BM71 Regulatory Compliance Information

Revision 0.4
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This document covers the Regulatory Compliance information which is part of the BM71 Module datasheet and related documents shared with customers.

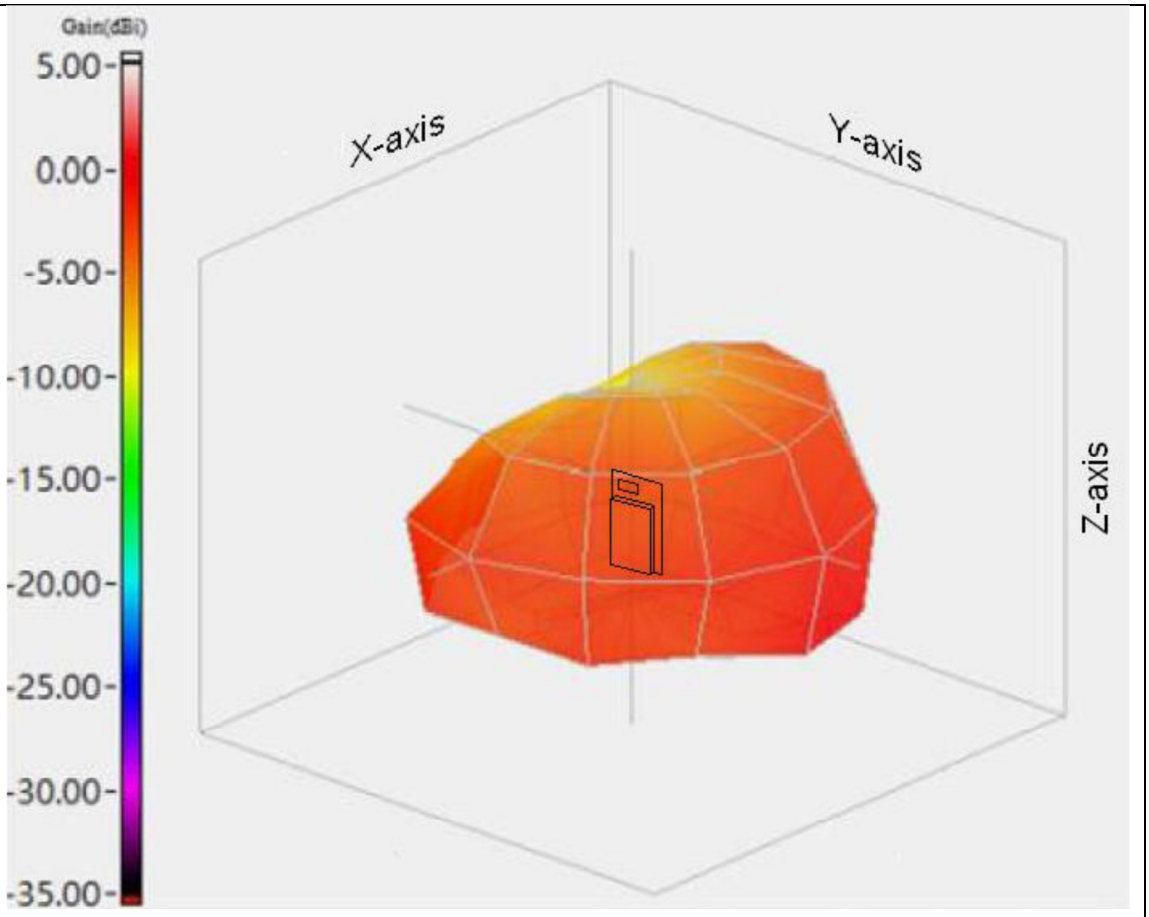
1.0 ANTENNA

1.1 Antenna Characteristics

1.1.1 CERAMIC CHIP ANTENNA

The BM71 module contains an integral ceramic chip antenna.
The Figure 1-1 illustrates the antenna performance of the module.

FIGURE 1-1: BM71 ANTENNA RADIATION PATTERN



Frequency	2442 MHz
Max Gain	0.1 dBi
Efficiency	42.7%

APPENDIX A: CERTIFICATION NOTICES

Note: This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.

BM71 module regulatory approval status:

- BT SIG/QDID:74246
- United States/FCC ID: A8TBM71S2
- Canada/IC ID: 12246A-BM71S2
  HVIN: BM71BLES1FC2
- Europe/CE: In Progress
- Japan/MIC: 005-101150
- Korea/KCC: MSIP-CRM-mcp-BM71BLES1FC2
- Taiwan/NCC No: In Progress

A.1 REGULATORY APPROVAL

This section outlines the regulatory information for the BM71 module for the following countries:

- United States
- Canada
- Europe
- Japan
- Korea
- Taiwan

A.1.1 UNITED STATES

The BM71 module is in progress to receive Federal Communications Commission (FCC) CFR47 Telecommunications, Part 15 Subpart C "Intentional Radiators" modular approval in accordance with Part 15.212 Modular Transmitter approval. Modular approval allows the end user to integrate the BM71 module into a finished product without obtaining subsequent and separate FCC approvals for intentional radiation, provided no changes or modifications are made to the module circuitry. Changes or modifications could void the user's authority to operate the equipment. The end user must comply with all of the instructions provided by the Grantee, which indicate installation and/or operating conditions necessary for compliance.

The finished product is required to comply with all applicable FCC equipment authorizations regulations, requirements and equipment functions not associated with the transmitter module portion. For example, compliance must be demonstrated to regulations for other transmitter components within the host product; to requirements for unintentional radiators (Part 15 Subpart B "Unintentional Radiators"), such as digital devices, computer peripherals, radio receivers, etc.; and to additional authorization requirements for the non-transmitter functions on the transmitter module (i.e., Verification, or Declaration of Conformity) (e.g., transmitter modules may also contain digital logic functions) as appropriate.

A.1.2 LABELING AND USER INFORMATION REQUIREMENTS

The **BM71** module has to be labeled with its own FCC ID number, and if the FCC ID is not visible when the module is installed inside another device, then the outside of the finished product into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording as follows:

Contains Transmitter Module FCC ID:
A8TBM71S2

or
Contains FCC ID: A8TBM71S2

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

Due to the limited module size (9.0 x 11.5mm) the FCC Identifier is displayed in the Datasheet only and cannot be displayed on the module label.

A user's manual for the finished product should include the following statement:

> 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
>
> - Reorient or relocate the receiving antenna.
> - Increase the separation between the equipment and receiver.
> - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
> - Consult the dealer or an experienced radio/TV technician for help.

Additional information on labeling and user information requirements for Part 15 devices can be found in KDB Publication 784748 available at the FCC Office of Engineering and Technology (OET) Laboratory Division Knowledge Database (KDB) http://apps.fcc.gov/oetcf/kdb/index.cfm.

A.1.3 RF EXPOSURE

All transmitters regulated by FCC must comply with RF exposure requirements. KDB 447498 General RF Exposure Guidance provides guidance in determining whether proposed or existing transmitting facilities, operations or devices comply with limits for human exposure to Radio Frequency (RF) fields adopted by the Federal Communications Commission (FCC).

From the FCC Grant: Output power listed is conducted. This grant is valid only when the module is sold to OEM integrators and must be installed by the OEM or OEM integrators. This transmitter is restricted for use with the specific antenna(s) tested in this application for Certification and must not be co-located or operating in conjunction with any other antenna or transmitters within a host device, except in accordance with FCC multi-transmitter product procedures.

A.1.4 HELPFUL WEB SITES

Federal Communications Commission (FCC): http://www.fcc.gov

FCC Office of Engineering and Technology (OET) Laboratory Division Knowledge Database (KDB): http://apps.fcc.gov/oetcf/kdb/index.cfm

A.2 Canada

The BM71 module certification is in progress for use in Canada under Industry Canada (IC) Radio Standards Specification (RSS) RSS-247 and RSS-Gen. Modular approval permits the installation of a module in a host device without the need to recertify the device.

Certification details:
IC Certification Number: 12246A-BM71S2
HVIN: BM71BLES1FC2

A.2.1 LABELING AND USER INFORMATION REQUIREMENTS

Labeling Requirements for the Host Device (from Section 3.1, RSS-Gen, Issue 4, November 2014): The host device shall be properly 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:
> 12246A-BM71S2

Due to the limited module size (9.0 x 11.5mm) the IC identifier is displayed in the Datasheet only and cannot be displayed on the module label.

User Manual Notice for License-Exempt Radio Apparatus (from Section 8.4, RSS-Gen, Issue 4, November 2014): User manuals for license-exempt radio apparatus shall 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.

Transmitter Antenna (from Section 8.3, RSS-Gen, Issue 4, November 2014): User manuals for transmitters shall display the following notice in a conspicuous location:

> Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.
>
> Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

The above notice may be affixed to the device instead of displayed in the user manual.

A.2.2 RF EXPOSURE

All transmitters regulated by IC must comply with RF exposure requirements listed in RSS-102 - Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands).

A.2.3 HELPFUL WEB SITES

Industry Canada: http://www.ic.gc.ca/

A.3 Europe

The BM71 module is in progress to be an R&TTE Directive assessed radio module that is CE marked and has been manufactured and tested with the intention of being integrated into a final product.

The **BM71** module has been tested to R&TTE Directive 1999/5/EC Essential Requirements for Health and Safety (Article (3.1(a)), Electromagnetic Compatibility (EMC) (Article 3.1(b)), and Radio (Article 3.2) and are summarized in **Table A-1.** A Notified Body Opinion can be arranged on request.

The R&TTE Compliance Association provides guidance on modular devices in "*Technical Guidance Note 01"* document available for download from the following location: http://www.rtteca.com/html/download_area.htm.

Note: To maintain conformance to the testing listed in Table A-1: European Compliance Testing, the module shall be installed in accordance with the installation instructions in this data sheet and shall not be modified.
When integrating a radio module into a completed product the integrator becomes the manufacturer of the final product and is therefore responsible for demonstrating compliance of the final product with the essential requirements of the R&TTE Directive.

A.3.1 LABELING AND USER INFORMATION REQUIREMENTS

The label on the final product which contains the BM71 module must follow CE marking requirements. The R&TTE Compliance Association **Technical Guidance Note 01** provides guidance on final product CE marking.

A.3.2 ANTENNA REQUIREMENTS

From R&TTE Compliance Association document Technical Guidance Note 01.

> Provided the integrator installing an assessed radio module with an integral or specific antenna and installed in conformance with the radio module manufacturer's installation instructions requires no further evaluation.Under Article 3.2 of the R&TTE Directive and does not require further involvement of an R&TTE Directive Notified Body for the final product. [Section 2.2.4]

The European Compliance Testing listed in Table A-1 was performed using the integral ceramic chip antenna.

TABLE A-1: EUROPEAN COMPLIANCE TESTING

Certification	Standards	Article	Laboratory	Report Number	Date
Safety	EN60950-1:2006/A11:2010/A1:2010/ A12:2011/A2:2013	3(1)(a)	TUV Rheinland	10053210 001	-
Health	EN62479:2010			10053433 001	-
EMC	EN301489-1 V1.9.2	3(1)(b)		10052964 001	-
	EN301489-17 V2.2.1				
Radio	EN300328 V1.9.1	3(2)		10053433 001	-
Notified Body	-			-	-

A.3.3 HELPFUL WEB SITES

A document that can be used as a starting point in understanding the use of Short Range Devices (SRD) in Europe is the European Radio Communications Committee (ERC) Recommendation 70-03 E, which can be downloaded from the European Radio Communications Office (ERO) at: http://www.ero.dk/. Additional helpful web sites are:

- Radio and Telecommunications Terminal Equipment (R&TTE): http://ec.europa.eu/enterprise/rtte/index_en.htm
- European Conference of Postal and Telecommunications Administrations (CEPT): http://www.cept.org
- European Telecommunications Standards Institute (ETSI): http://www.etsi.org
- European Radio Communications Office (ERO): http://www.ero.dk
- The Radio and Telecommunications Terminal Equipment Compliance Association (R&TTE CA): http://www.rtteca.com

A.4 Japan

The BM71 module has received type certification and is labeled with its own technical conformity mark and certification number as required to conform to the technical standards regulated by the Ministry of Internal Affairs and Communications (MIC) of Japan pursuant to the Radio Act of Japan.

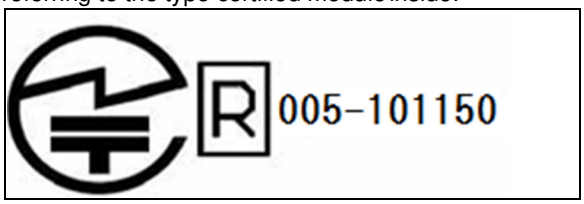
Integration of this module into a final product does not require additional radio certification provided installation instructions are followed and no modifications of the module are allowed. Additional testing may be required:

- If the host product is subject to electrical appliance safety (for example, powered from an AC mains), the host product may require Product Safety Electrical Appliance and Material (PSE) testing. The integrator should contact their conformance laboratory to determine if this testing is required.
- There is an voluntary Electromagnetic Compatibility (EMC) test for the host product administered by VCCI: http://www.vcci.jp/vcci_e/index.html

A.4.1 LABELING AND USER INFORMATION REQUIREMENTS

The label on the final product which contains the **BM71** module must follow Japan marking requirements. The integrator of the module should refer to the labeling requirements for Japan available at the Ministry of Internal Affairs and Communications (MIC) website.

The **BM71** module is labeled with its own technical conformity mark and certification number. The final product in which this module is being used must have a label attach on the top side of module and another one referring to the type certified module inside:



A.4.2 HELPFUL WEB SITES

Ministry of Internal Affairs and Communications (MIC): http://www.tele.soumu.go.jp/e/index.htm

Association of Radio Industries and Businesses (ARIB): http://www.arib.or.jp/english/

A.5 Korea

The BM71 module has received certification of conformity in accordance with the Radio Waves Act. Integration of this module into a final product does not require additional radio certification provided installation instructions are followed and no modifications of the module are allowed.

A.5.1 LABELING AND USER INFORMATION REQUIREMENTS

The label on the final product which contains the **BM71** module must follow KC marking requirements. The integrator of the module should refer to the labeling requirements for Korea available on the Korea Communications Commission (KCC) website.

The **BM71** module due to the limited size(9.0 x 11.5mm) the KC mark and identifier is displayed in the Datasheet only and cannot be displayed on the module label. .

The final product requires the KC mark and certificate number of the module:

A.5.2 HELPFUL WEB SITES

Korea Communications Commission (KCC):
http://www.kcc.go.kr

National Radio Research Agency (RRA):
http://rra.go.kr

A.6 Taiwan

The BM71 module has pending compliance approval in accordance with the Telecommunications Act. Customers seeking to use the compliance approval in their product should contact Microchip Technology sales or distribution partners to obtain a Letter of Authority.

Integration of this module into a final product does not require additional radio certification provided installation instructions are followed and no modifications of the module are allowed.

A.6.1 LABELING AND USER INFORMATION REQUIREMENTS

The **BM71** module due to the limited size(9.0 x 11.5mm) the NCC mark and identifier is displayed in the Datasheet only and cannot be displayed on the module label :

The user's manual should contain below warning (for RF device) in traditional Chinese:

注意！

依據 低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，

公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計

之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；

經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信規定作業之無線電信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性

電機設備之干擾。

A.6.2 HELPFUL WEB SITES

National Communications Commission (NCC):
http://www.ncc.gov.tw

A.7 Other Regulatory Jurisdictions

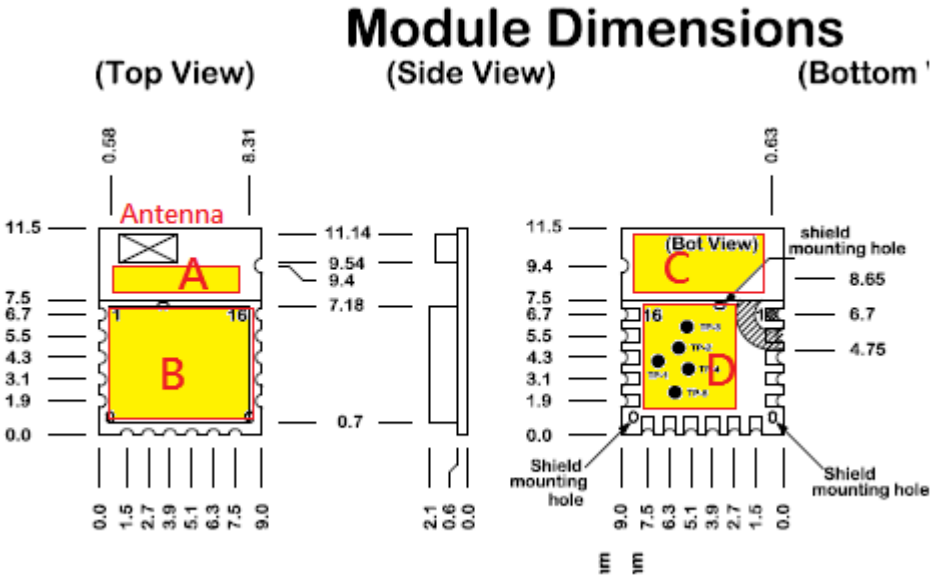
Should other regulatory jurisdiction certification be required by the customer, or the customer need to recertify the module for other reasons, contact Microchip for the required utilities and documentation.

Appendix B: Labelling Considerations

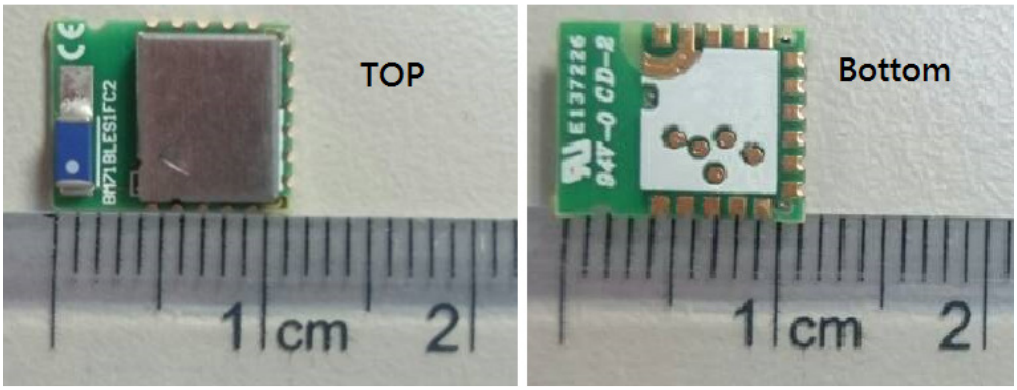
BM71 module, due to the module dimension limitation, could not add the certificate ID on module directly, we would like to apply for your permission to add the certificate ID on the Datasheet and alternatively on the shipping package instead of on module.

Description：

1. BM71 Module dimension



Area A: 1.5X8.5mm^2
Area B: 7.7X6.1mm^2, this is a shielding case with a label for BT address and date code
Area C: 3.5X8.5mm^2
Area D: 2.1X6.35mm^2 and 1.4X3.6mm^2, the area is not complete and continuous.



Form factor

2. According the description above, due to the dimension limitation, we could not find out an area good to print a clear certificate ID or logo.
3. We would apply for your kindly permission to allow Microchip to ship the module by the new approach, in appendix I, to add the certificate ID on the anti-static bag, the out pack of the module tray。
4. Appendix B-1 is one of the proposal.

Appendix B-1

There is an anti-static bag outside the module tray, we suggest adding the certificate ID on the bag, it is very clear for the custom and government to check the ID, and we will also add the certificate ID information in the module user manual to avoid any possible confusion by the user.

Open BOX

Module tray in the anti-static bag

Logo and ID is pasted on the anti-static bag and also noted in user manual