

ZBM1502

802.15.4/Zigbee Radio Module

2019-10-17

Product Features

- FCC and ISES Approvals
- 802.15.4 Compliant
- Integrated amplifier : 19.5dB
- RF data rate : 250kbps
- Frequency band : 2.4Ghz
- Network topology support : Mesh, Point to point
- Antenna type : PCD IFA strip
- Internal voltage regulator to limit TX power fluctuation

Operating conditions

Parameter	Min	Typical	Max	Value
Supply Voltage	2.9		3.8	Vdc
Operating temperature	-40°		60°	°C

Electrical Specifications

Parameter	Min	Typical	Max	Value
RX supply current		13		mA
		140		mA

Transceiver Specifications

Parameter	Min	Typical	Max	Value
Modulation		O-QPSK DSSS		
TX power		19.5		dBm
RX sensitivity		-112		dBm

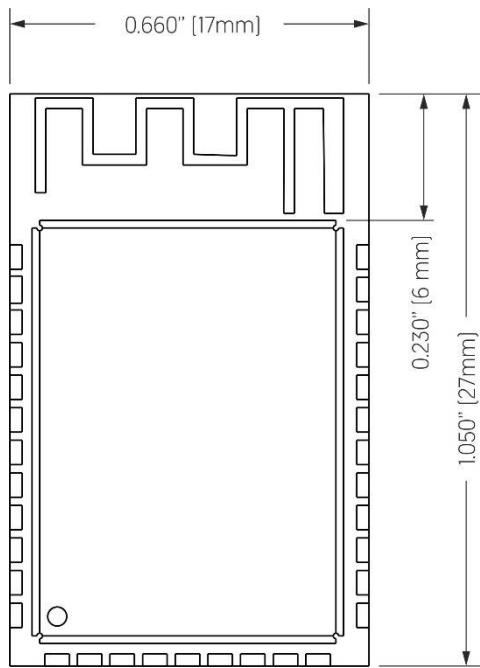
Supply voltage

Although the transceiver does not have a voltage regulator to guarantee the power of the transmission output, it is not recommended to use a supply voltage higher than 3.8V. Higher supply voltage might damage the module.

TX power settings

The maximum power setting can be used for all 802.15.4 channels.,

Dimensions:



Compliance Statements:

FCC Compliance Statement (Part 15.19)

This transmitter module meets the FCC Rule Part 15C requirements.

Operation is subject to the following two conditions:

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

FCC Interference Statement (Part 15.105 (b))

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

The final host product still requires Part 15B compliance testing with the modular transmitter installed.

Responsibility to the FCC Rules and Regulations

The ZBM1501 Module has been certified per FCC Part 15 rules for integration into products without further testing or certification. To fulfill the FCC certification requirements the Radio Module must ensure that the information provided on the Module Label is placed on the outside of the final product.

The Radio Module is labeled with its own FCC ID Number. If the FCC ID is not visible when the module is installed inside another device, then the outside of the device into which the module is



installed must also display a label referring to the enclosed module. This exterior label can use wording

such as the following:

“Contains Transmitter Module FCC ID: 2AK2T-ZBM1502”

or

“Contains FCC ID: 2AK2T-ZBM1502”

Warning (Part 15.21)

Changes or modifications not expressly approved by the party responsible for compliance could void

the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement:

To comply with FCC exposure requirements, users of this device must ensure that the module be installed to operate with a separation distance of 20cm or more from all persons.

Industry Canada Statement

The ZBM1501 module has been certified for use in Canada under Industry Canada (IC) Radio Standards Specification (RSS) RSS-210 and RSS-Gen. Modular approval permits the installation of a module in a host device without the need to recertify the device. Labeling Requirements for the Host Device (from Section 3.2.1, RSS-Gen, Issue 3, December 2010). The host device must be labeled to identify the module within the host device. The Industry Canada certification label of a module shall be clearly visible at all times when installed in the host device, otherwise the host device must be labeled to display the Industry Canada certification number of the module, preceded by the words "Contains transmitter module", or the word "Contains", or similar wording expressing the same meaning, as follows:

“Contains Transmitter Module IC: 22394-ZBM1502”

User manuals for license-exempt radio apparatus must contain the following or equivalent notice in a conspicuous location in the user manual or alternatively on the device or both.

“This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. Le présent appareil est conforme aux CNR d'Industrie 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, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. »

To comply with Industry Canada exposure requirements, users of this device must ensure that the module be installed to operate with a separation distance of 20cm or more from all persons.

Pour se conformer aux exigences d'Industrie Canada, une distance de séparation d'au moins 20cm doit être maintenue entre l'antenne de cet appareil et toutes personnes.