



The **ABT01B** is a Bluetooth HID module using Broadcom Bluetooth 3.0 controller **BCM20730**. This module is ideal for wireless sensing device applications including pointing devices like mice, trackball, gestural controls or keyboards, leisure equipment, consumer electronics, HID, health care, etc.. The module is integrated with EEPROM and crystal to reduce the external BOM cost.

FEATURES:

- On-chip support for common keyboard and mouse interfaces eliminates external processor
- Programmable keyscan matrix interface, up to 8x20 key-scanning matrix
- Bluetooth specification 3.0 compatible, including enhanced power control
- Bluetooth HID profile version 1.0 compliant
- Bluetooth Device ID profile version 1.3 compliant
- Bluetooth AVRCP-CT profile version 1.3 compliant
- Supports Adaptive Frequency Hopping(AFH)
- On-chip support for serial peripheral interface(SPI)
- Programmable output power control meets Class 2 or Class 3 requirements
- Excellent receiver sensitivity
- Integrated ARM Cortex™-M3 based
- On-chip power-on reset (POR)

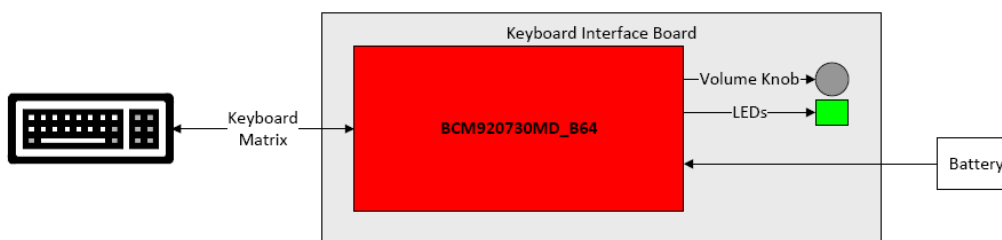
MAXMIUM RATING

Description	Symbol	Value	Unit
DC supply voltage	-	3.8	V
Voltage on input or output pin	-	V _{ss} -0.3 to V _{dd} +0.3	V
Operating ambient temperature range	Topr	0 to +70	°C
Storage temperature Range	Tstg	-40 to 125	°C

Power Supply	Min.	Typ.	Max.	Unit
DC supply voltage	1.8	2.8	3.6	V

Current Consumption (Keyboard as example)	Vdd@1.8V	Vdd@2.8v
Operating current	1mA	<2.8mA
Standby current	<0.2mA	<0.3mA
Deep sleep	30uA	30uA

Note: The current consumption depends on application

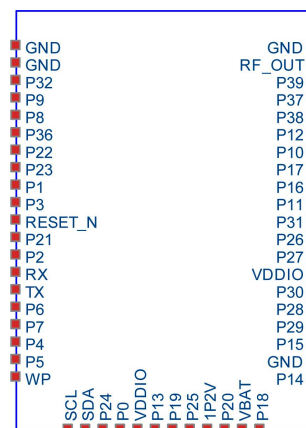
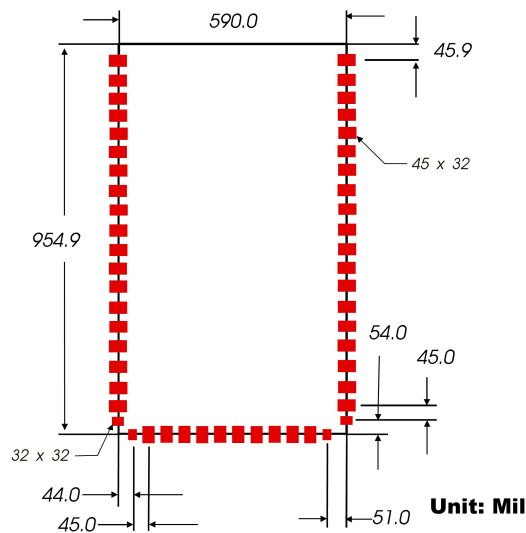


RF SPECIFICATION (Vdd_RF = 1.5, T = 25°C)

Parameter	Mode and Conditions	Min	Typ	Max	Unit
Receiver Section					
Frequency range	-	2402	-	2480	MHz
RX sensitivity (standard)	GFSK, 0.1%BER, 1Mbps	-	-88.0	-84.0	dBm
Rx sensitivity (low current)		-	-84.0	-	dBm
Input IP3	-	-16	-	-	dBm
Maximum input		-10	-	-	dBm
Interference Performance					
C/I cochannel	GFSK, 0.1%BERa	-	-	11.0	dB
C/I 1MHz adjacent channel	GFSK, 0.1%BERa	-	-	0.0	dB
C/I 2MHz adjacent channel	GFSK, 0.1%BERa	-	-	-30.0	dB
C/I > 3MHz adjacent channel	GFSK, 0.1%BERa	-	-	-40.0	dB
C/I image channel	GFSK, 0.1%BERa	-	-	-9.0	dB
C/I 1MHz adjacent to image channel	GFSK, 0.1%BERa	-	-	-20.0	dB
Out-of-Band Block Performance (CW)b					
30MHz to 2000 MHz	0.1%BER	-	-10.0	-	dBm
2000MHz to 2399MHz	0.1%BER	-	-27	-	dBm
2498MHz to 3000MHz	0.1%BER	-	-10.0	-	dBm
Spurious Emissions					
30MHz to 1GHz	-	-	-	-57.0	dBm
1GHz to 12.75GHz	-	-	-	-55.0	dBm

1. Desired signal is 10 dB above the reference sensitivity level (defined as -70dBm).
2. Desired signal is 3dB above the reference sensitivity level (defined as -70 dBm).

Outline Dimension of PCBa



Thickness	TBD
PCB Thickness	0.8mm (+/- 0.1mm)
Dimension	24mm x 15mm (+/-0.5mm)

* Features and specification are subject to change without notice.



DIGIMORE ELECTRONICS CO., LTD
 10 Fl., No. 61, Yan-Ping S. Rd., Taipei 100, Taiwan
 TEL: +886 2 2311 3299 FAX: +886 2 2311 3375
 Email: info@digimore.com.tw <https://www.digimore.com.tw>