

BT3086P

Data Sheet

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1, Description

The BTM3086P module consumer audio platform for wired and wireless applications integrates an ultra-low-power DSP and application processor with embedded flash memory, a high-performance stereo codec, a power management subsystem, LED and LCD drivers and capacitive touch sensor inputs in a SOC IC. The dual-core architecture with flash memory enables manufacturers to easily differentiate their products with new features without extending development cycles.

2, Key Feature

- Qualified to Bluetooth® v5.4 specification
- Transmitter function
- 240 MHz Qualcomm® Kalimba™ audio DSP
- 32/80MHz Developer Processor for applications
- Firmware Processor for system
- Flexible QSPI flash programmable platform
- Advanced audio algorithms
- High-performance 24bit stereo audio interface
- analog audio interfaces
- Flexible LED controller and LED pins with PWM support
- Qualcomm® aptX™ and aptX HD Audio ,aptX Adaptive, enabled using license key
- Advanced audio algorithms
- Serial interfaces: UART, Bit Serializer (I²C/SPI), USB 2.0
- Integrated PMU: Dual SMPS for system/digital circuits,
- 27 PIOs, 4 LED pads with PWM or AIO
- Analog-to-digital converter (ADC)s support sample rates of 8 kHz, 16 kHz, 32 kHz, 44.1 kHz, 48 kHz, 96kHz.

3, Electrical Characteristics

3.1 Absolute Maximum Ratings

	Min	Max
Storage Temperature	-40°C	+85°C
Supply Voltage, (VBAT)	-0.4V	+4.8V
Input Voltage, (SYS_CTRL)	-0.4V	+4.8V
Supply Voltage, (VDD_PADS)	-0.4V	+3.6V
Supply Voltage, (VBUS)	-0.4V	+6.5V
Other terminal voltages	VSS-0.4V	VDD+0.4V

3.2 Recommended Operating Conditions

	Min	Max
Operating Temperature Range	-20°C	+70°C
Supply Voltage, (VBAT)	3.0V	+4.6V
Supply Voltage, (SYS_CTRL)	0V	+4.6V
Supply Voltage, (VDD_PADS)	+1.7V	+3.6V
Supply Voltage, (VDD_< MEM)	+1.7V	+3.6V
Supply Voltage, (VBUS)	4.5V	+5.75V

4, Certification Information

FCC Statement

FCC standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

PCB antenna with antenna gain 1dBi

A: 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.

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

C: Note: 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.

FCC Radiation Exposure Statement

The modular can be installed or integrated in mobile or fix devices . This modular cannot be installed in any portable device if without further certification such as C2PC with SAR. This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: “Contains Transmitter Module FCC ID: ACJ-BT3086P Or Contains FCC ID: ACJ-BT3086P”

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Any company of the host device which install this modular with modular approval should perform the test of radiated & conducted emission and spurious emission,etc. according to FCC part15B Class B requirement, Only if the test result comply with FCC part 15B Class B requirement, then the host can be sold legally.

When the module is installed inside another device, the user manual of the host must contain above Paragraphs A, B, and C warning statements.

IC STATEMENT

A: This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device

B: Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS) d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes :

(1) Cet appareil ne doit pas causer d'interférences.

(2) Cet appareil doit accepter toutes les interférences, y compris celles susceptibles de provoquer un fonctionnement indésirable de l'appareil.

IC Radiation Exposure Statement

This modular complies with IC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body. Cette modulaire doit être installé et utilisé à une distance minimum de 20 cm entre le radiateur et le corps de l'utilisateur.

If the IC number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following:

“Contains IC: 216A-BT3086P”

when the module is installed inside another device, the user manual of this device must contain Above paragraph A&B warning statements .

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product

for China model

CMIIT ID: 25J9908MT100

Display below sentence in body and Manual

本设备包含型号核准代码为：
CMIIT ID: 25J9908MT100
的无线电发射模块