

Bluetooth Module: BT12B

User Manual

1 GENERAL

1-1 Purpose and Scope of this document

This document contains the specifications pertinent to the module for Bluetooth™ system, which comply with BLUETOOTH™ Specifications Version 4.0.

This document specifies and describes General, Mechanical, Electrical, Software and Reliability specifications and aspects for Panasonic Bluetooth Module BT12B.

1-2 Standard Operating Conditions

Items	Conditions
Operating Temperature	Nominal: +15°C to +35°C Extreme: -20°C to +75°C
Storage Temperature	-30°C to +85 °C
Supply Voltage ; VCC_VCC_IO	Nominal: +3.3 V Extreme: +3.3 V ± 0.1 V
Absolute Maximum Ratings Supply Voltage	VCC_VCC_IO : -0.4V ~ +3.5V

2-1 Specifications

Operating Frequency	2402 MHz to 2480 MHz
Carrier Spacing	1.0 MHz
Channel	79
Duplexing	TDD
Symbol Rate	1Mbps-BDR,260kbps-LE (GFSK) 2Mbps ($\pi/4$ -DQPSK) 3Mbps (8DPSK)
Modulation Method	GFSK BbT = 0.5 $\pi/4$ -DQPSK 8DPSK
Reference Oscillator	26MHz (built in)
RF input and output impedance	Nominal 50 ohm

Regulatory Information

USA-Federal Communications Commission (FCC)

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.

Caution

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

Labeling

System integrators must include the FCC ID on the label of the end product as following, "Contains FCC ID: ACJ9TGBT12B".

Caution: Exposure to Radio Frequency Radiation.

To comply with FCC/IC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Instructions to OEM Integrators

A User manual provided to the end user must indicate the operating requirements and conditions that must be observed to ensure compliance with the above-mentioned FCC RF Exposure guideline.

If this module is intended for use in a portable device, integrators are responsible for separate evaluation and/or approval to satisfy FCC RF Exposure requirements.

The antenna used this module is as follows;

Antenna Type: PIFA

Antenna Gain: -0.48dBi

If an antenna with higher gain or new antenna type is used with this module, integrators must contact Panasonic for additional testing and submission to the FCC.

If other radio devices are to be integrated with this module, an additional evaluation and FCC submission may be required. Integrators are responsible for such additional evaluation and FCC submission.

Canada-Industry Canada (IC)

This device complies with RSS 210 of Industry Canada.

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 this device.

L' utilisation de ce dispositif est autorisée seulement aux conditions suivantes :

- (1) il ne doit pas produire de brouillage et
- (2) l' utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Caution: Exposure to Radio Frequency Radiation.

To comply with RSS 102 RF exposure compliance requirements, for mobile configurations, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le dispositif rayonnant et le corps.

Labeling

System integrators must include the IC ID on the label of end product as following, "Contains IC: 216A-CFBT12B".

Instructions to OEM Integrators

A User manual provided to the end user must indicate the operating requirements and conditions that must be observed to ensure compliance with the above-mentioned FCC RF Exposure guideline.

If this module is intended for use in a portable device, integrators are responsible for separate evaluation and/or approval to satisfy FCC RF Exposure requirements.

The antenna used this module is as follows;

Antenna Type: PIFA

Antenna Gain: -0.48dBi

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