Bluetooth Low Energy 4.0 Module

Model RBT01 Data Sheet

Date : DEC 2012 Version : 1.0

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DESCRIPTION

RBT01 Bluetooth low energy single mode module is a single mode device targeted for low power sensors and accessories.

RBT01 offers all Bluetooth low energy features: radio, stack, profiles and application space for customer applications, so no external processor is needed. The module also provides flexible hardware interfaces to connect sensors, simple user interfaces or even displays directly to the module.

RBT01 can be powered directly with a standard 3V coin cell batteries or pair of 3A batteries. In lowest power sleep mode it consumes only 0.4uA and will wake up in few hundred microseconds.

KEY FEATURES

- Support Central and/or Peripheral roles
- Small size 14*20mm
- Integrated Bluetooth low energy stack, GAP, GATT, L2CAP, SMP
- Lowest power consumption: 0.4uA (sleep mode)

Applications

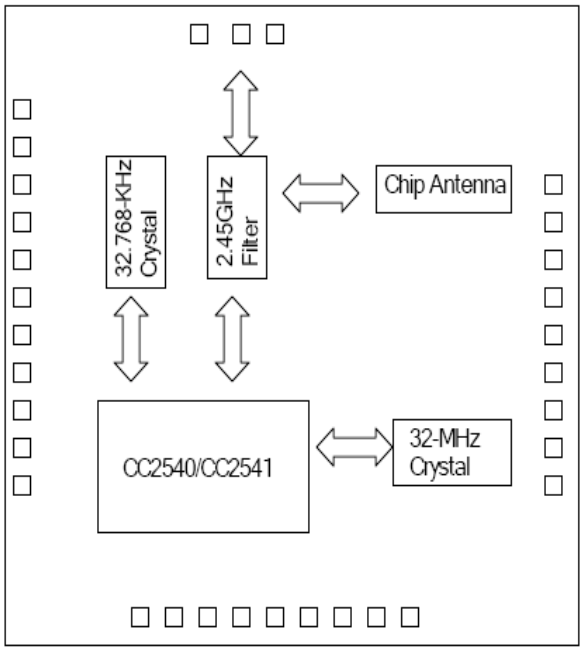
- Mobile Phone Accessories
- Sports and leisure equipments
- Heart rate collector
- Pedometer
- Watches
- Cycling and cadence sensor
- Consumer Electronics
- Human Interface Devices (Keyboard, Mouse)
- USB Dongles
- Consumer medical
- Smart energy
- Security finder
- Proximity and presence

1. PRODUCT NUMBER ASSIGNMENT

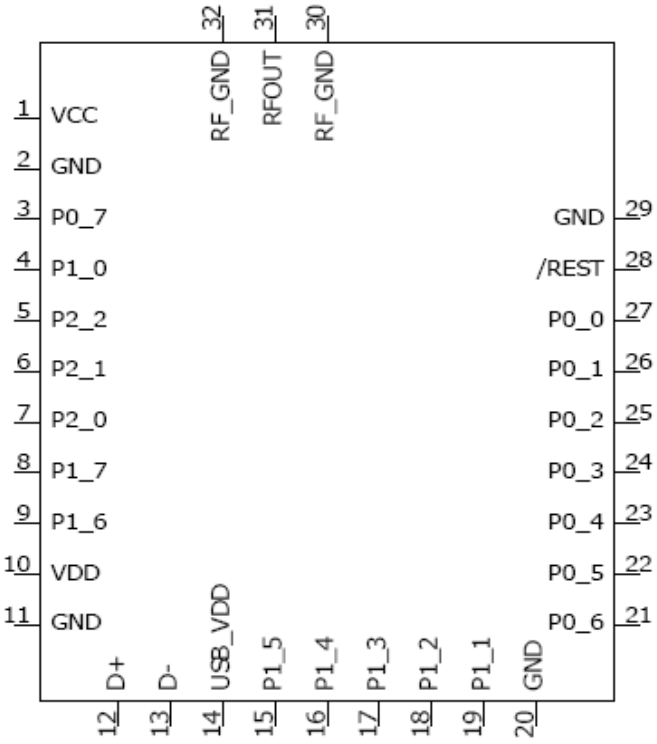
RBT01-①-②

①	C	RBT01-C-01 with internal chip antenna and firmware version 1.0
	E	RBT01-E-01 with external antenna and firmware version 1.0
②	01	Firmware revision

2. BLOCK DIAGRAM



3. PACKAGE PINOUT DIAGRAM



4. ABSOLUTE MAXIMUM RATINGS

Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device.

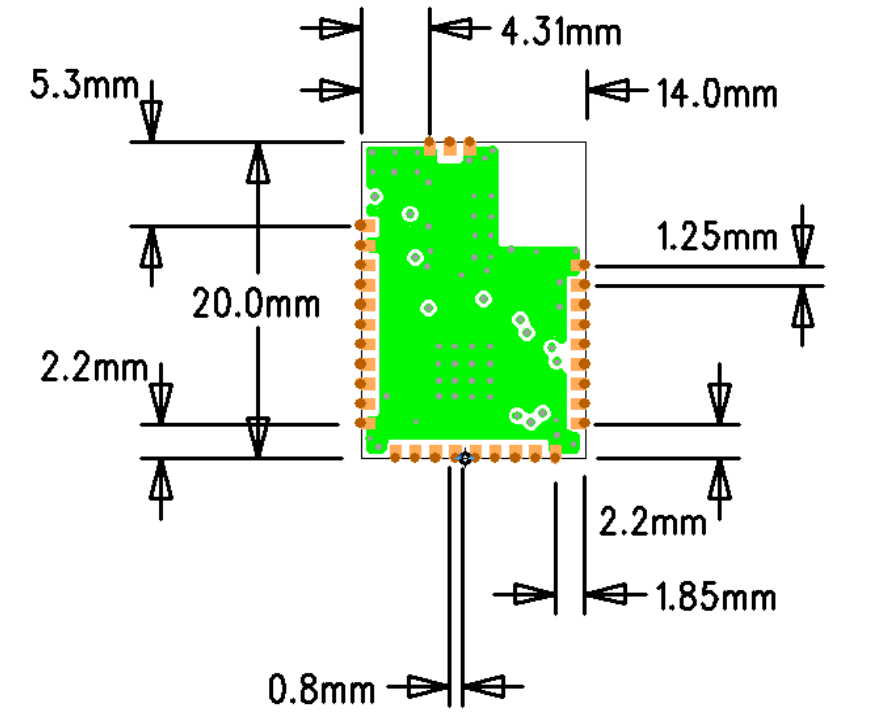
Item	Min	Max	Unit
Supply voltage (VCC VDD USB_VDD)	-0.3	3.9	V
All IO	–0.3	VDD +≤03 ≤3.9	V
ESD		2	kV
Storage temperature range	-40	125	℃
Input RF level		10	DB

5. RECOMMENDED OPERATING CONDITIONS

Supply voltage noise should be less than 10mVpp. Excessive noise at the supply voltage will reduce the RF performance.

Item	Min	Max	Unit
Operating Temperature Range	-20	70	℃
Operating supply voltage	2	3.6	V

6. PCB PHYSICAL DIMENSIONS



7. PCB Layout Guide

For optimal performance of the antenna, place the module at the corner of the PCB as shown in the diagram below, do not place any metal (traces, components, battery etc.) within the clearance area of the antenna.