



4M-029-001

4moms Bluetooth module

Datasheet

MODEL: 4004036

Revision	Date	By	Description
1.0	4/22/14	jjw	Initial Draft

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Contents

General Specifications	3
RF Specifications	3
Electric Specifications	3
Module Footprint.....	4
Placemet Consideration	5
Pin Description	6
Solder Reflow Profile.....	7
Additional Information.....	7
Notes.....	9
Regulatory Certifications	9
United States – FCC.....	9
Europe – CE and RoHS	9
Canada – IC	9
Bluetooth Qualification Program (BQP).....	9

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General Specifications

Specification	Description
Bluetooth Standard	Bluetooth 4.0
Interfaces	SPI, UART
Size	20mm x 26.7mm x 3.2mm
Weight	1.5g

RF Specifications

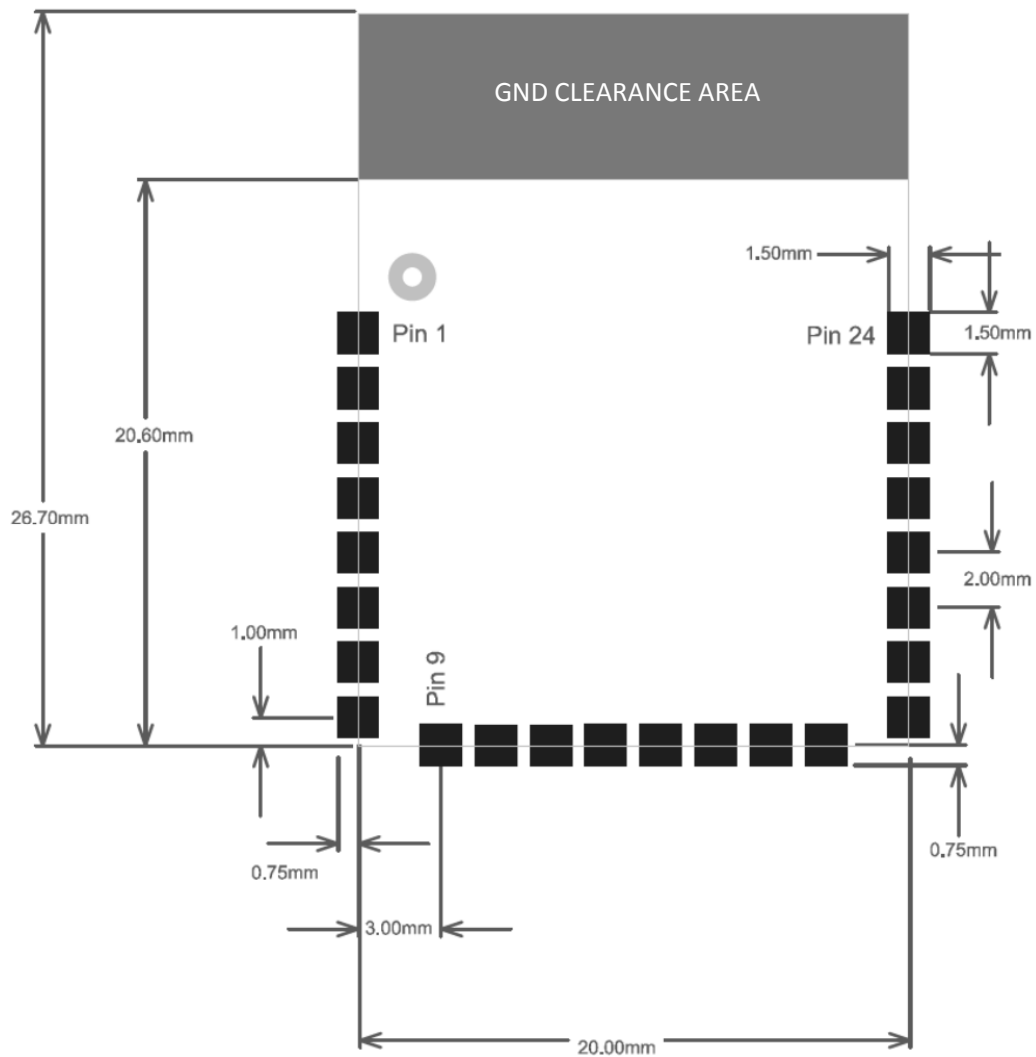
Specification	Description
Frequency Band	2.400GHz to 2.483GHz
Modulation	GFSK
Maximum Data Rate	1Mbps to 2Mbps
Operating Range	20m to 30m
RF Sensitivity	-87dBm to -93dBm
Transmit Power	0dBm to -23dBm

Electric Specifications

Specification	Description
Supply Voltage	2.0V to 3.6V
Typical Idle Current	~2uA
Typical Advertising Current	0.54mA (100ms Advertising Period)
Typical Transmit Current	0.76mA (37.5ms Connection Interval)
Operating Temperature	-40°C to 85°C

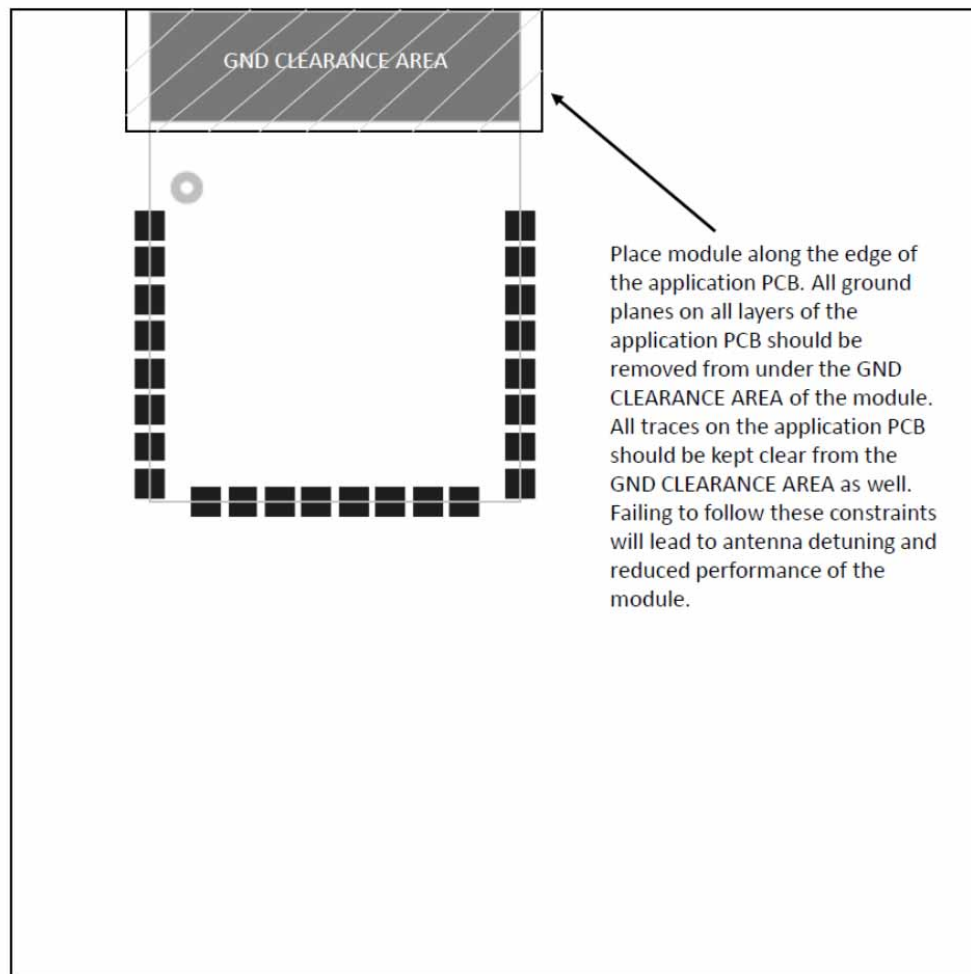
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Module Footprint



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Placemet Consideration



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Pin Description

Number	Name	Type	Description
1	GND	GND	Common Ground
2	P2_2 / DBG_C	GPIO	Clock line for module programming
3	P2_1 / DBG_D	GPIO	Data line for module programming
4	P1_7 / sRDY	Digital Output	Digital output signaling module is ready for data
5	P1_6 / nTEST	Digital Input	Used to put module in Test mode
6	GND	GND	Common Ground
7	P1_5 / MOSI / TX	Digital Output	SPI Output, UART Transmit
8	P1_4 / MISO / RX	Digital Input	SPI Input, UART Receive
9	P1_3 / sCLK	Digital Input	SPI Clock input
10	P1_2 / nCS	Digital Input	SPI Chip select
11	P1_1	GPIO	Programmable input/output line
12	P1_0	GPIO	Programmable input/output line
13	P0_7	GPIO / ADC	Programmable input/output line or ADC input
14	P0_6	GPIO / ADC	Programmable input/output line or ADC input
15	P0_5	GPIO / ADC	Programmable input/output line or ADC input
16	GND	GND	Common Ground
17	P0_4	GPIO / ADC	Programmable input/output line or ADC input
18	P0_3	GPIO / ADC	Programmable input/output line or ADC input
19	P0_2	GPIO / ADC	Programmable input/output line or ADC input
20	VCC	Supply	Positive Supply Input
21	P0_0	GPIO / ADC	Programmable input/output line or ADC input
22	RESET	Digital In	Resets module (active low)
23	GND	GND	Common Ground
24	P0_1	GPIO / ADC	Programmable input/output line or ADC input

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Solder Reflow Profile

- Preheat Temperature: 150°C for 100 seconds
- Temperature: 220°C for 40 seconds
- Single Pass

Additional Information

The final end product must be labeled in a visible area with the following: "Contains FCC ID: WTW4004036, IC: 12085A-4004036".

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 show in this manual.

L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer ce module RF dans le manuel de l'utilisateur du produit final qui intègre ce module. Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

Federal Communications Commission (FCC) Statement

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

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 of the device.

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.

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Canada, Industry Canada (IC) Notices

"This device complies with Industry Canada licence-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."

Canada, avis d'Industry Canada (IC)

"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."

RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

根據 NCC 低功率電波輻射性電機管理辦法 規定:

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，指依電信法規定作業之無線電通信。

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。

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Notes

- Reset input contains strong pull-up

Regulatory Certifications

United States – FCC

Europe – CE and RoHS

Canada – IC

Bluetooth Qualification Program (BQP)

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