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Ultimate IOT (Shanghai) Technology Ltd.

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(Shanghai) Pilot FTZ, China

### **Product Function Description:**

Product Name: ZigBee Module

Model No.: UIOT-ZMPA

ZigBee wireless micro power communication module is an embedded wireless data transmission module based on the physical layer of IEEE 802.15.4, which uses 2.4GHz free frequency band. It is a two-way wireless communication technology with short distance, low complexity, low power consumption and low cost. It is mainly used for data transmission between various electronic devices with short distance and low power consumption, as well as typical applications with periodic data and intermittent data transmission

### **Main functional characteristics:**

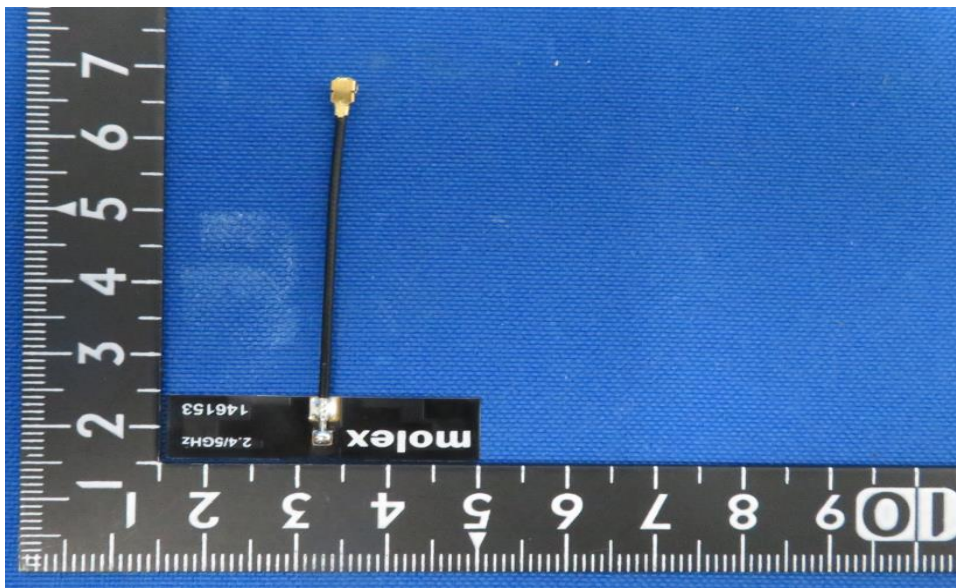
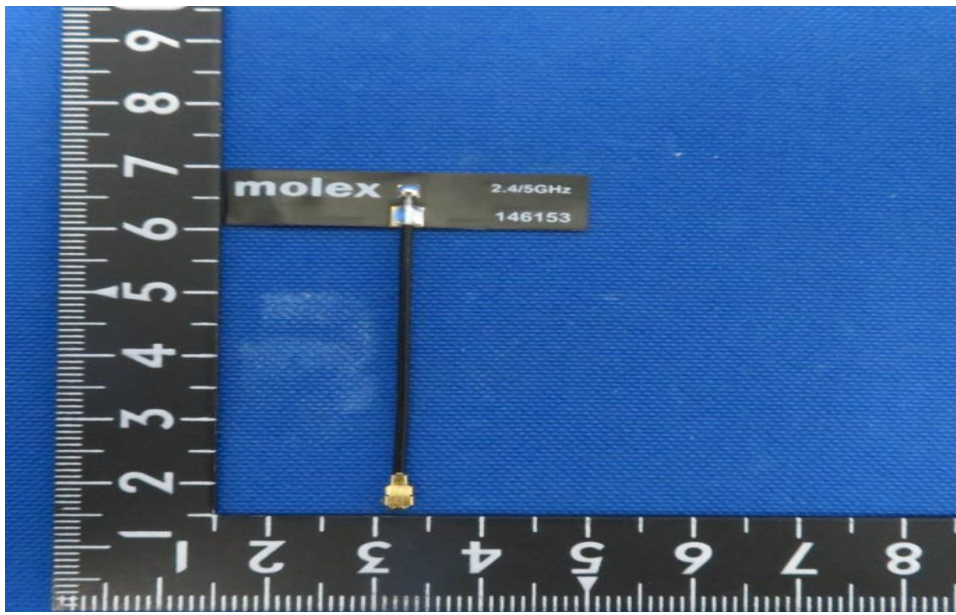
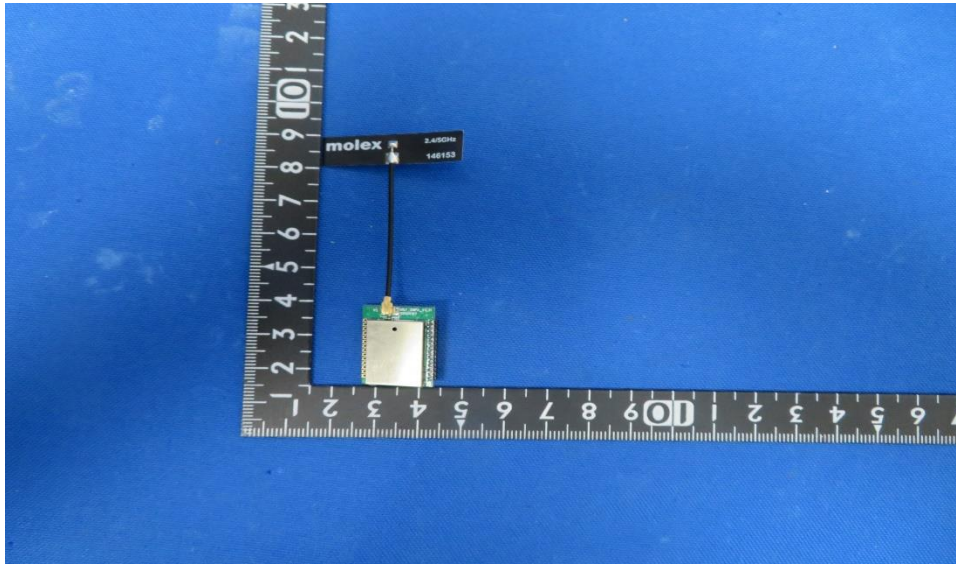
- 1.High performance industrial ZigBee chip, suitable for all kinds of complex and harsh environment.
2. Ensure the stability and reliability of the system.
3. Adopt complete anti dropping mechanism to ensure the data terminal is always online.

### **Chip Parameters:**

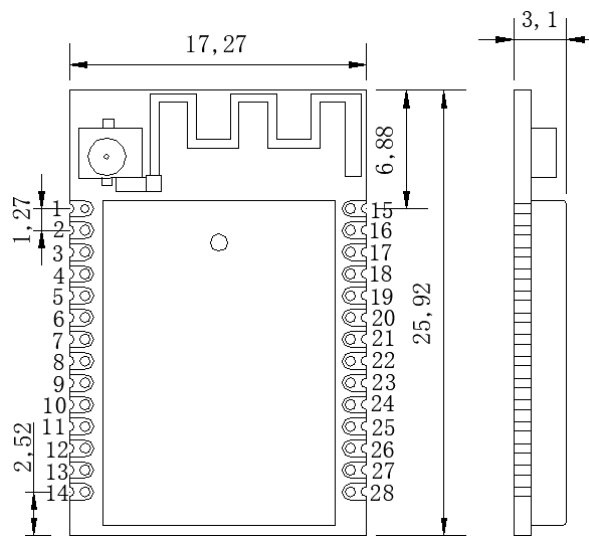
Type	Value	Unit	Remark
Emission Current	29(MAX)	mA	
Receive Current	18(MAX)	mA	
Output Power	>9	dBm	
Receive Sensitivity	≤-93	dBm	
Frequency Range	2405-2475	MHz	2480 MHz turn off
Voltage	3.3/5	V	5V need LDO

### **Antenna Information:**

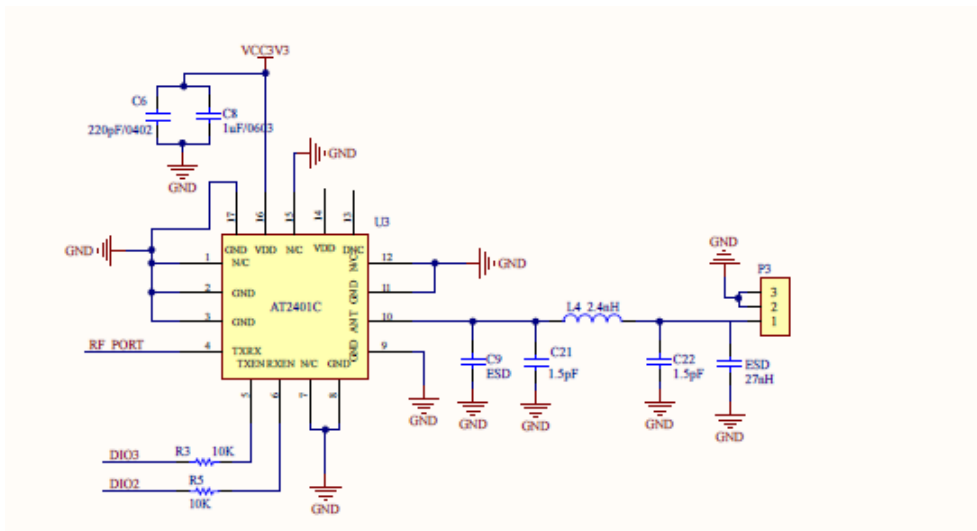
No.	Antenna Type	Gain	Impedance
1	External uniqueness Antenna	2 dBi	50 ohm



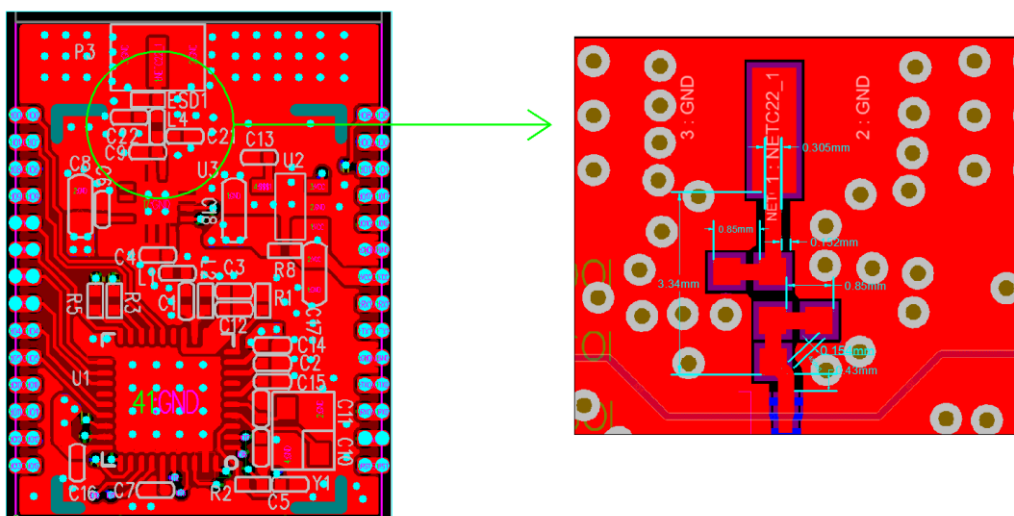
### Dimensional Drawing



### Antenna matching peripheral circuit schematic



### Antenna matching peripheral circuit PCB layout



**Label and compliance information**

The final end product must be labeled in a visible area with the following: "Contain FCC ID: 2ATY4-UIOTZMPA" and "Contains IC: 25239-UIOTZMPA".

**Information on test modes and additional testing requirements**

Contact Ultimate IOT (Shanghai) Technology Ltd. will provide stand-alone modular transmitter test mode.

Additional testing and certification may be necessary when multiple modules are used in a host.

**Additional testing, Part 15 Subpart B disclaimer**

To ensure compliance with all non-transmitter functions the host manufacturer is responsible for ensuring compliance with the module(s) installed and fully operational. For example, if a host was previously authorized as an unintentional radiator under the Supplier's Declaration of Conformity procedure without a transmitter certified module and a module is added, the host manufacturer is responsible for ensuring that after the module is installed and operational the host continues to be compliant with the Part 15B unintentional radiator requirements. Since this may depend on the details of how the module is integrated with the host, Ultimate IOT (Shanghai) Technology Ltd. shall provide guidance to the host manufacturer for compliance with the Part 15B requirements.

## **FCC Warning**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

## **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance.

This module certified that complies with RF exposure requirement under mobile or fixed condition, this module is to be installed only in mobile or fixed applications.

A mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

NOTE 1: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note 2: Any modifications made to the module will void the Grant of Certification, this module is limited to OEM installation only and must not be sold to end-users, end-user has no manual instructions to remove or install the device, only software or operating procedure shall be placed in the end-user operating manual of final products.

Note 3: Additional testing and certification may be necessary when multiple modules are used.

Note 4: The module may be operated only with the antenna with which it is authorized. Any antenna that is of the same type and of equal or less directional gain as an antenna that is authorized with the intentional radiator may be marketed with, and used with, that intentional radiator.

## **IC WARNING**

This device contains licence-exempt transmitter(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This radio transmitter IC:25239-UIOTZMPA has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

### **IC Radiation Exposure Statement:**

This device and its antenna(s) must not be co-located with any other transmitters except in accordance with IC multi-transmitter product procedures. Referring to the multi-transmitter policy, multiple-transmitter(s) and module(s) can be operated simultaneously without reassessment permissive change.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionner en association avec une autre antenne ou transmetteur.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps.

This module is limited to OEM installation only and must not be sold to end-users, end-user has no manual instructions to remove or install the device, only software or operating

procedure shall be placed in the end-user operating manual of final products.

Additional testing and certification may be necessary when multiple modules are used.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.