

L-1RB4

4G/3G/2G Waterproof IP67 Connector Mount Antenna

CELLULAR

IP67

The L-1RB4 is a type of connector mount antenna that is designed to be waterproof with an IP67 rating. 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-1RB4 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.



80 x 10 mm

Document Information

Product	L-1RB4
Part Number	L-1RB4
Description	4G/3G/2G Waterproof IP67 Connector Mount Antenna
Version	2.0 (current)
Date	30-Mar-2023
Status	Released

Revision History

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

Product Overview

Product Description

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Key Features

- Supports LTE / WCDMA & WIFI
- Wide Application
- High Reliability/Sensitivity
- Compact Size, Easy to install.
- RoHS Compliant

Applications

- LTE/Wi-Fi Radios
- Gateways
- Set-top Boxes.
- Security
- Transportation
- Smart Agriculture

Electrical Specifications

Frequency			VSWR	Peak Gain	Efficiency
LTE	690 - 960	MHz	1.8	3.7 d Bi	40%
LTE	1710 - 2170	MHz	1.5	6.6 d Bi	60%
2.4G WiFi	2400 - 2700	MHz	1.5	5.0 d Bi	60%

Frequency Range 690 – 2700 MHz

Impedance 50 Ω

Polarization Linear

Radiation Omnidirectional

Electrical Type Monopole

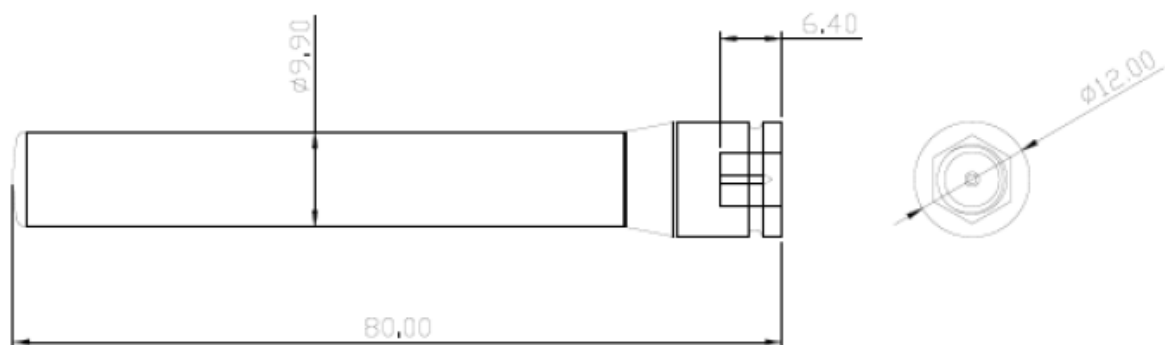
Mechanical Specifications

Type	Hinge	Casing	Yes
Dimensions	80 x 10 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



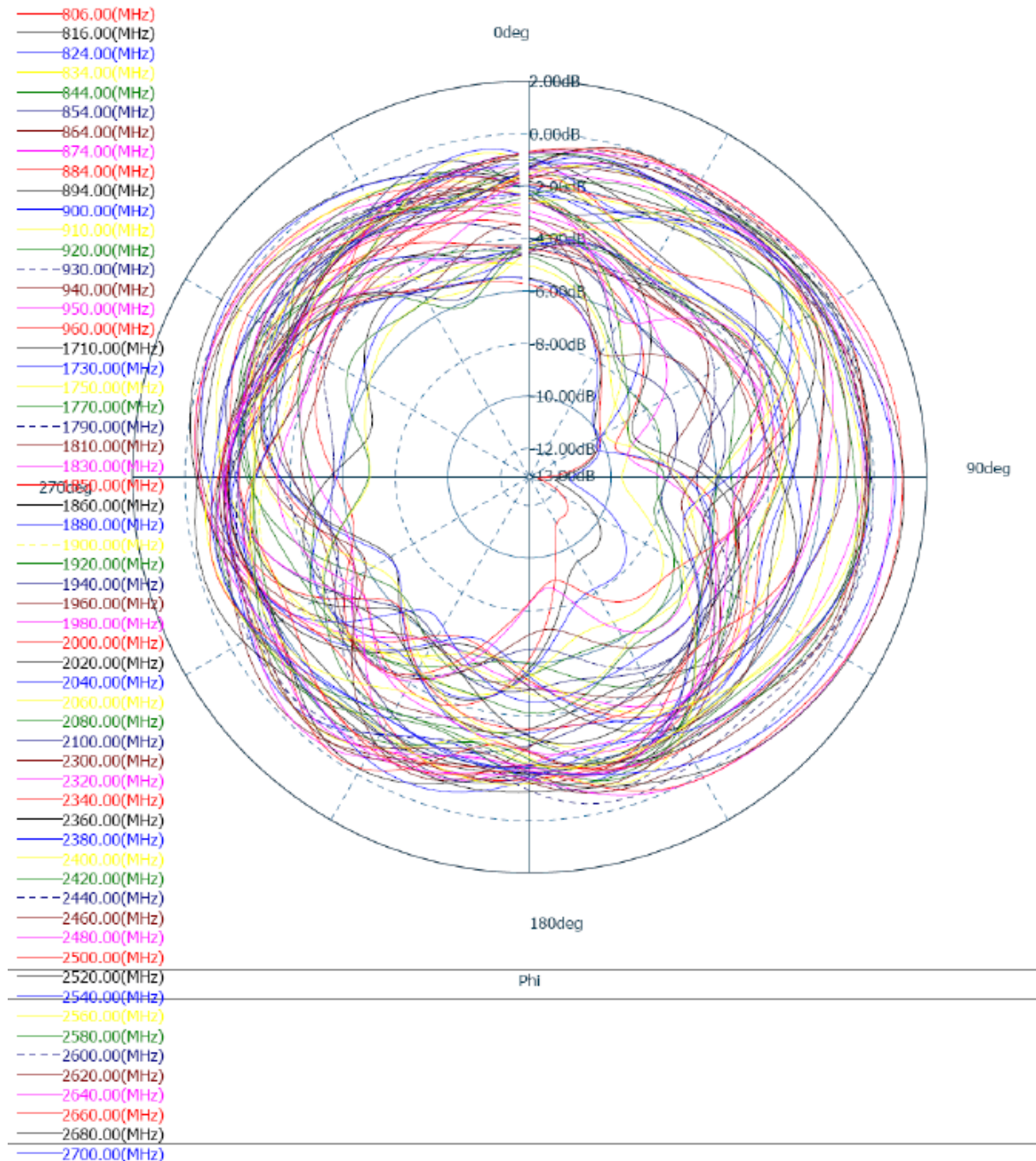
Radiation Pattern

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.

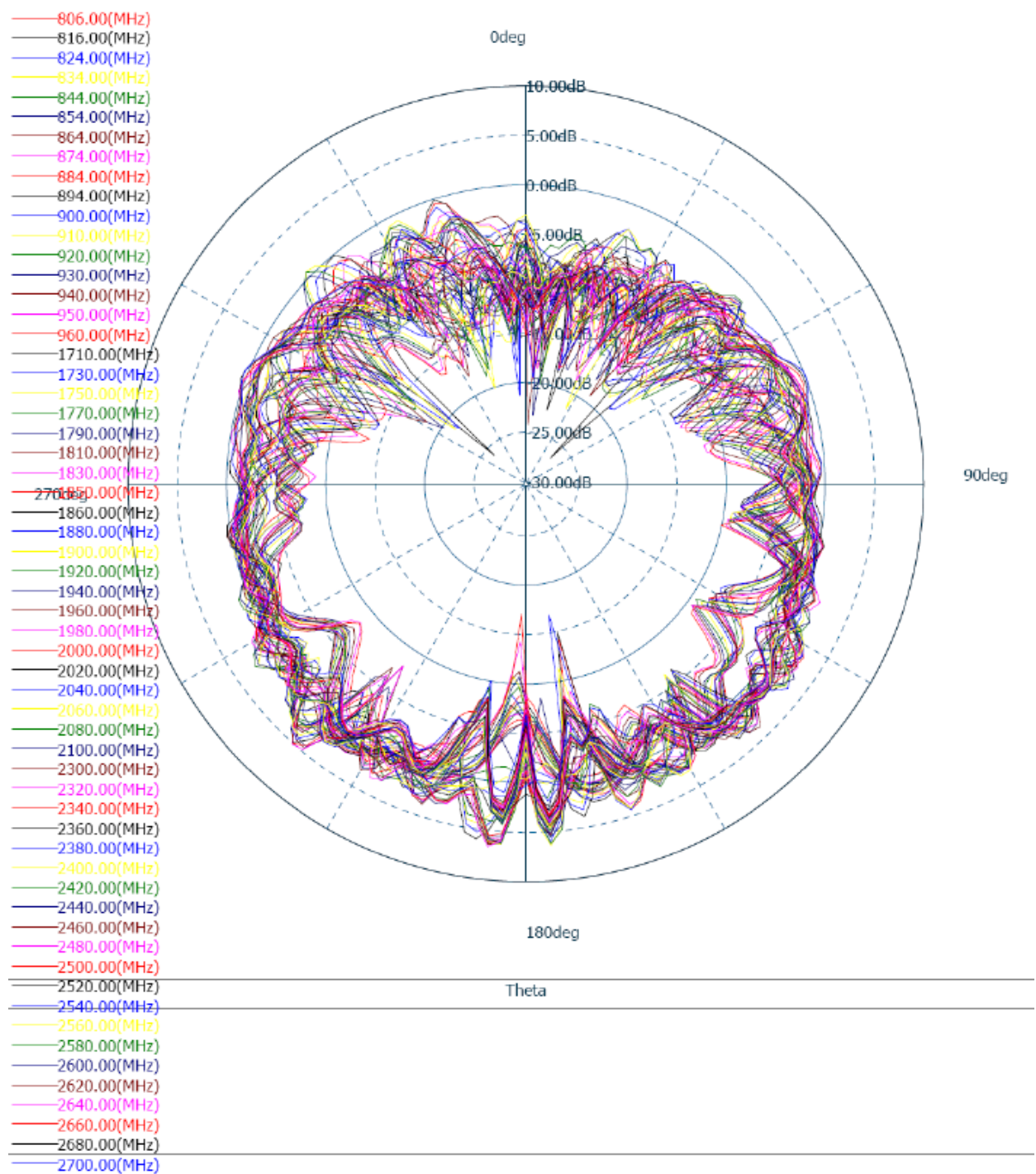
XY Plane (H)

698 – 2700 MHz



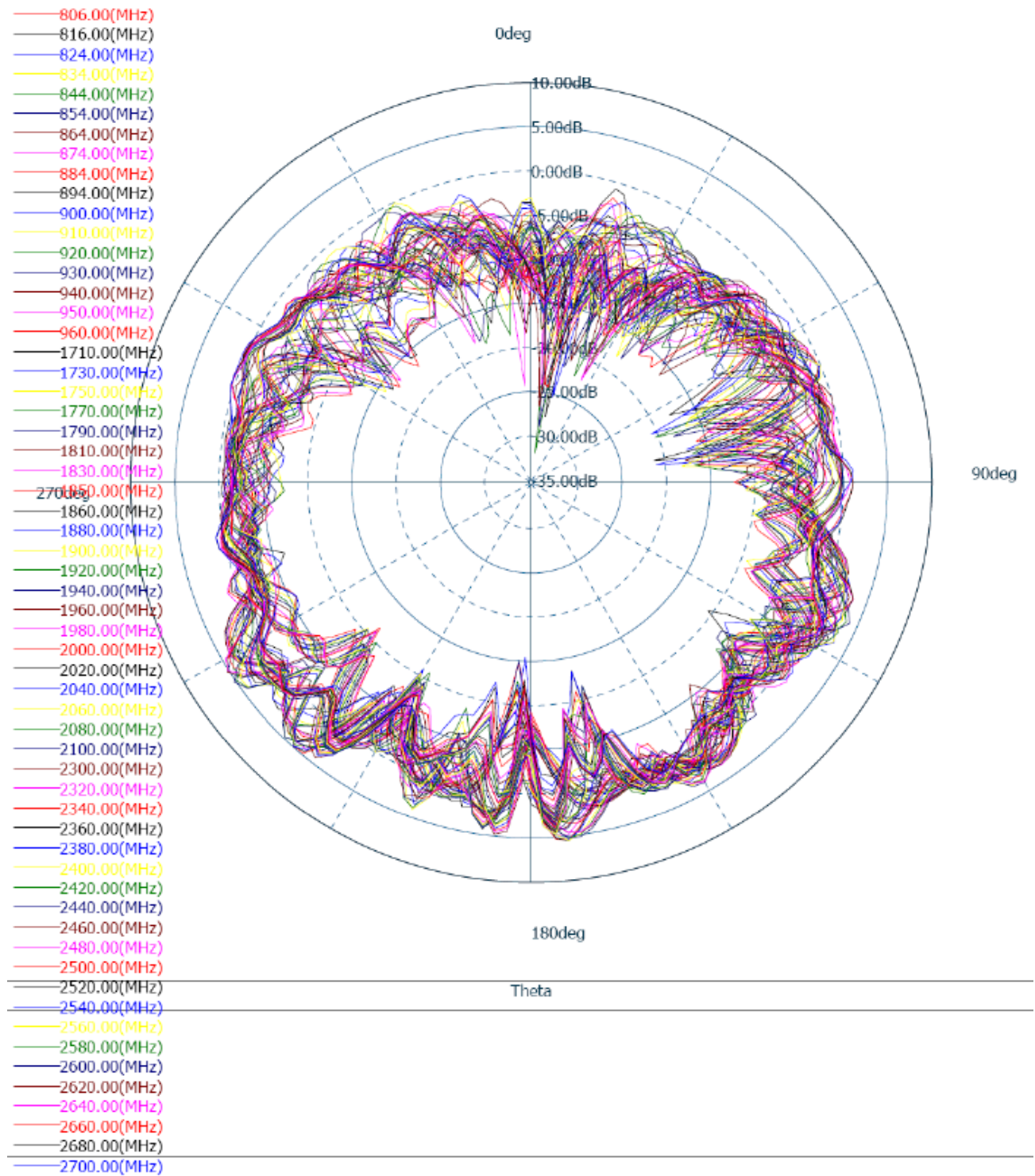
YZ Plane (E1)

698 – 2700 MHz



YZ Plane (E2)

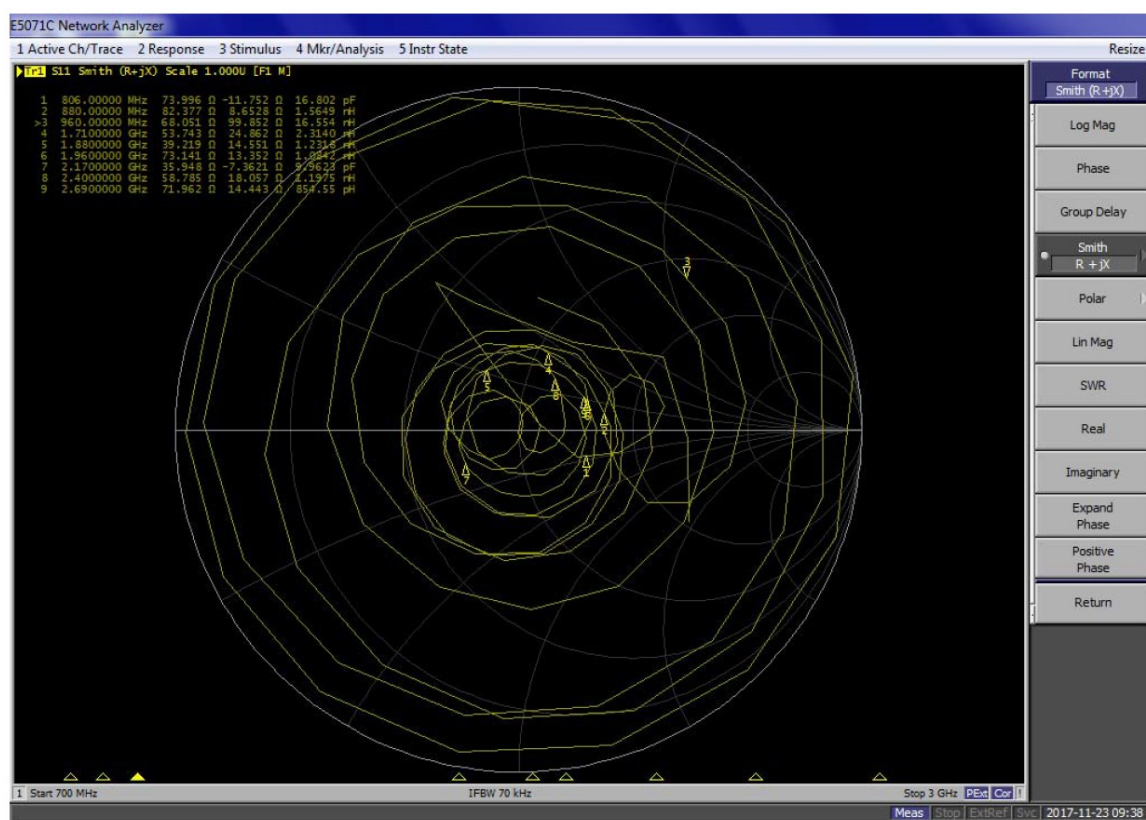
690 – 2700 MHz



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



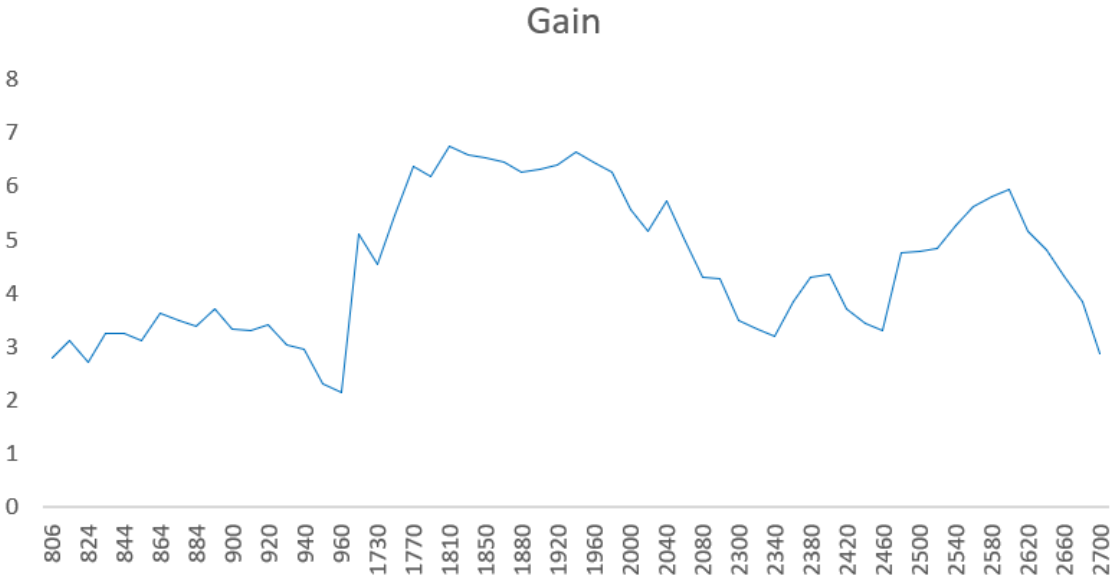
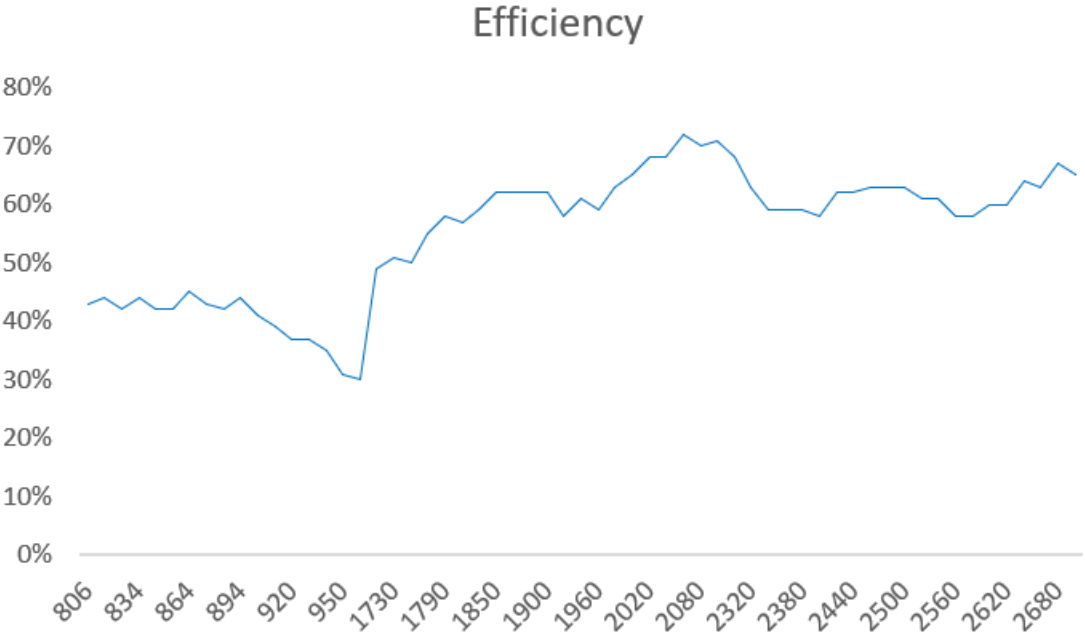
Antenna Efficiency and Gain

Frequency		Efficiency	Gain
806	MHz	43%	2.80
816	MHz	44%	3.11
824	MHz	42%	2.72
834	MHz	44%	3.26
844	MHz	42%	3.25

Frequency		Efficiency	Gain
1940	MHz	61%	6.64
1960	MHz	59%	6.45
1980	MHz	63%	6.28
2000	MHz	65%	5.56
2020	MHz	68%	5.15

854	MHz	42%	3.11
864	MHz	45%	3.62
874	MHz	43%	3.49
884	MHz	42%	3.39
894	MHz	44%	3.70
900	MHz	41%	3.34
910	MHz	39%	3.30
920	MHz	37%	3.41
930	MHz	37%	3.04
940	MHz	35%	2.94
950	MHz	31%	2.31
960	MHz	30%	2.15
1710	MHz	49%	5.12
1730	MHz	51%	4.55
1750	MHz	50%	5.46
1770	MHz	55%	6.38
1790	MHz	58%	6.19
1810	MHz	57%	6.76
1830	MHz	59%	6.58
1850	MHz	62%	6.54
1860	MHz	62%	6.45
1880	MHz	62%	6.27
1900	MHz	62%	6.33
1920	MHz	58%	6.41

2040	MHz	68%	5.73
2060	MHz	72%	5.03
2080	MHz	70%	4.29
2100	MHz	71%	4.27
2300	MHz	68%	3.48
2320	MHz	63%	3.34
2340	MHz	59%	3.19
2360	MHz	59%	3.84
2380	MHz	59%	4.29
2400	MHz	58%	4.35
2420	MHz	62%	3.72
2440	MHz	62%	3.43
2460	MHz	63%	3.31
2480	MHz	63%	4.77
2500	MHz	63%	4.78
2520	MHz	61%	4.84
2540	MHz	61%	5.27
2560	MHz	58%	5.62
2580	MHz	58%	5.80
2600	MHz	60%	5.95
2620	MHz	60%	5.16
2640	MHz	64%	4.81
2660	MHz	63%	4.32
2680	MHz	67%	3.84
2700	MHz	65%	2.86



Environmental Data

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

Ordering Information

Product Variants

Part Number	Description
L-1RB4	4G/3G/2G Waterproof IP67 Connector Mount 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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