

W-2MB2

2.4G WiFi SMD Antenna

WiFi

SMD

The W-2MB2 is a 2.4 GHz PCB antenna designed for use in IoT devices that require reliable and high-performance wireless communication. The W-2MB2 is easy to integrate into various devices, and its low profile and small size make it an ideal choice for space-constrained applications.

Its high gain and excellent radiation efficiency provide reliable and stable WiFi connectivity, making it suitable for a wide range of IoT applications. Overall, the W-2MB2 is an excellent choice for developers and designers who need a high-performance,



Key Features

- Support 2.4G WiFi
- High Reliability/Sensitivity
- Easy to install
- RoHS Compliant

Document Information

Product	Antenna
Part Number	W-2MB2
Version	1.0 (current)
Date	2025-08-28
Status	Released

Revision History

Version	Date	Author	Modifications
1.0	2025-08-28	Arthur	Initial Release

Specifications

Antenna Specifications	
Frequency	2400-2500MHz
VSWR	1.62 Max@2400-2500MHz
Peak Gain	2.24dBi@2400-2500MHz
Impedance (Ω)	50
Radiation	Omni-directional
Polarization	Linear
Connector	N/A
Color	Black
Cable Type	N/A
Cable Length	N/A
Operating Temperature	-40 °C to + 85 °C
Storage Temp / Humidity	25±5°C / <70%
Compliance	RoHS

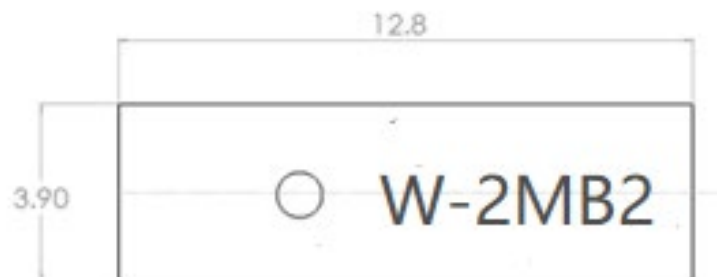
Caution:

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.

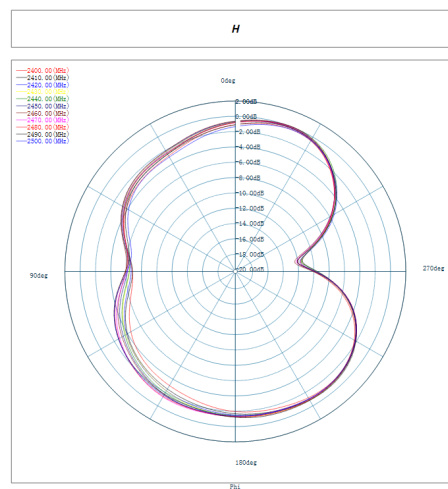
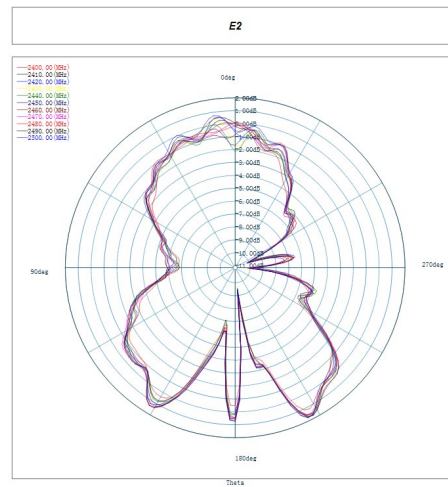
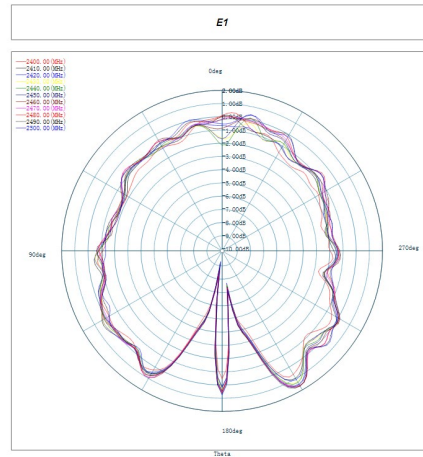
Application

- Lot Devices
- Gateways
- Set-Top Boxes
- Security
- Transportation
- Smart agriculture

Product Images and Dimensions

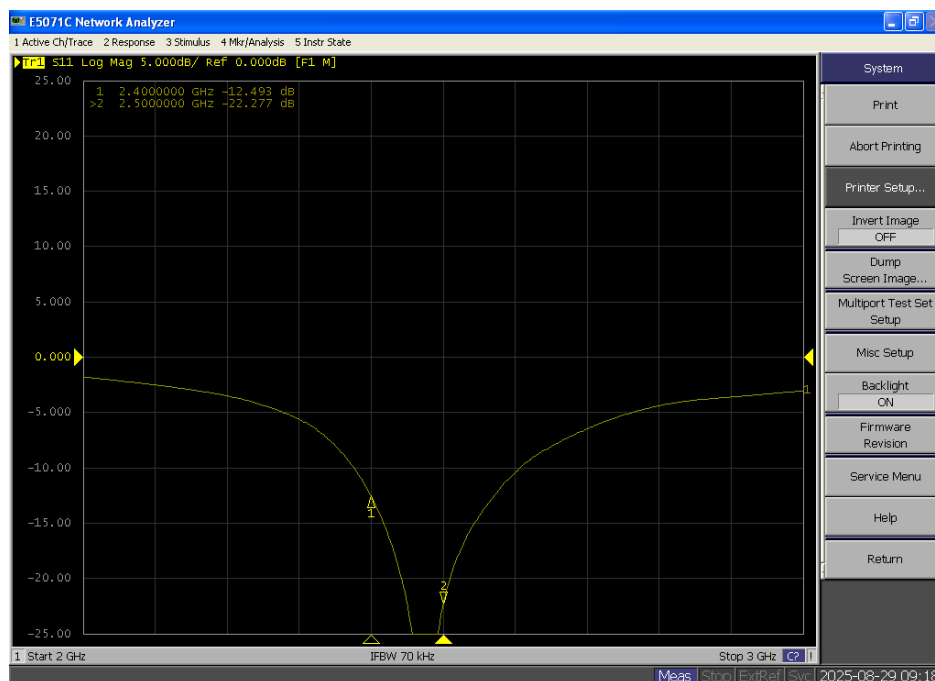


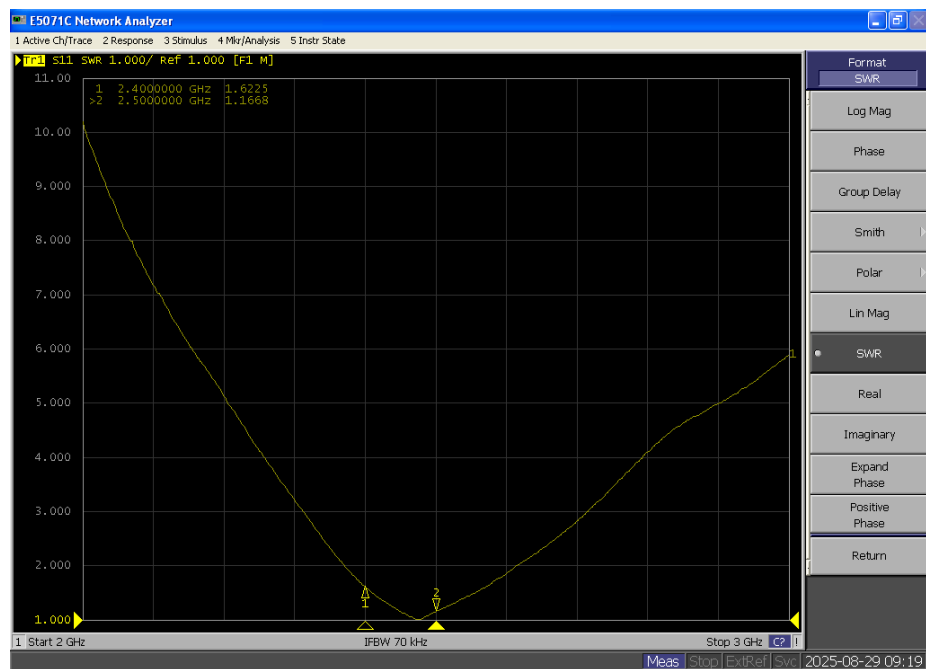
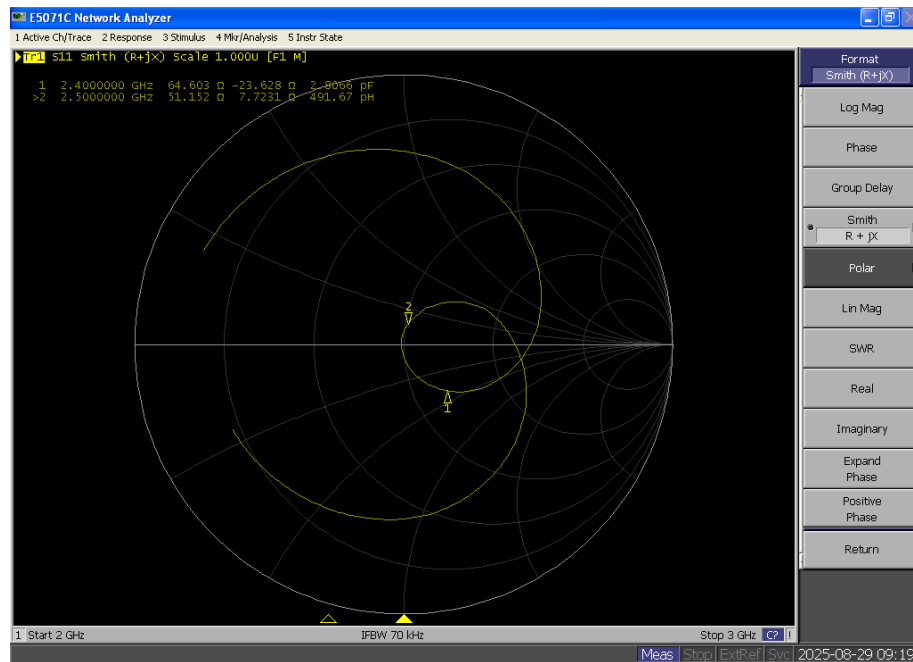
Radiation Pattern



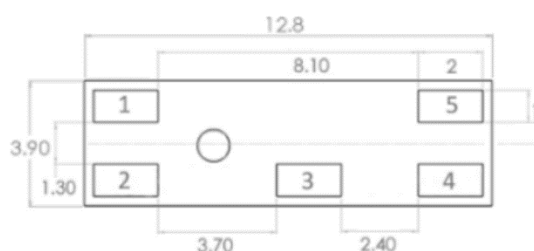
Antenna Efficiency and Gain		
Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	59.3	1.600742
2410	62.9	1.839509
2420	63.1	1.718193
2430	63.6	1.831722
2440	63.7	1.917561
2450	64.7	2.03515
2460	65.7	2.240137
2470	66.1	2.122336
2480	65.8	2.030132
2490	66.2	2.039751
2500	65.4	1.923586

Antenna Smith and VSWR

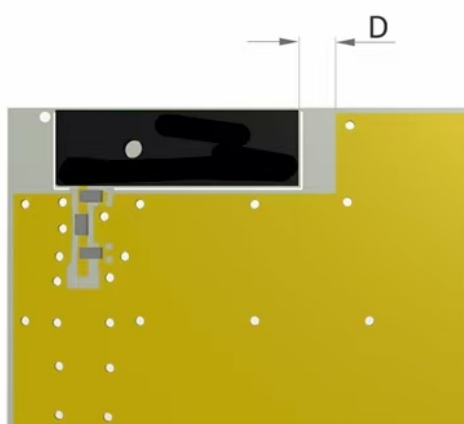
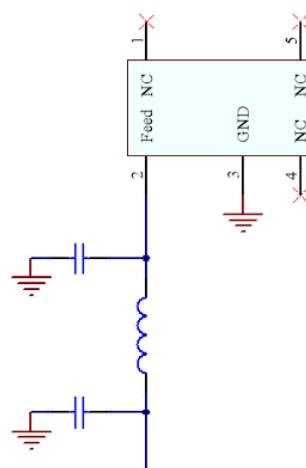




PCB Layout



ALL PADS = 2.0 X 1.0 (MM)
ALL DIMENSIONS IN MM



Additional ground and components near the antenna should be at a distance of at least 2mm. Where possible the antenna should be clear of ground from both sides, although the antenna can work well with a minimum clearance of $D \geq 2$ mm as shown in the drawing above.

Order Information

Part Number	Description
W-2MB2	2.4G WiFi SMD Antenna

About Us

MIOT Wireless Solutions Co., Ltd., established in 2017, is composed of seasoned IoT industry experts and developers from all over the world.

We possess extensive knowledge in **Antennas, Device Prototyping, ODM, Component Sourcing, and Manufacturing**, with a specialized focus on IoT products.

Regardless of the type of connectivity you require in your design, our wireless experts can assist you in achieving it. MIOT's products and solutions have already connected hundreds of thousands of devices in the field.

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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