

2. Antenna

■ Please perform the antenna design that followed the specifications of the antenna.

■ About the signal line between an antenna and a module

It is a 50-ohm line design.

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.

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.

■ 50-ohm line (microstrip line length)

	Antenna
Antenna type	Monopole pattern antenna
50-ohm feed line length	We test it at 0mm as a representative

LBEE5HY1MW User Manual for FCC

■ Regarding FCC modular approval of LBEE5HY1MW

Model Name: LBEE5HY1MW

FCC ID: VPYLBEE5HY1MW

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.

Since this module is not sold to general end users directly, there is no user manual of module. For the details about this module, please refer to the specification sheet of module. This module should be installed in the host device according to the interface specification (installation procedure).

● The following information must be indicated on the host device of this module.

Contains Transmitter Module FCC ID: VPYLBEE5HY1MW

or

Contains FCC ID: VPYLBEE5HY1MW

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 cannot be described on the host product, it must be listed on both the host product manual and on the host product package or removable label.

● 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.

Compliance with FCC requirement 15.407(c)

Data transmission is always initiated by software, which is then passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinues transmission in case of either absence of information to transmit or operational failure.

Frequency Tolerance: ± 20 ppm

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

- 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. LBEE5HY1MW 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 (except to use only Bluetooth V5.0 (BDR/EDR/LE)).

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.

LBEE5HY1MW User Manual for ISED

PMN: LBEE5HY1MW
HVIN: LBEE5HY1MW
IC Number: 772C-LBEE5HY1MW

Since this module is not sold to general end users directly, there is no user manual of module.
For the details about this module, please refer to the specification sheet of module.
This module should be installed in the host device according to the interface specification (installation procedure).

- The following information must be indicated on the host device of this module.

Contains IC: 772C-LBEE5HY1MW

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

This device complies with Industry Canada's applicable licence-exempt RSSs. 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;
2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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

- In case of the final product which can be carried around to outdoor.

The following indication is necessary to the final product.

When the AP function is used in W52;

At the time of a channel setting of W52, please indicate "for indoor use only". During connecting, please show the channel number which connects.

And please indicate that the end user may find out "for indoor use only channel".

When the STA function is used in channel 52, 54, 58, at the time of the channel 52 or 54 or 58 setting, please indicate "for indoor use only channel".

During connecting, please show the channel number which connects.

And please indicate that the end user may find out "for indoor use only channel".