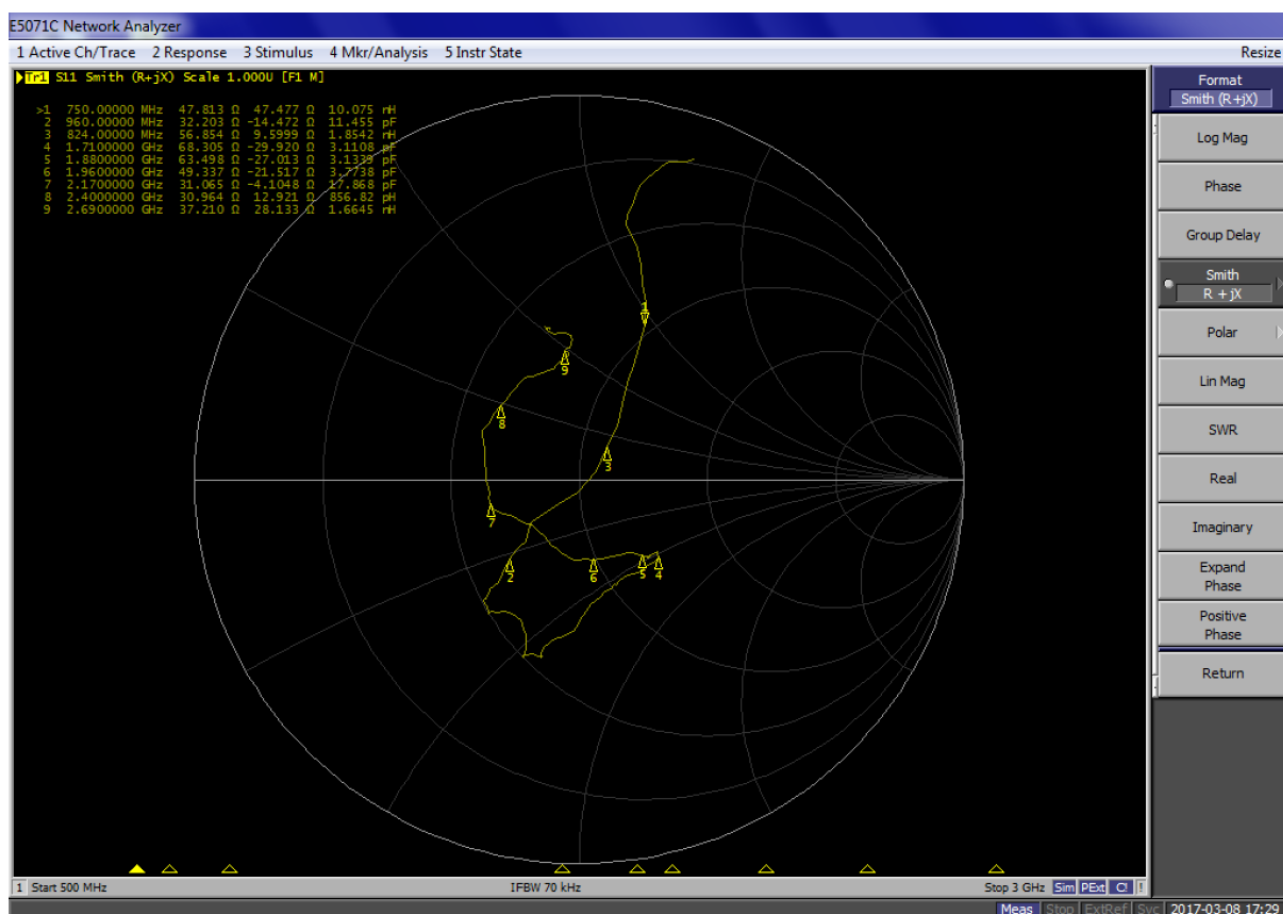


Antenna Smith and VSWR

Frequency		VSWR
824	MHz	1.5
880	MHz	1.7
960	MHz	1.5
1710	MHz	1.6

Frequency		VSWR
1880	MHz	1.5
2170	MHz	1.4
2400	MHz	1.4
2690	MHz	1.5





Antenna Efficiency and Gain

Frequency		Efficiency		Gain	
750	MHz	30%		0.8	
824	MHz	43%		2.6	
960	MHz	41%		3.5	
1710	MHz	60%		5.9	
1880	MHz	60%		5.4	
1960	MHz	64%		5.8	
2170	MHz	65%		5.7	
2400	MHz	57%		5	
2690	MHz	61%		5	

Environmental Data

Operating Temperature	-20 °C to +80 °C
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IP Rating	IP67
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Compliance	RoHS
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Ordering Information

Product Variants

Part Number	Description
L-1RA10	Multiband 2G 3G 4G/LTE 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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