



WIFI/BT 2.4 GHz CHIP ANTENNA

Part Name: CH-M-W-3216050

Part Number: XXXXXXXXXX

I. Introduction:

An internal chip antenna is designed in the frequency band 2.4-2.483 GHz MHz. It is a multi-layer type with a small size of 3.2mm*1.6mm*0.52mm and to be placed on the PCB by surface mounting technology. Although it small size, it also own good antenna performance like antenna gain and efficiency.

Features:

1. Light weight and compact
2. Good antenna efficiency up to 70%.
3. Good input impedance bandwidth and antenna gain.
4. Multi-layer structure and low cost.
5. Matching circuit with PI model is needed to obtain good efficiency.



II. Antenna Specifications:

Frequency Range	2400-2483 MHz
Impedance	50 Ohm
VSWR	< 2
Antenna Gain	2 dBi typ.
Polarization	Linear (Vertical)
Max. Power	1 Watt
Dimensions	3.2 mm* 1.6 mm * 0.5 mm
Operating Temp	-40°C ~ +85°C

III. Measured Results:

1. Reflection Coefficient:

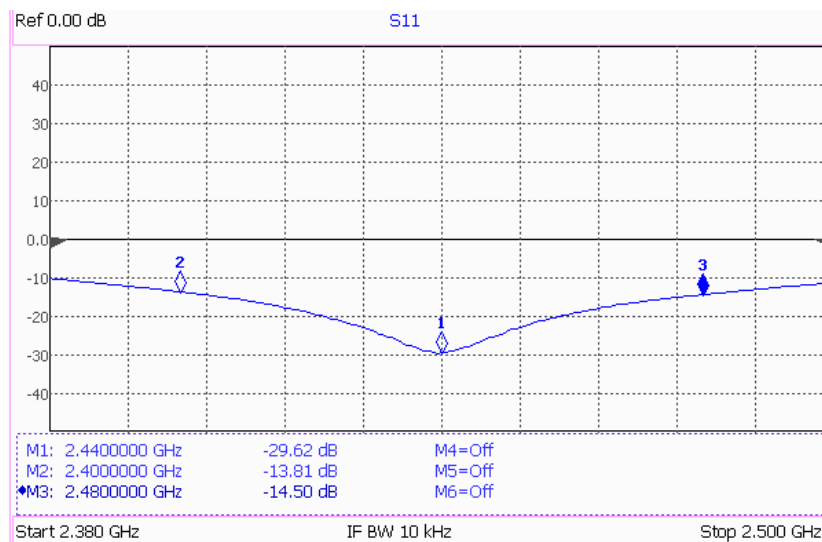


Fig. 3-1. Reflection coefficient of Chip Antenna

BS-MoVA Technology Co., Ltd reserves the right to change products and specifications without notice. Before using the document, please confirm that this is the latest version. The information does not convey any license under rights of BS-MoVA Technology Co., Ltd.

TEL: +886-3-560-1688, FAX: +886-3-560-1690, <http://www.bs-mova.com.tw> E-mail: sales@bs-mova.com.tw

Revision 1.0 20181015

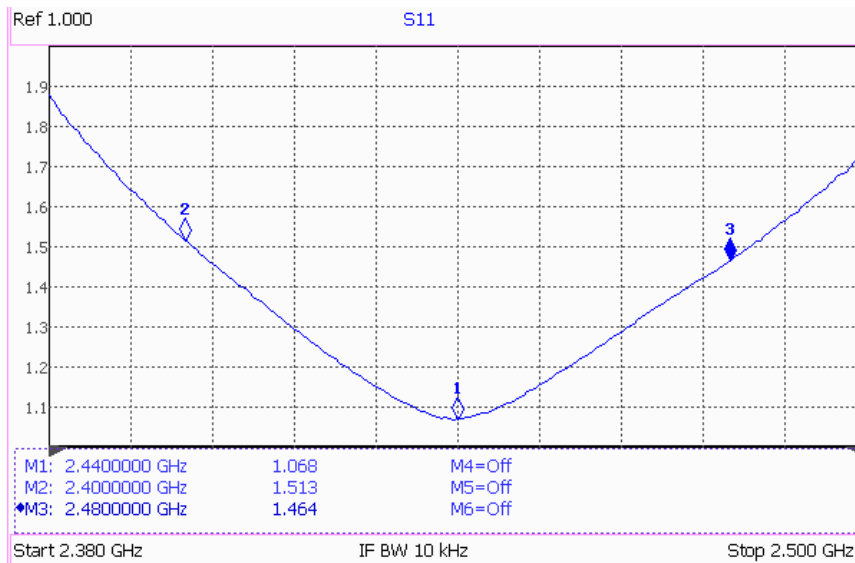


Fig. 3-12. VSWR of Chip Antenna

2. Radiation Patterns and Gains:

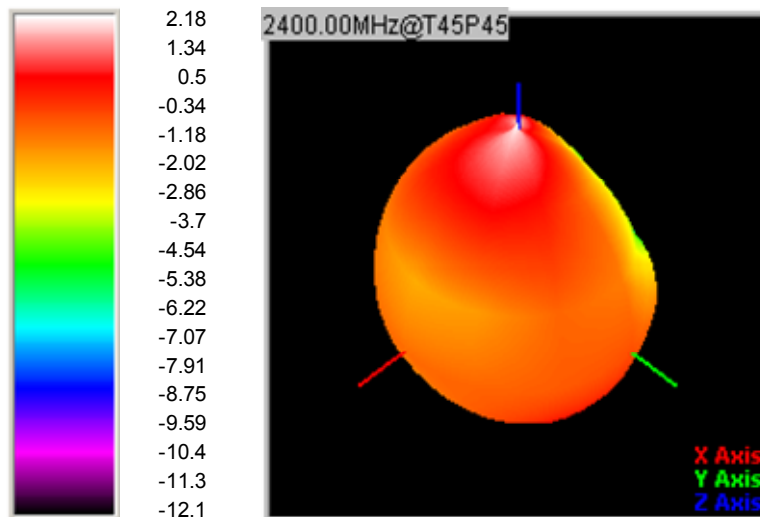


Fig. 3-3. 3D pattern at 2400 MHz.

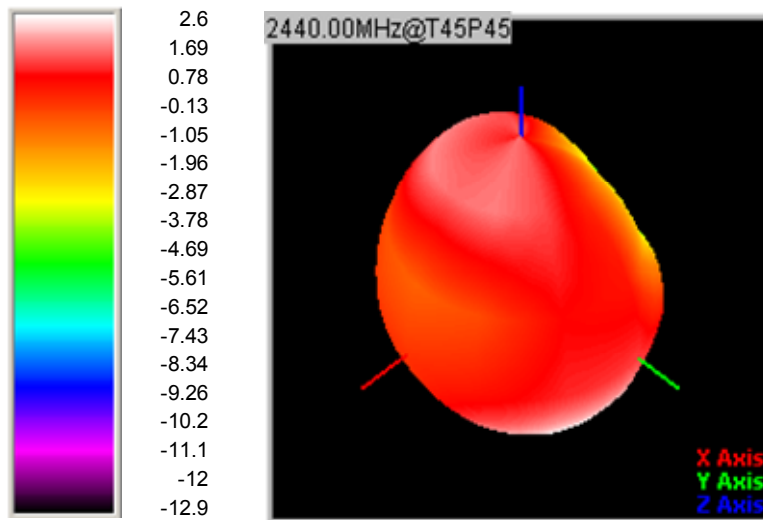


Fig. 3-4. 3D pattern at 2440 MHz.

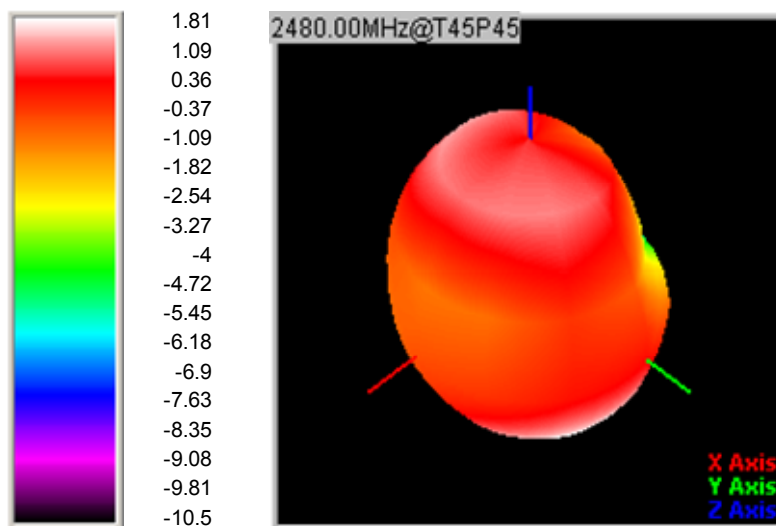
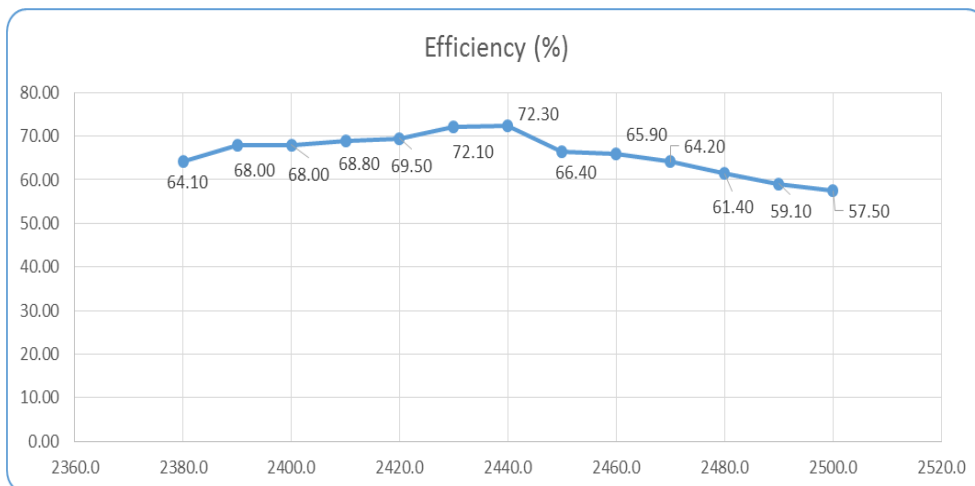
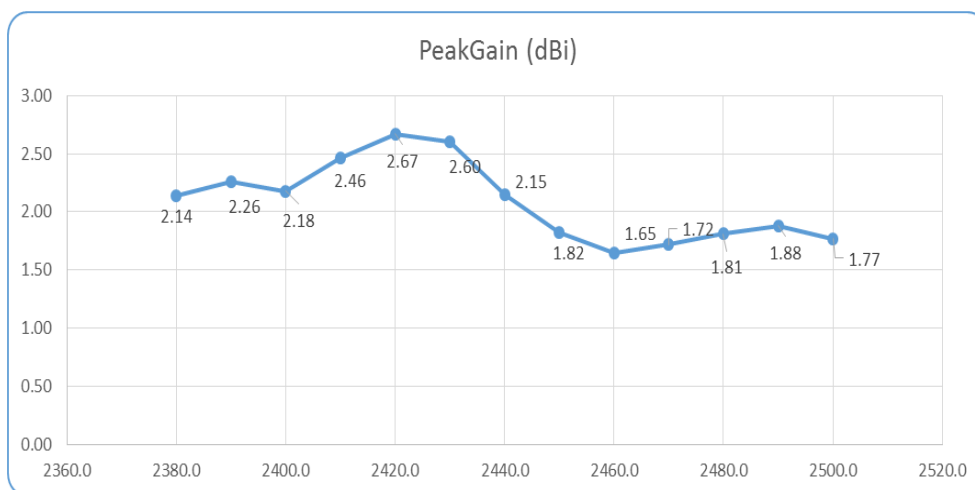
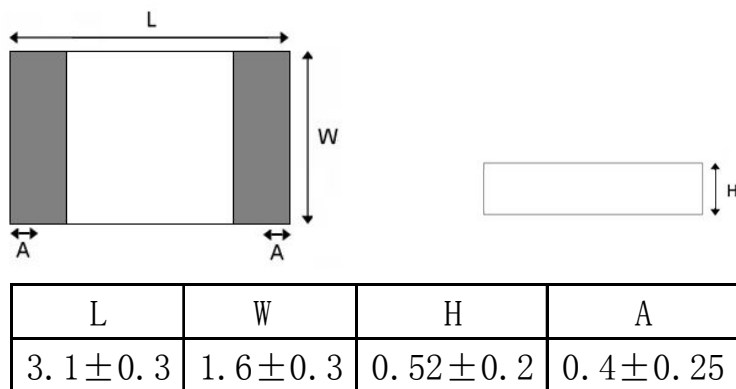


Fig. 3-5. 3D pattern at 2483 MHz.

WIFI/BT 2.4 GHz CHIP ANTENNA CHMW-3216050

Fig. 3-6. Efficiency of Chip Antenna.

Fig. 3-7. Peak Gain of Chip Antenna.
IV. Appearance: unit: mm

Fig. 4-1. Configuration of antenna.

BS-MoVA Technology Co., Ltd reserves the right to change products and specifications without notice. Before using the document, please confirm that this is the latest version. The information does not convey any license under rights of BS-MoVA Technology Co., Ltd.
 TEL: +886-3-560-1688, FAX: +886-3-560-1690, <http://www.bs-mova.com.tw> E-mail: sales@bs-mova.com.tw
 Revision 1.0 20181015

Host PCB layout

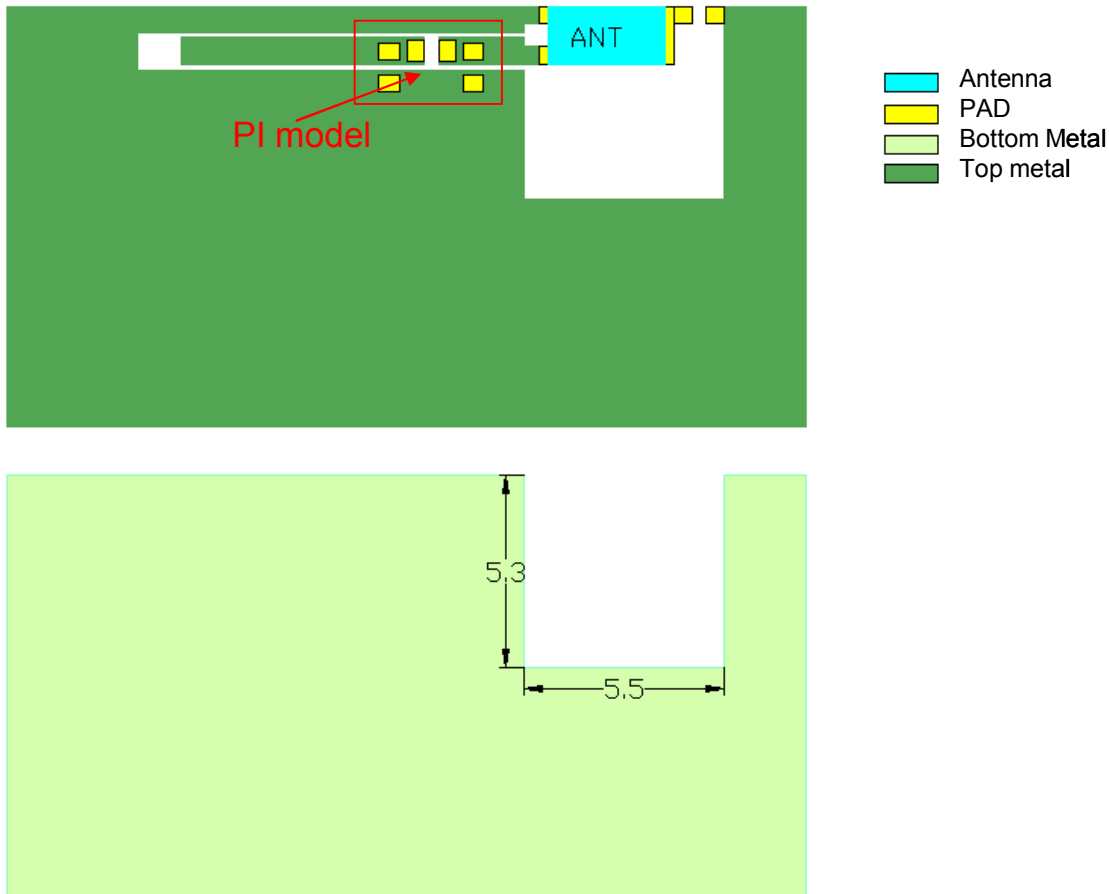


Fig. 4-2. Host PCB of Chip antenna

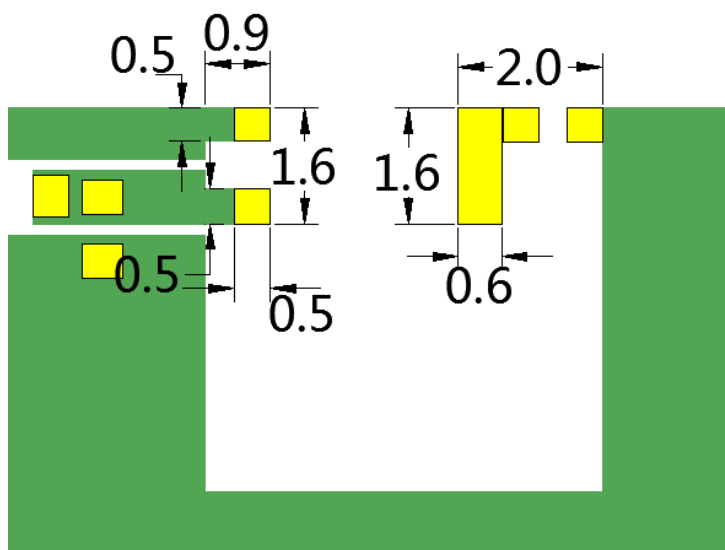


Fig. 4-3. Layout of Chip antenna



V. Reflow Condition:

Recommended Reflow Temperature Profile:

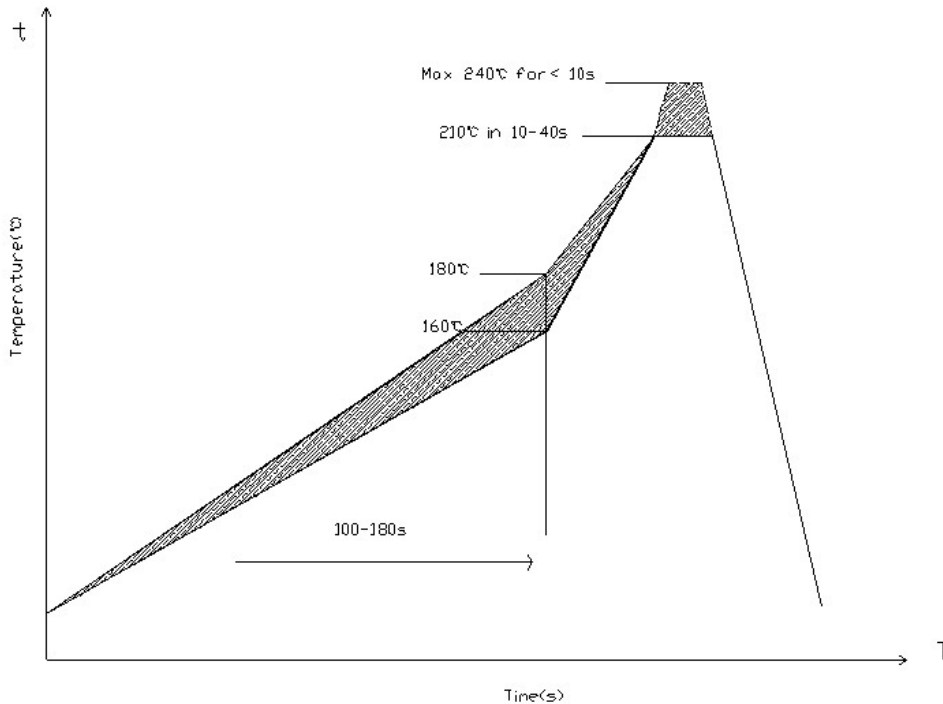


Fig. 5-1. Recommended reflow temperature profile.

※General attention to soldering:

- High soldering temperatures and long soldering times can cause leaching of the termination, decrease in adherence strength, and the change of characteristic may occur.
- For soldering, please refer to the soldering curves above. However, please keep exposure to temperatures exceeding 200°C to under 50 seconds.
- Please use a mild flux (containing less than 0.2wt% Cl). Also, if the flux is water soluble, be sure to wash thoroughly to remove any residue from the underside of components that could affect resistance.

※Cleaning:

When using ultrasonic cleaning, the board may resonate if the output power is too high. Since this vibration can cause cracking or a decrease in the adherence of the termination, we recommend that you use the conditions below.

Frequency: 40 kHz max.

Output power: 20W/liter

Cleaning time: 5minutes max.

BS-MoVA Technology Co., Ltd reserves the right to change products and specifications without notice. Before using the document, please confirm that this is the latest version. The information does not convey any license under rights of BS-MoVA Technology Co., Ltd.

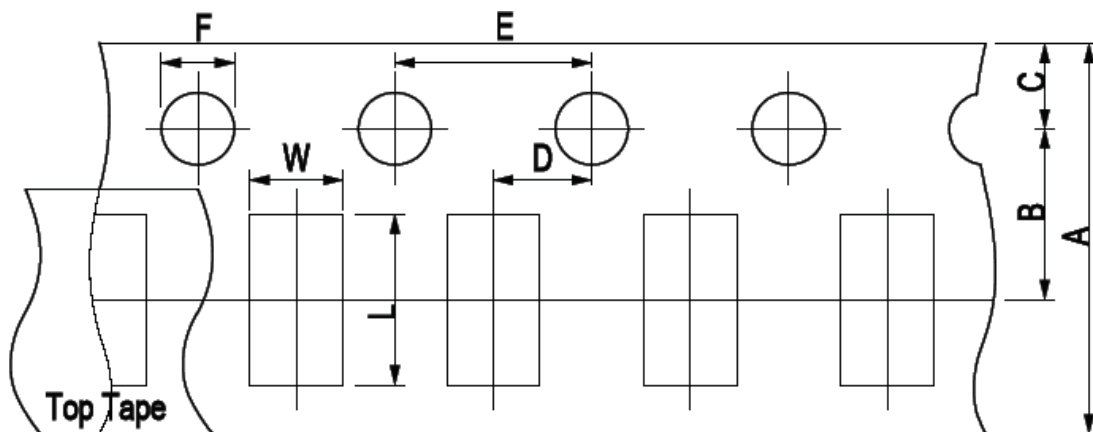
TEL: +886-3-560-1688, FAX: +886-3-560-1690, <http://www.bs-mova.com.tw> E-mail: sales@bs-mova.com.tw

Revision 1.0 20181015

VI. Taping Package and Label Marking: (unit: mm)

(1) Quantity/Reel: 3000pcs/Reel

(2) Carrier tape dimensions



Type	A	B	C	D	E	F	L	W
2450-21	8.00±0.3	3.50±0.05	1.75±0.1	2.00±0.05	4.00±0.1	1.50±0.1	2.30±0.1	1.55±0.1