

User Manual to FCC

Murata Manufacturing Co.,Ltd.





Product Outline

This product has a function as an NB-IOT

- Product Size : 10.6 x 13.2 x 1.8(max) [mm]
- RF-IC : MediaTek MT2625
- Reference Clock : 26MHz X'tal

Feature

- Product Name : Communication Module
- Model Name : 1SS
- Purpose of the equipment : Telecommunication
- Equipment Type : Transceiver
- Frequency Band : B2/B4/B5/B12/B13/B17/B66/B71/B85
- Channel Bandwidth : 200kHz
- Input Voltage to RF parts : AVDD33, AVDD33_VPA Typ.3.3V

FCC ID: VPYLB1SS

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as shown in User manual.

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.

If it is difficult to describe this statement on the host product due to the size, please describe in the User's manual.

- The following statements must be described on the user manual of the host device of this module:

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Notice



List of applicable FCC rules

This module complies with below part 22, 24 and 27 of the FCC Rules.

Part 22 Subpart H

Part 24 Subpart 24E

Part 27 Subpart B, C & L

Trace antenna designs and Antennas

Antenna ANT-LTE3-2(Monopole Antenna)

Antenna maker: Murata Manufacturing Co.,Ltd.

Antenna peak gain: 4.2dBi(Rx), 1.8dBi(Tx)

Antenna impedance: 50Ω

Details: Please refer document of antenna specification.

Band	Peak Tx gain(dBi)	Band	Peak Tx gain(dBi)
B2	1.8	B13	1.1
B4	-0.4	B66	0.5
B5	1.5	B71	0.5
B12/17	-0.1	B85	0.0

Band	Peak Rx gain(dBi)	Band	Peak Rx gain(dBi)
B2	2.6	B13	0.1
B4	4.2	B66	4.2
B5	1.2	B71	0.6
B12/17	0.1	B85	0.1

■ Please check the following points when changing antenna.

The concrete contents of a check are the following three points.

- 1) It is the same type as the antenna type of antenna specifications.
- 2) An antenna gain is lower than a gain given in antenna specifications.
- 3) The emission level is not getting worse. If they do not correspond, it is necessary to apply Class 2 change application accompanied by test.

Fine tuning of return loss etc. can be performed using a matching network. However, it is required to check “Class1 change” and “Class2 change” which the authorities define then.

RF exposure considerations

- When installing it in a mobile equipment. Please describe the following warning to the manual.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

- When installing it in a portable equipment. Please describe the following warning to the manual.

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. 1SS has been tested and found to comply with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines.

It is necessary to take a SAR test with your set mounting this module.

Class II permissive change application is necessary using the SAR report.

Please contact Murata.

Note)

Portable equipment : Equipment for which the spaces between human body and antenna are used within 20cm.

Mobile equipment : Equipment used at position in which the spaces between human body and antenna exceeded 20cm.

CONFIDENTIAL

Notice



Label and compliance information

- Please describe the following warning on the final product which contains this module.

Contains Transmitter Module FCC ID:VPYLB1SS

or

Contains FCC ID: VPYLB1SS



Additional testing, Part 15 Subpart B disclaimer

The modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification.

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

This device is intended only for OEM integrators under the following conditions:

1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and 2) The transmitter module may not be co-located with any other transmitter or antenna. As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

Test Modes (FCC only)

Murata Manufacturing Co., Ltd. uses various test mode programs for test set up which operate separate from production firmware. Host integrators should contact Murata Manufacturing Co., Ltd. for assistance with test modes needed for module/host compliance test requirements.