

# User Manual for FCC

Application Product Name: Communication Module  
Application Type name: Type1YA, Type1YB

FCC ID:VPYLB1YA

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).

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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.

This device complies with below part 15 of FCC Rules.  
Part 15 Subpart C

The modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, and 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 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.

## Operating temperature Range and Supply Voltage

		min.Ⓢ	typ.Ⓢ	max.Ⓢ	unit.Ⓢ
Operating Temperature RangeⓈ		-10Ⓢ	25Ⓢ	60Ⓢ	deg.CⓈ
Supply VoltageⓈ	VCCⓈ	10.0Ⓢ	14.0Ⓢ	16.0Ⓢ	VⓈ

## Power Levels and Scan mode

mode	Rate	Channel	MAXIMUM TUNE UP TOLERANCE [dBm]
IEEE 802.11b	1Mbps 2Mbps	1~11	10.5 ± 1.5
	Other rates		13.0 ± 1.5
IEEE 802.11g	All Rates	1~11	13.0 ± 1.5
IEEE 802.11n(HT20 only)	All Rates	1~11	13.0 ± 1.5

Frequency of operation			Scan	Ad-hoc mode
2.4GHz	11b/g/n (HT20)	2412-2462MHz	Active	Yes

End users can not modify the software because F/W & driver are installed in device.

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## Antenna information

Antenna Product Name: Type1YA internal antenna

Antenna Type: Inverted F

Antenna Max Peak Gain: 1.6dBi @ 2400-2483.5MHz

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- The host device that builds in this module must contain the following statement

Contains Transmitter Module FCC ID:VPYLB1YA

or

Contains FCC ID: VPYLB1YA

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 of the host device.

- Please describe the following warning to the manual of the host device.

**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.

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- 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. 1MW 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.

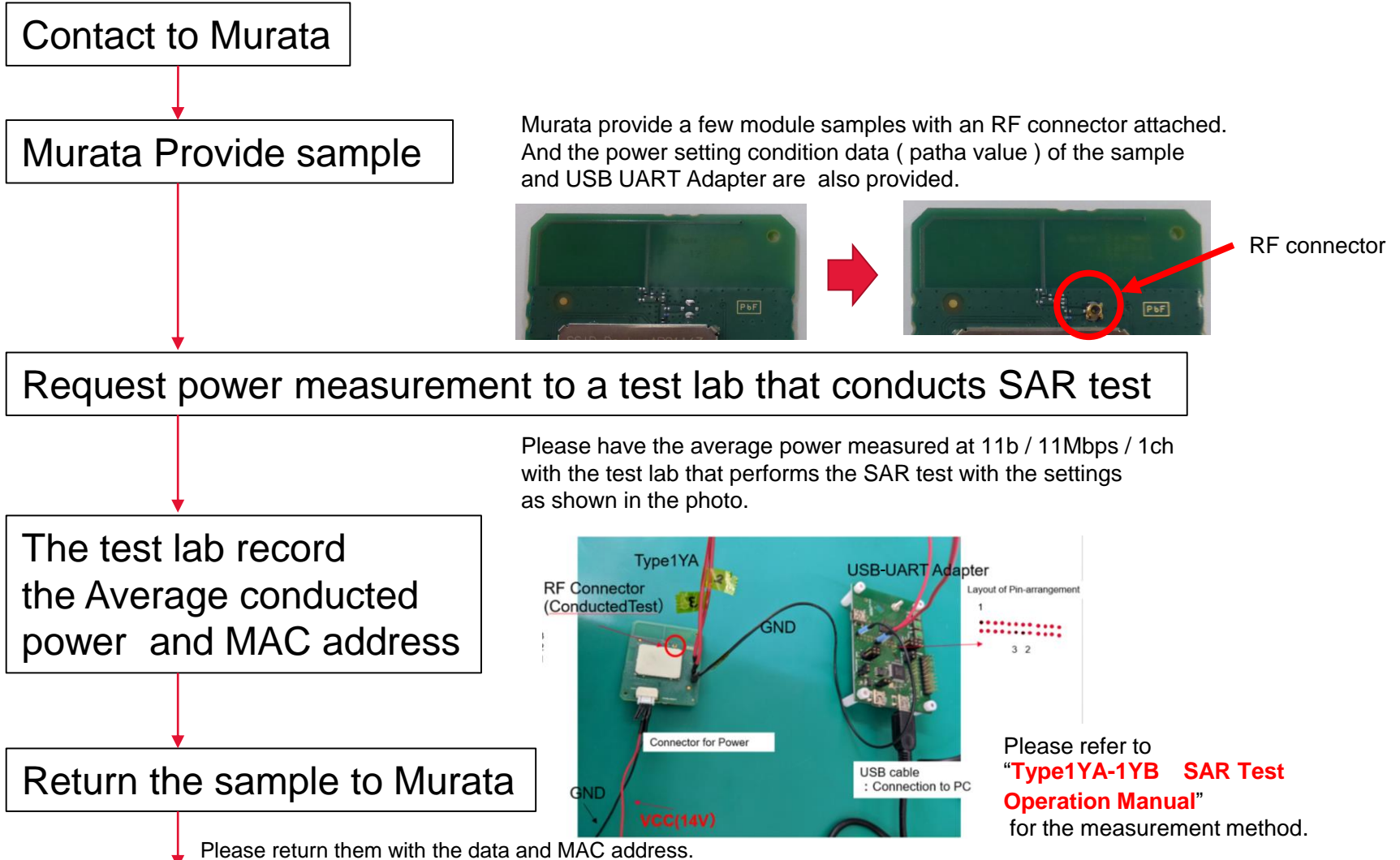
Class II permissive change application is necessary using the SAR report. Please contact Murata.

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.

## About preparation and flow for SAR test at host equipment



Murata re-connects the RF line to the antenna. And re-provide to you.

Murata will reconnect the antenna for samples whose power measurement results in the test lab are within 2 dB of the maximum power specified in the product specifications.

You incorporate the sample into the host equipment.

Connect the 3UART lines to the USB-UART Adapter and the sample.

3 UART lines are attached  
Power to the module is supplied by the host

Transmission control at 11b/11Mbps/1ch.  
And get MAC address information.

By checking the MAC address, the test lab recognizes that it is the same sample that measured the Average power.

Disconnect 3UART lines from sample.

It is in the Tx ON status.

Close the host equipment enclosure

Please do SAR test

