

L-1RC4

4G Magnetic Suction Antenna

CELLULAR

WIFI

L-1RC4 is a high-performance 4G magnetic suction antenna produced by MIOT Company, supporting frequencies of 690-960MHz and 1710-2700MHz. This antenna is designed with advanced technology, delivering outstanding signal reception and transmission capabilities suitable for applications in IoT, mobile communications, and other related fields. Its magnetic suction design allows for easy and quick installation on metal surfaces, ensuring a stable and reliable connection experience for users.

With its wide frequency range and high-performance capabilities, the L-1RC4 antenna supports reliable wireless connectivity across multiple cellular networks. It enables efficient data transfer, voice communication, and IoT applications.



233 × 16 mm

Document Information

Product	L-1RC4
Part Number	L-1RC4
Description	4G Magnetic Suction Antenna
Version	1.0 (current)
Date	3-Jan-2024
Status	Released

Revision History

Version	Date	Author	Changes
1.0	3-Jan-2024	Ivy liao	Initial Release

Product Overview

Product Description

L-1RC4 is a high-performance 4G magnetic suction antenna produced by MIOT Company, supporting frequencies of 690-960MHz and 1710-2700MHz. This antenna is designed with advanced technology, delivering outstanding signal reception and transmission capabilities suitable for applications in IoT, mobile communications, and other related fields. Its magnetic suction design allows for easy and quick installation on metal surfaces, ensuring a stable and reliable connection experience for users.

With its wide frequency range and high-performance capabilities, the L-1RC4 antenna supports reliable wireless connectivity across multiple cellular networks. It enables efficient data transfer, voice communication, and IoT applications.

Key Features

- Operates in 690-960, 1710-2700 MHz
- Multiband band antenna
- Vertical polarization
- High gain of 5 dBi
- VSWR 1.4
- Omni-directional pattern

Applications

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

Electrical Specifications

Frequency			VSWR	Peak Gain	Efficiency
LTE	690 - 960	MHz	2.3	2.0 d Bi	53%
LTE/WiFi	1710 - 2700	MHz	1.6	6.0 d Bi	60%

Frequency Range	690-960, 1710-2700 MHz	Radiation	Omnidirectional
Impedance	50 Ω	Polarization	Linear

Mechanical Specifications

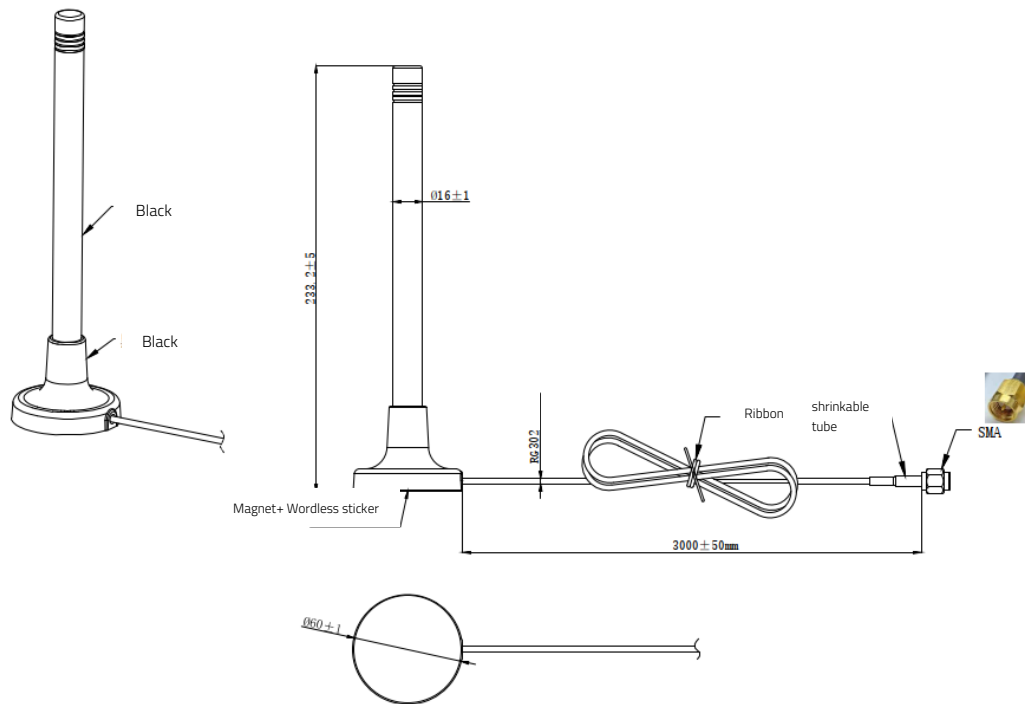
Type	Magnetic	Mounting Type	Magnetic
Dimensions	233 × 16 mm	Casing	YES
Connector	SMA Male	Color	Black
Enclosure	TPE	Material	ABS
Cable Length	3000mm		

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.

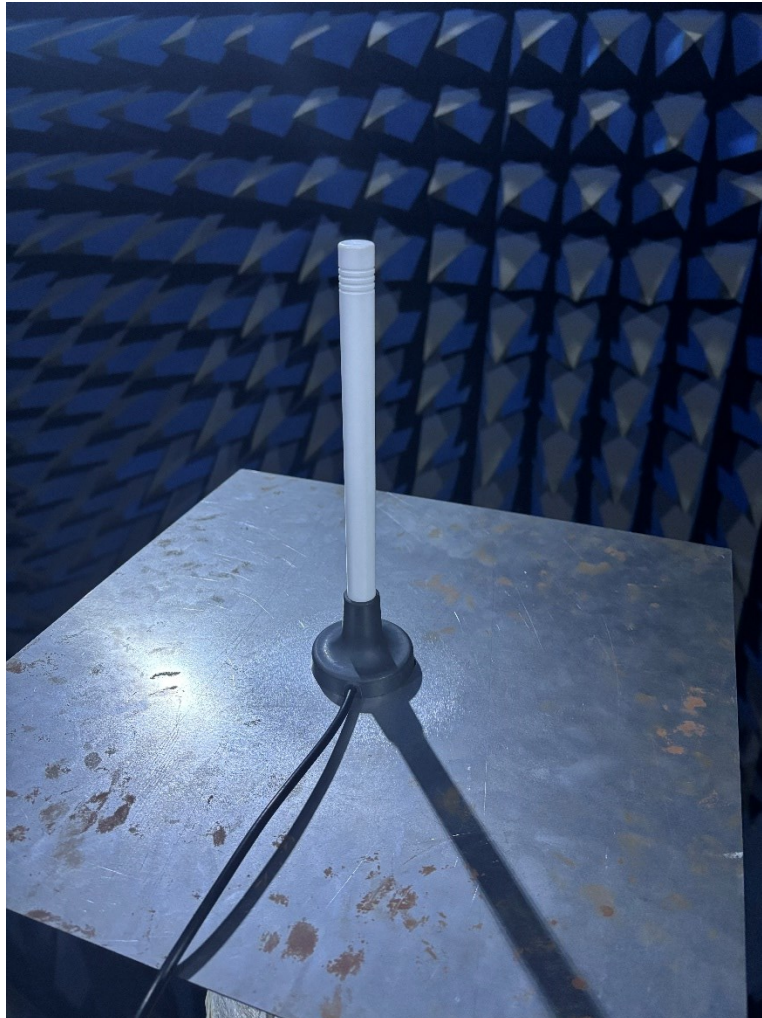
Test Setup

Equipment

XYZ Testing Machine

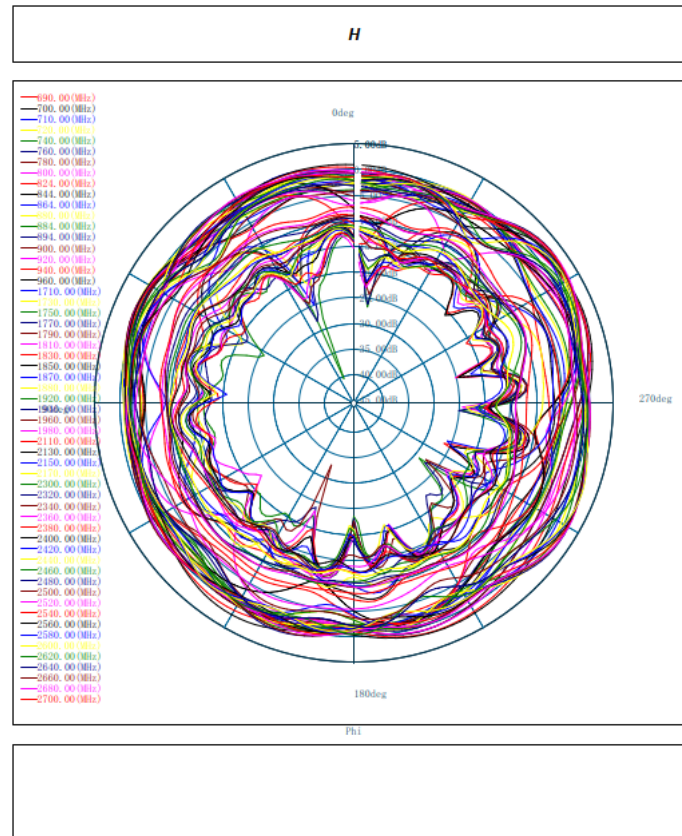
Conditions

Free space Bend



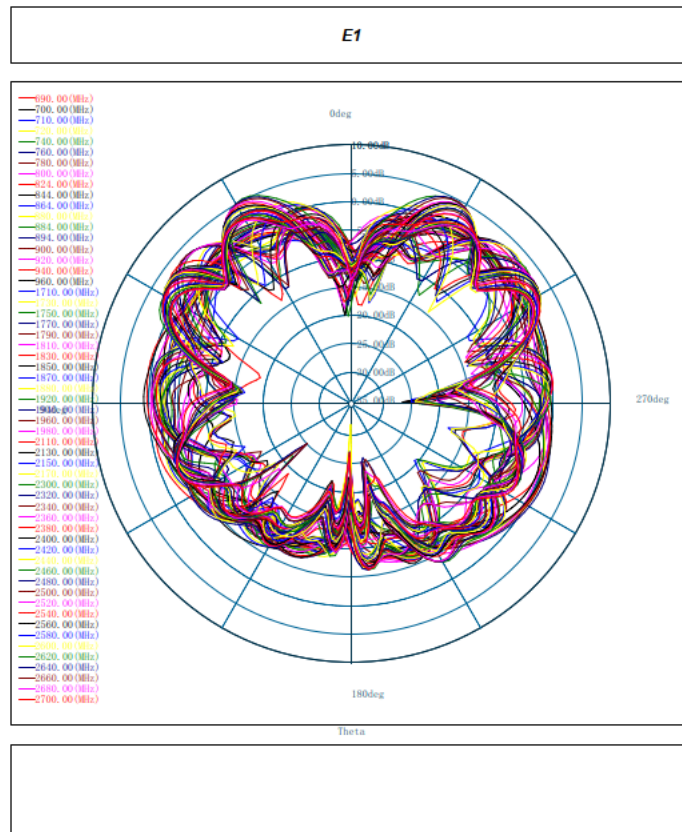
XY Plane (H)

690– 2700 MHz



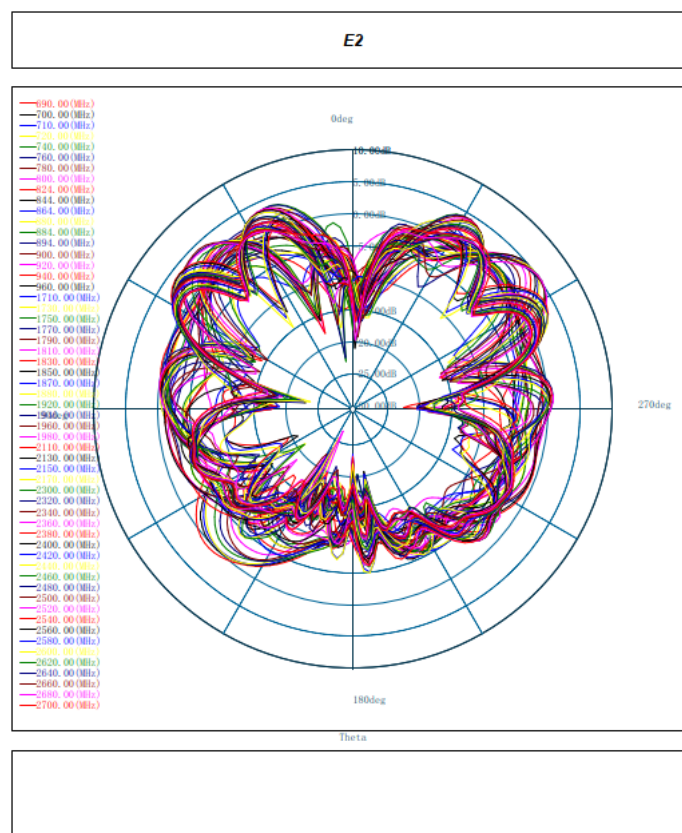
XZ Plane (E1)

690– 2700 MHz



YZ Plane (E2)

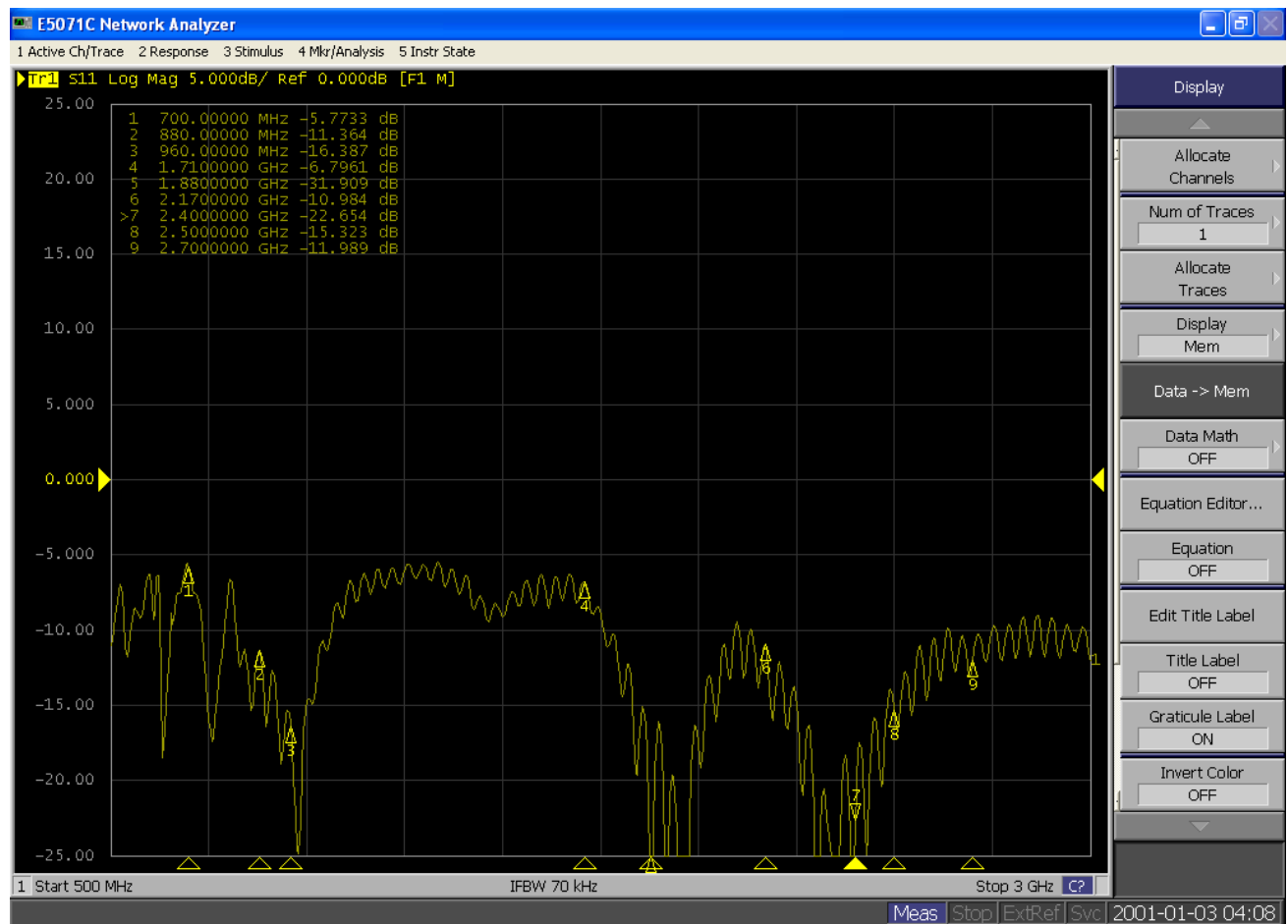
690– 2700 MHz

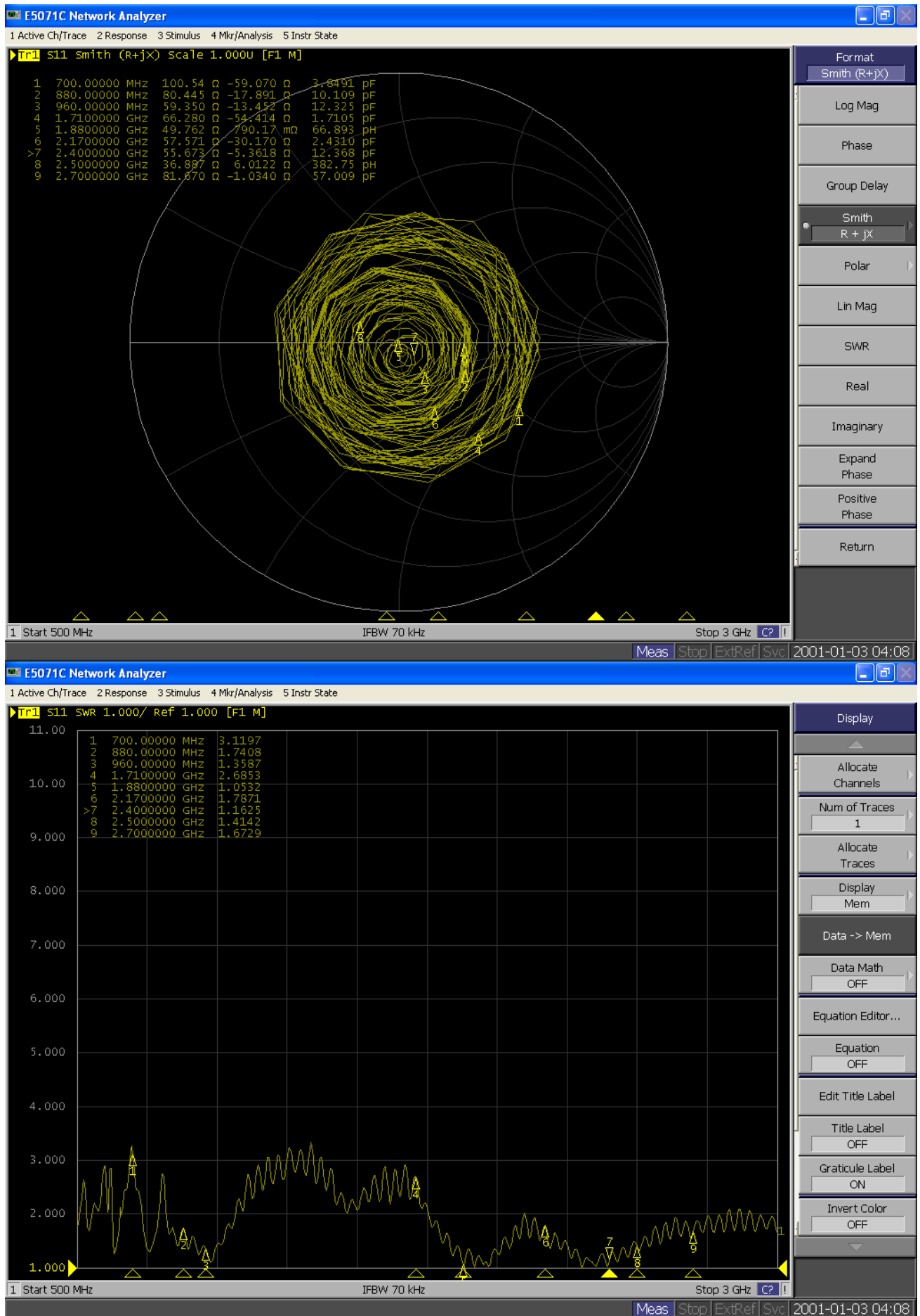


Antenna Smith and VSWR

Frequency		VSWR
700	MHz	3.1
880	MHz	1.7
960	MHz	1.3
1710	MHz	2.6
1880	MHz	1.0

Frequency		VSWR
2170	MHz	1.7
2400	MHz	1.1
2500	MHz	1.4
2700	MHz	1.6



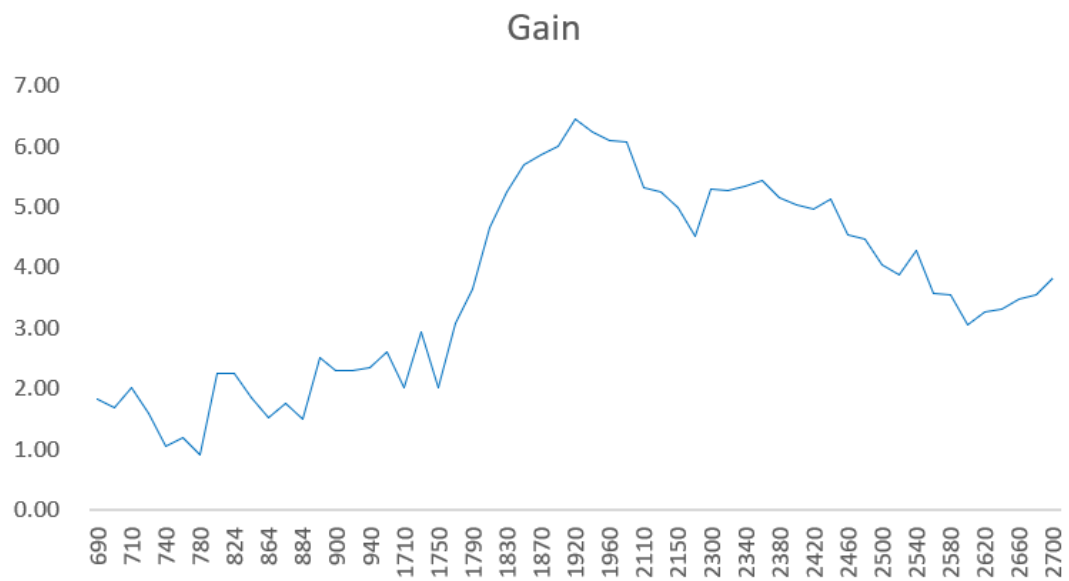
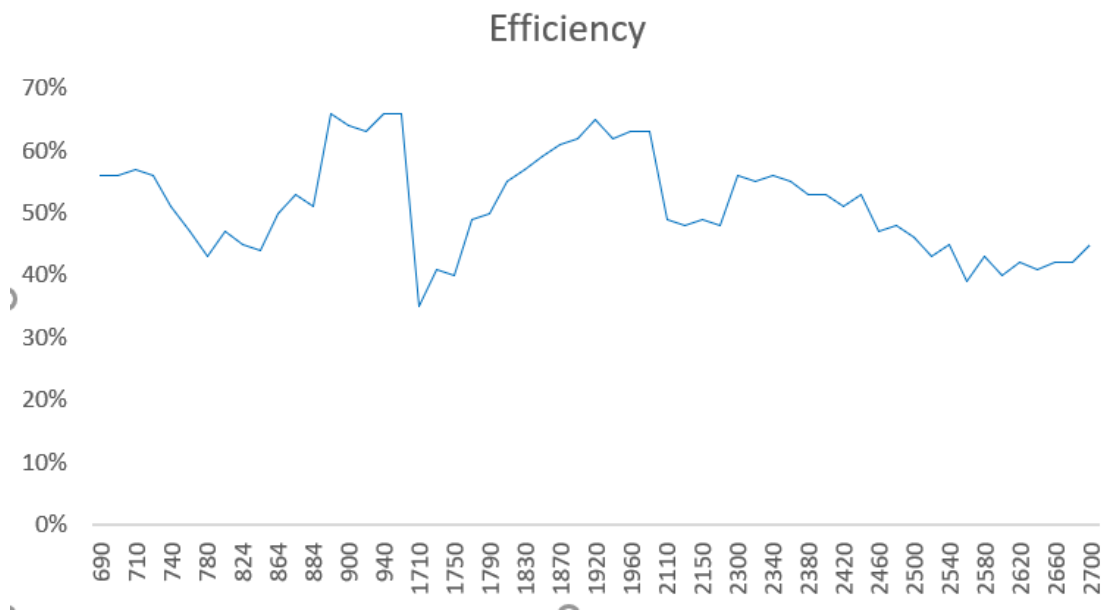


Antenna Efficiency and Gain

Frequency		Efficiency	Gain
690	MHz	56%	1.83748
700	MHz	56%	1.694204
710	MHz	57%	2.027525
720	MHz	56%	1.595535
740	MHz	51%	1.06179
760	MHz	47%	1.199184
780	MHz	43%	0.920479
800	MHz	47%	2.260084
824	MHz	45%	2.264766
844	MHz	44%	1.856401
864	MHz	50%	1.523333
880	MHz	53%	1.758017
884	MHz	51%	1.489711
894	MHz	66%	2.513927
900	MHz	64%	2.310338
920	MHz	63%	2.312106
940	MHz	66%	2.345908
960	MHz	66%	2.618217
1710	MHz	35%	2.026416
1730	MHz	41%	2.938906
1750	MHz	40%	2.006976
1770	MHz	49%	3.069029
1790	MHz	50%	3.652864
1810	MHz	55%	4.653018
1830	MHz	57%	5.247236
1850	MHz	59%	5.69273
1870	MHz	61%	5.865461
1880	MHz	62%	6.010724

Frequency		Efficiency	Gain
1940	MHz	62%	6.247476
1960	MHz	63%	6.096007
1980	MHz	63%	6.062555
2110	MHz	49%	5.309043
2130	MHz	48%	5.236344
2150	MHz	49%	4.981504
2170	MHz	48%	4.526871
2300	MHz	56%	5.300898
2320	MHz	55%	5.272173
2340	MHz	56%	5.333474
2360	MHz	55%	5.426106
2380	MHz	53%	5.152271
2400	MHz	53%	5.037961
2420	MHz	51%	4.974081
2440	MHz	53%	5.137402
2460	MHz	47%	4.547228
2480	MHz	48%	4.476137
2500	MHz	46%	4.047912
2520	MHz	43%	3.87811
2540	MHz	45%	4.283659
2560	MHz	39%	3.565613
2580	MHz	43%	3.558596
2600	MHz	40%	3.049512
2620	MHz	42%	3.256426
2640	MHz	41%	3.308769
2660	MHz	42%	3.470857
2680	MHz	42%	3.540888
2700	MHz	45%	3.826735

1920	MHz	65%	6.442854
------	-----	-----	----------



Environmental Data

Operating Temperature	-20°C to +80°C
-----------------------	----------------

Vibration	N/A
-----------	-----

IP Rating	IP66
-----------	------

Ordering Information

Product Variants

Part Number	Description
L-1RC4	4G Magnetic Suction 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@mioticsolutions.com

The information contained herein is provided "as is" and MOIT assumes no liability for using the information. No warranty, either express or implied, is given, including but not limited to the accuracy, correctness, reliability, and fitness for a particular purpose of the information. This document may be revised by MOIT at any time.

MIOT reserves all rights to this document and the information contained herein. Reproduction, use, modification, or disclosure to third parties of this document without express permission is strictly prohibited.

Copyright © 2023, MIOT Wireless Solutions Ltd. All Rights Reserved



www.mioticsolutions.com

