

L-2FB7

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

CELLULAR

FPC

The L-2FB7 is a flexible printed circuit (FPC) antenna designed to operate at frequencies ranging from 698 MHz to 3000 MHz. With its compact dimensions, it offers a space-efficient solution for wireless communication applications.

One of the key advantages of the L-2FB7 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-2FB7 FPC antenna can be tailored to meet your unique requirements.



96 x 21 x 0.2 mm

Document Information

Product	L-2FB7
Part Number	L-2FB7
Description	4G LTE/3G/2G ultra-thin FPC Adhesive Antenna
Version	2.0 (current)
Date	07-Jun-2023
Status	Released

Revision History

Version	Date	Author	Changes
1.0	16-Dec-2020	Amy Li	Initial Release
2.0	07-Jun-2023	Amy Li	New layout and design

Product Overview

Product Description

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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	2.0	3.0 d Bi	45%
LTE	1710 - 3000	MHz	1.5	6.0 d Bi	70%

Frequency Range	698 – 3000 MHz
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Impedance	50 Ω
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Polarization	Linear
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Radiation	Omnidirectional
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Electrical Type	Monopole
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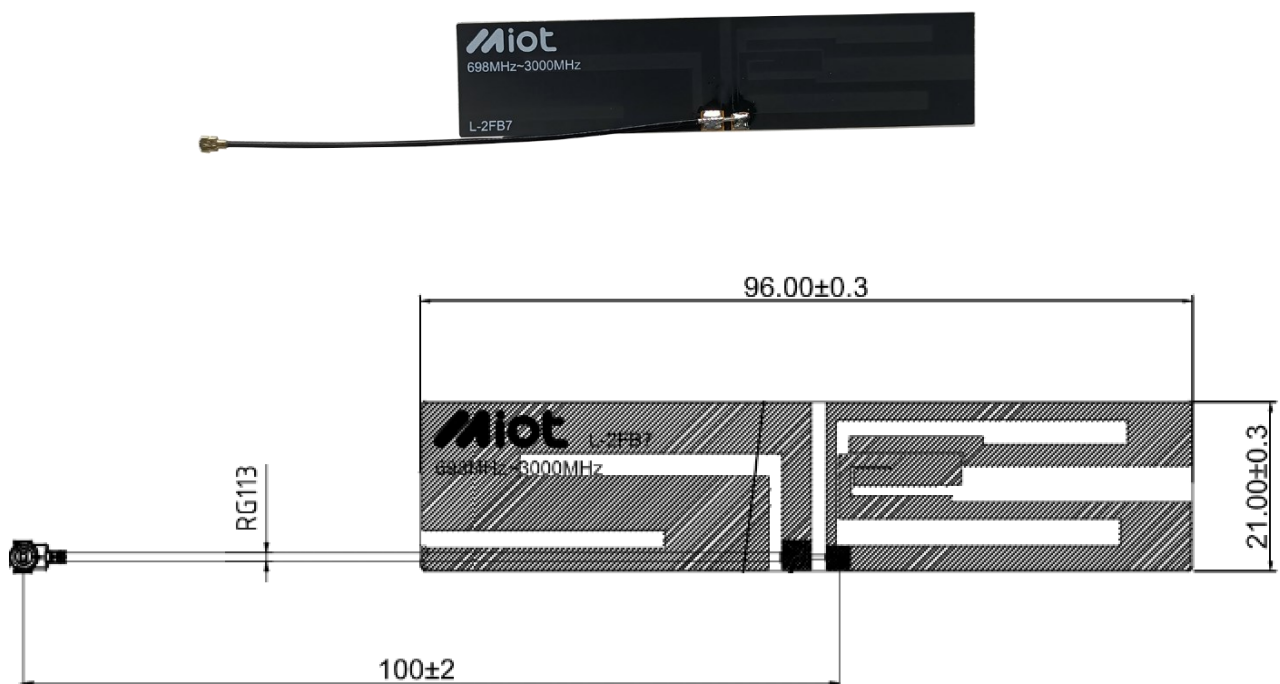
Mechanical Specifications

Type	FPC	Casing	NA
Dimensions	96 x 21 x 0.2 mm	Color	Black
Connector (Termination)	U.FL (standard)	Material	Flexible Polymer
Cable Type	1.13mm (standard)	Cable Length	100mm (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



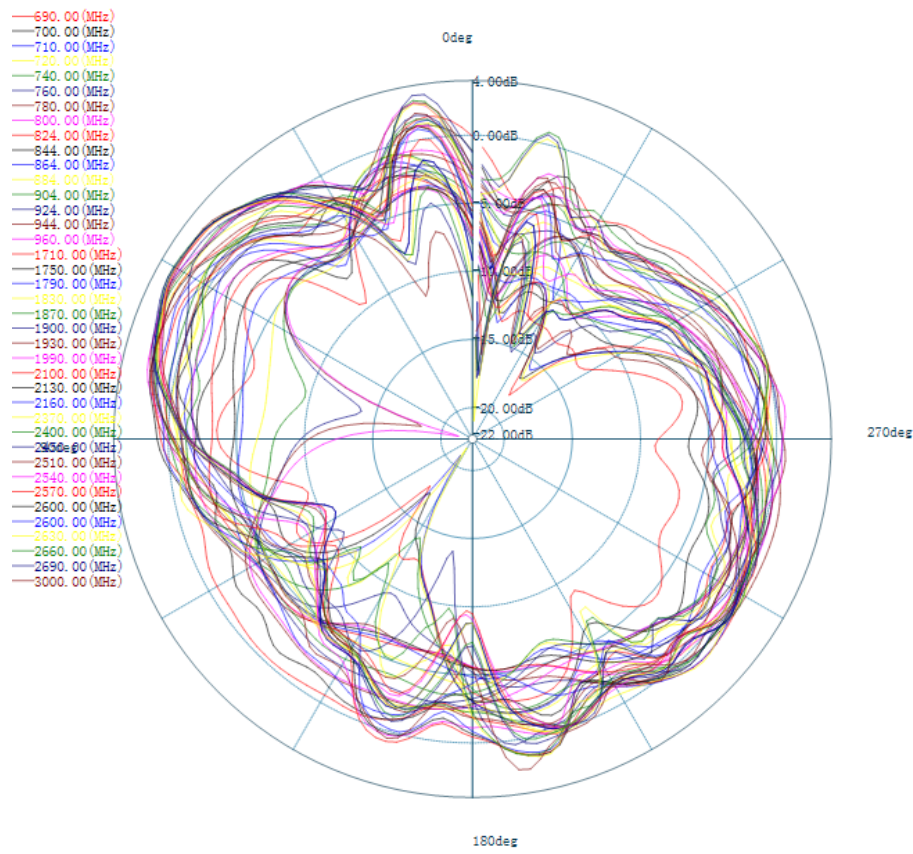
Radiation Pattern

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.

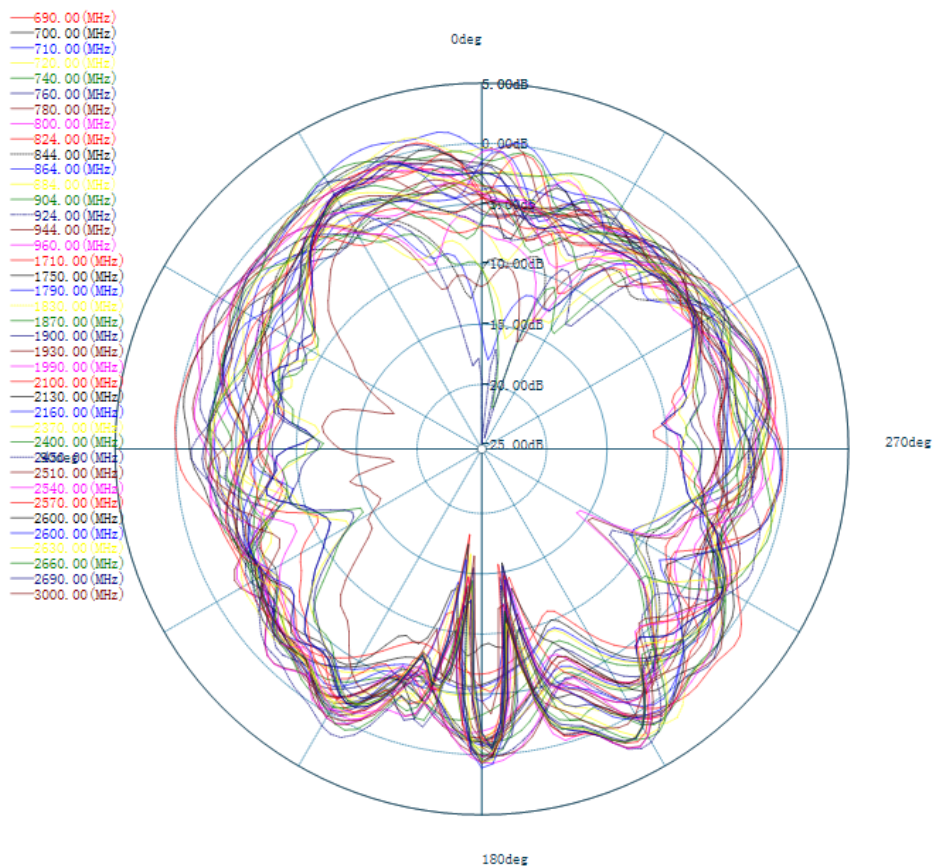
XY Plane (H)

698 – 3000 MHz



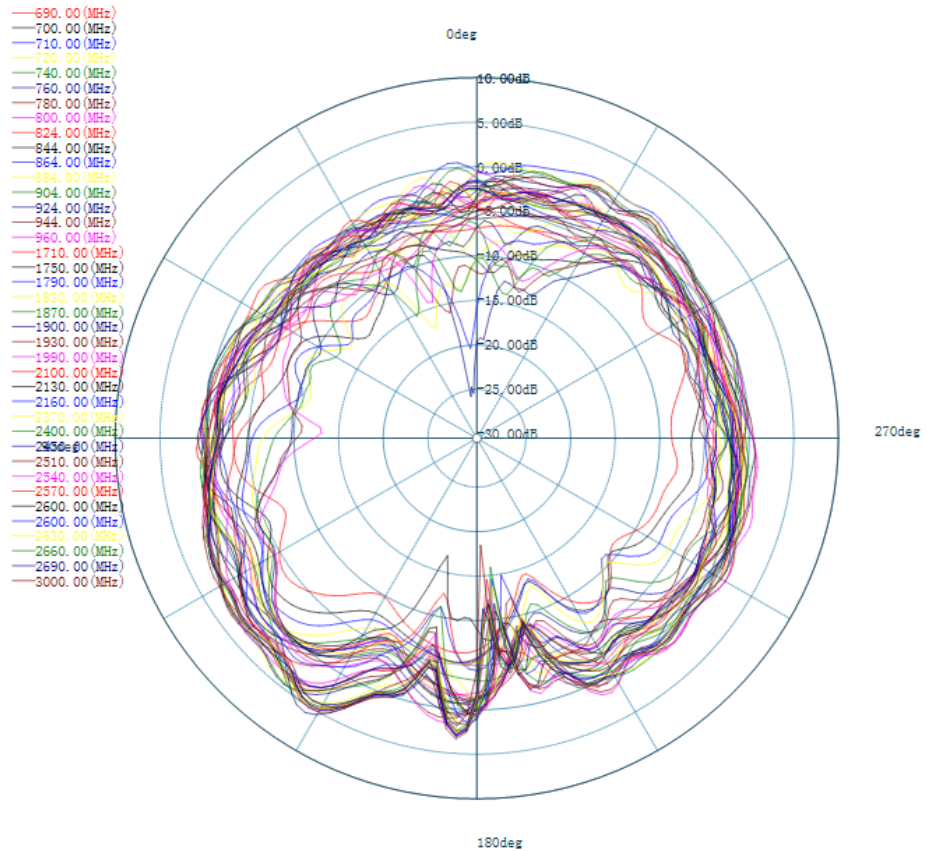
YZ Plane (E1)

698 – 3000 MHz



YZ Plane (E2)

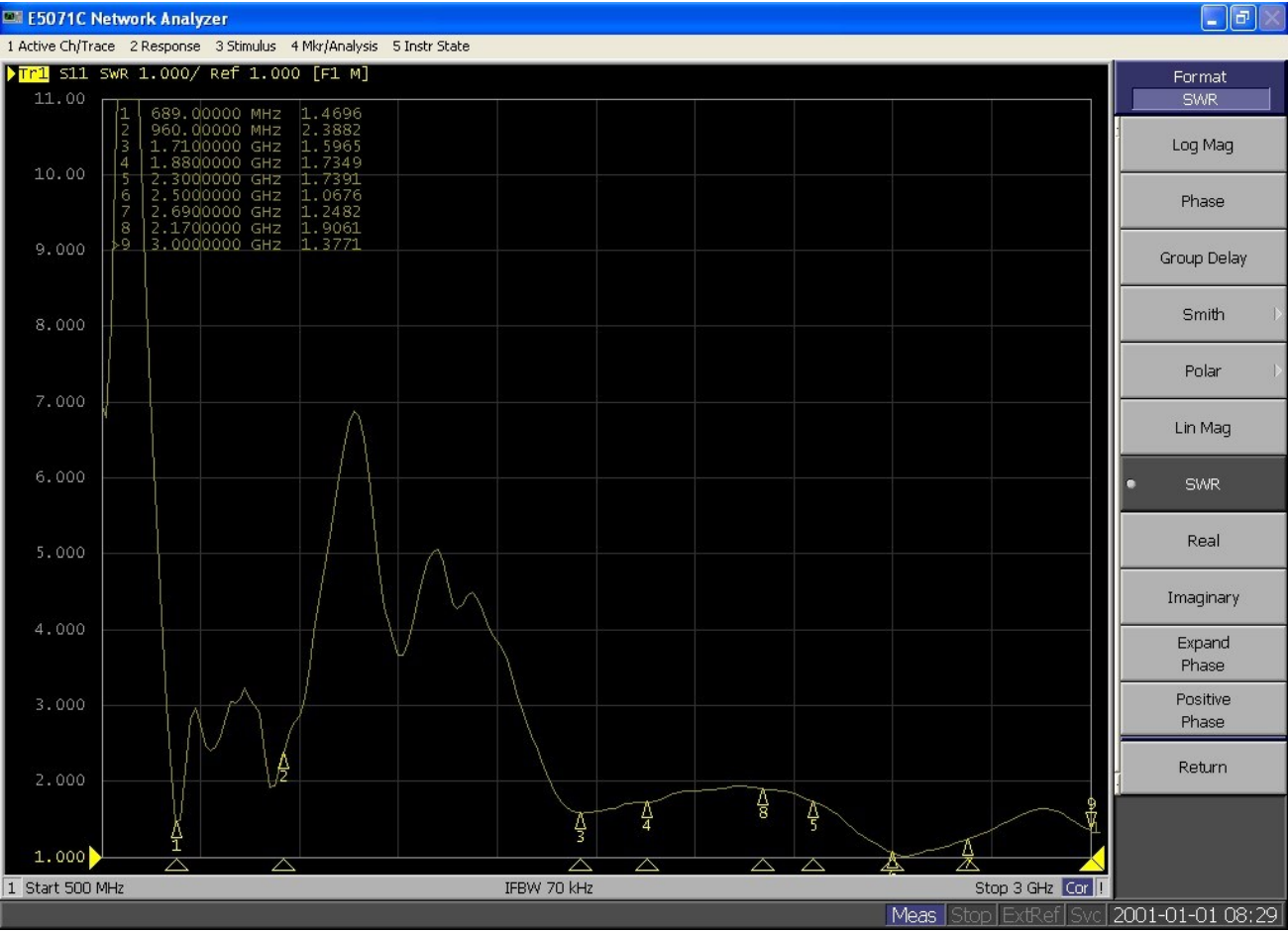
698 – 3000 MHz

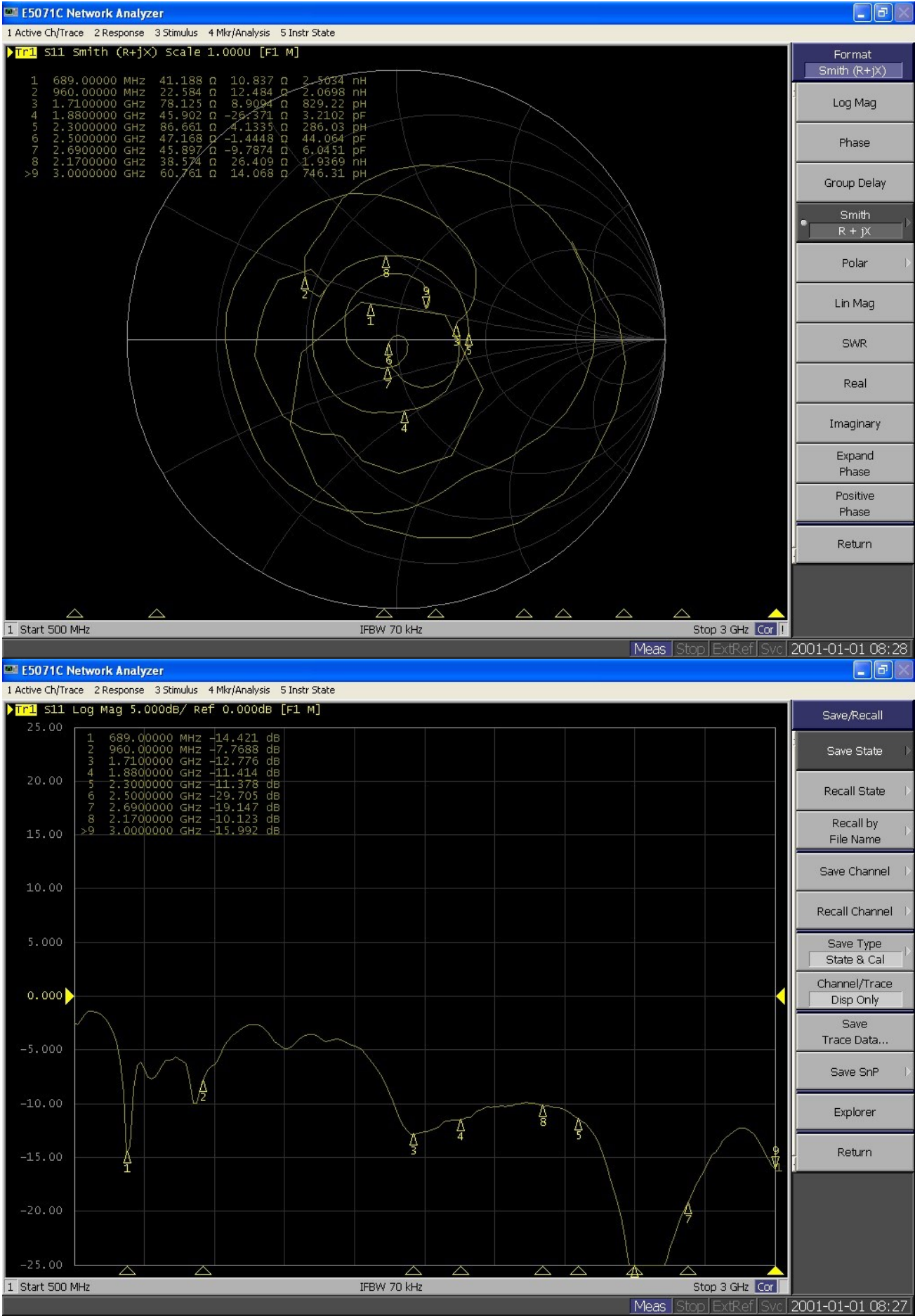


Antenna Smith and VSWR

Frequency		VSWR
689	MHz	1.47
960	MHz	2.39
1710	MHz	1.60
1880	MHz	1.73
2300	MHz	1.74

Frequency		VSWR
2500	MHz	1.07
2690	MHz	1.25
2170	MHz	1.91
3000	MHz	1.38

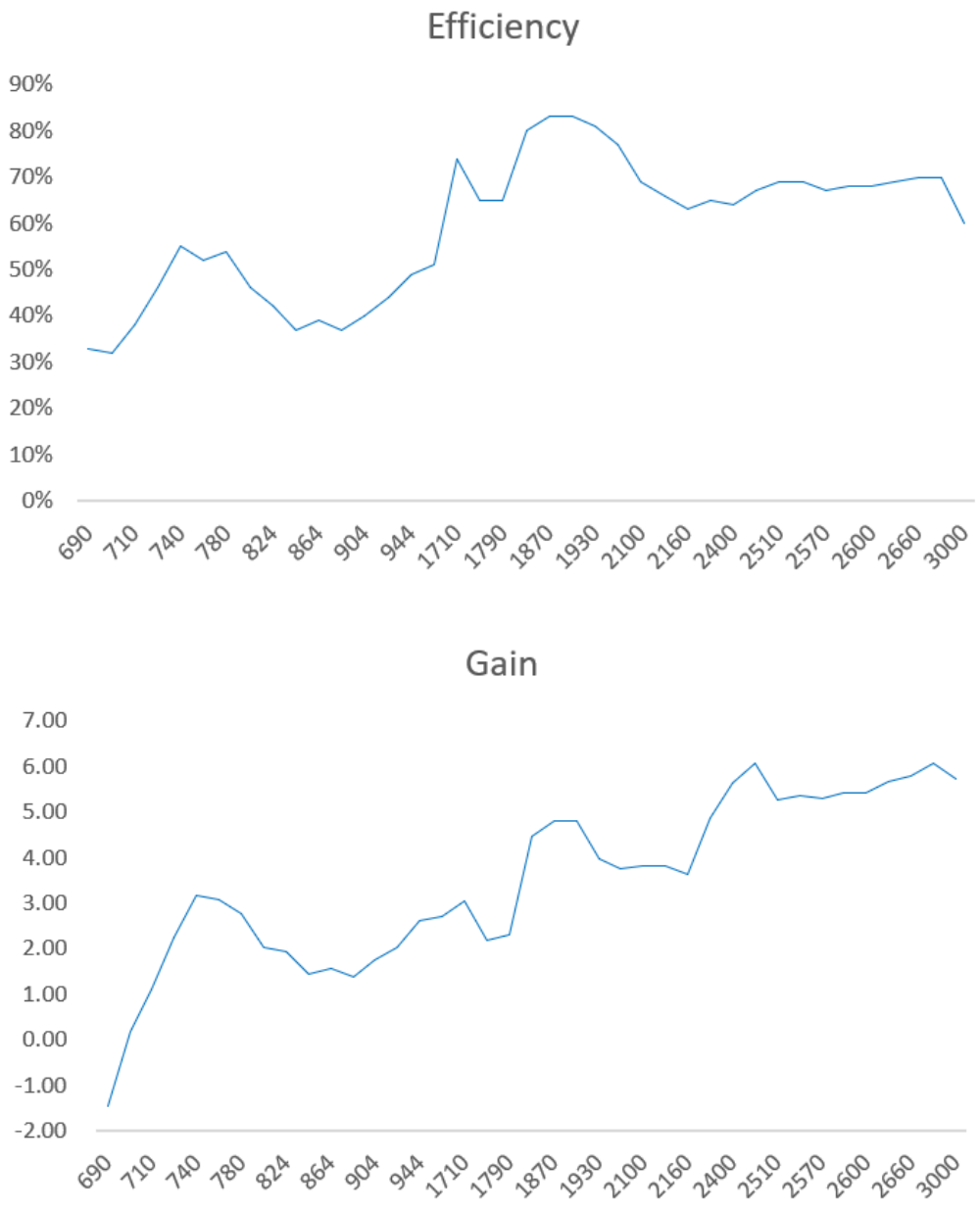




Antenna Efficiency and Gain

Frequency		Efficiency	Gain
690	MHz	33%	-1.45689
700	MHz	32%	0.16654
710	MHz	38%	1.11736
720	MHz	46%	2.241758
740	MHz	55%	3.159257
760	MHz	52%	3.066242
780	MHz	54%	2.771169
800	MHz	46%	2.017826
824	MHz	42%	1.946531
844	MHz	37%	1.442959
864	MHz	39%	1.580376
884	MHz	37%	1.375637
904	MHz	40%	1.744616
924	MHz	44%	2.035842
944	MHz	49%	2.620848
960	MHz	51%	2.697109
1710	MHz	74%	3.056385
1750	MHz	65%	2.173411
1790	MHz	65%	2.299701
1830	MHz	80%	4.452672

Frequency		Efficiency	Gain
1870	MHz	83%	4.80278
1900	MHz	83%	4.806791
1930	MHz	81%	3.972443
1990	MHz	77%	3.749371
2100	MHz	69%	3.830844
2130	MHz	66%	3.825731
2160	MHz	63%	3.645048
2370	MHz	65%	4.86004
2400	MHz	64%	5.6229
2450	MHz	67%	6.074257
2510	MHz	69%	5.249258
2540	MHz	69%	5.349071
2570	MHz	67%	5.294225
2600	MHz	68%	5.420115
2600	MHz	68%	5.418521
2630	MHz	69%	5.658744
2660	MHz	70%	5.778406
2690	MHz	70%	6.065558
3000	MHz	60%	5.73086



Environmental Data

Operating Temperature	-40 °C to +85 °C
IP Rating	NA
Compliance	RoHS

Ordering Information

Product Variants

Part Number	Description
L-2FB7	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.

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