BTM-5 Bluetooth

Wireless TTL Master/Slave Transceiver Module

Datasheet

Rev 1.0, Jan 2010

http://www.webtronico.com

Content

1. Key Features

➢ Bluetooth Spec v2.0+EDR Compliant

➢ Class 2 type Output Power

➢ Full speed Bluetooth operation with full piconet support

➢ Scatternet support

➢ Onboard antenna

➢ 3.3V operation

➢ UART interface

➢ Support for 8Mbit external onboard Flash

➢ Minimized size 26.9mm(L) x 13mm(W) x 2.2mm(H)

➢ RoHS Compliant

2. Product Description

BTM-5 module is a Class 2 Bluetooth module using BlueCore4-External chipset from leading Bluetooth chipset supplier Cambridge Silicon Radio. This module both support Master and Slave mode operation, it can be easily changed by AT command configuration. It is highly recommend to use BTM-5 pair to communicate with each other. User can also use the module with the Laptop, PDA, Mobile Phone and etc.

3. Applications

➢ Bluetooth Carkit

➢ PCs

➢ Personal Digital Assistants (PDAs)

➢ Computer Accessories (Compact Flash Cards, PCMCIA Cards, SD Cards and USB Dongles)

➢ Access Points

➢ Digital Cameras

4. Specifications

Parameters	Specifications
Operating Frequency Baud	2.4GHz-2.48GHz unlicensed ISM Band
Bluetooth Specification	V2.0+EDR
Output Power Class	-4 ~ 6dBm adjustable , Class 2
Sensitivity	-80dBm at 0.1% BER
Data Rate	Asynchronous: 2Mbps (Max)
Operating Voltage	3.3V
Host Interface	USB / UART
Audio Interface	PCM and Analog interface
Flash Memory Size	8Mbit
Operation temperature	-20 ~ +55 ℃
Dimension	26.9mm(L) x 13mm(W) x 2.2mm(H)

*Specifications are subject to change without prior notice

5. Electrical Characteristics

Absolute Maximum Ratings		
Rating	Min	Max
Storage temperature	-40℃	+150℃
Supply voltage : VBAT	-0.4V	5.6V
Other terminal voltages	VSS-0.4V	VDD+0.4V

Recommended Operating Conditions		
Operating Condition	Min	Max
Operating temperature range	-40℃	+150℃
Guaranteed RF performance range	-25℃	+75℃
Supply voltage : VBAT	2.2V	4.2V

6. Power Consumption

Operation Mode	Connection Type	UART Rate (kbps)	Average	Unit
Page scan	-	115.2	0.42	mA
ACL No traffic	Master	115.2	4.60	mA
ACL with file transfer	Master	115.2	10.3	mA
ACL 1.28s sniff	Master	38.4	0.37	mA
ACL 1.28s sniff	Slave	38.4	0.42	mA
SCO HV3 30ms sniff	Master	38.4	19.8	mA
SCO HV3 30ms sniff	Slave	38.4	19.0	mA
Standby Host connecton	-	38.4	40	uA

7. Typical Application

The following schematic is the typical hardware application for the BTM-5 module, it provide both RS232 and 5V TTL logic level connection to the module.
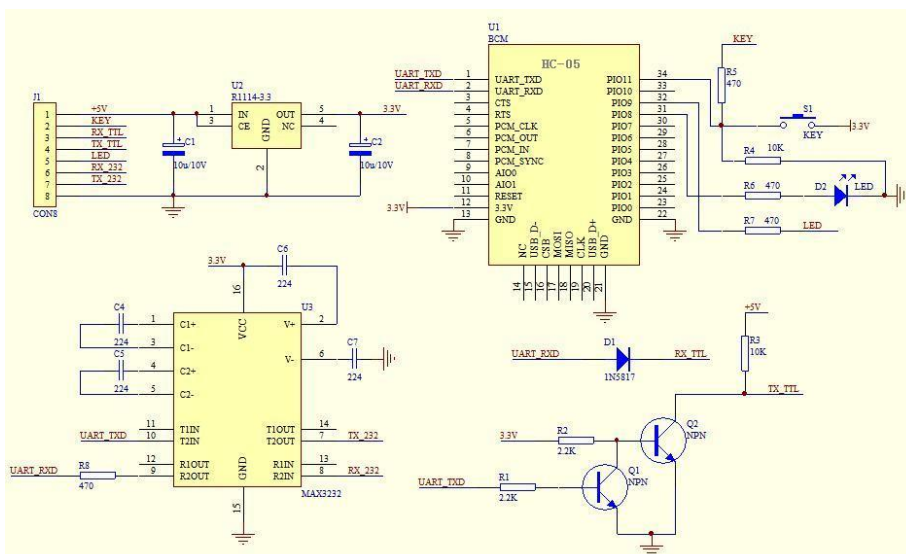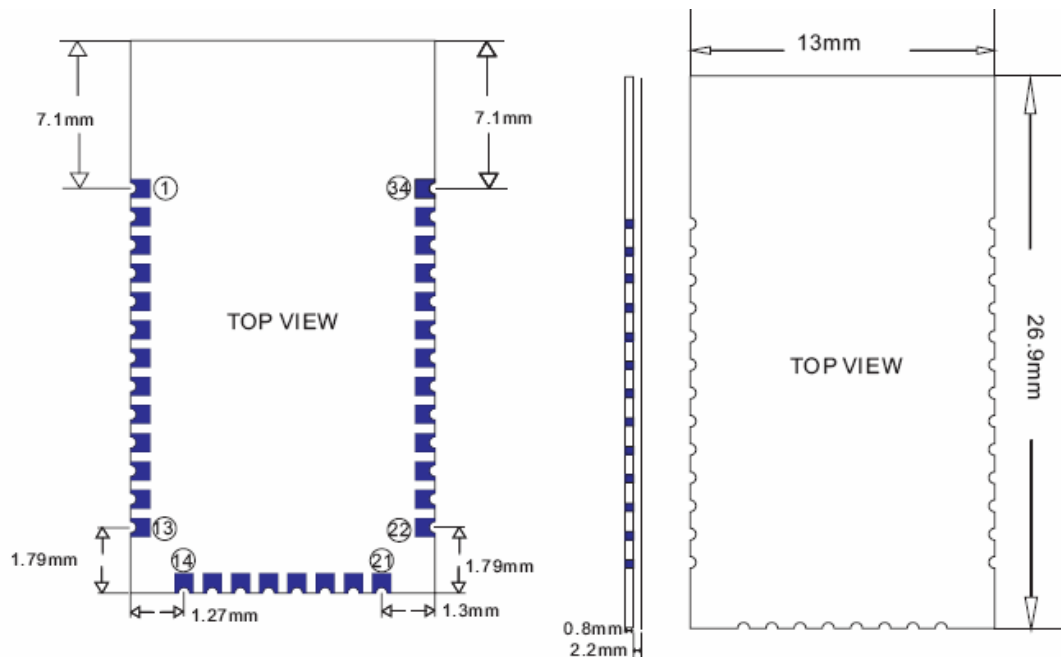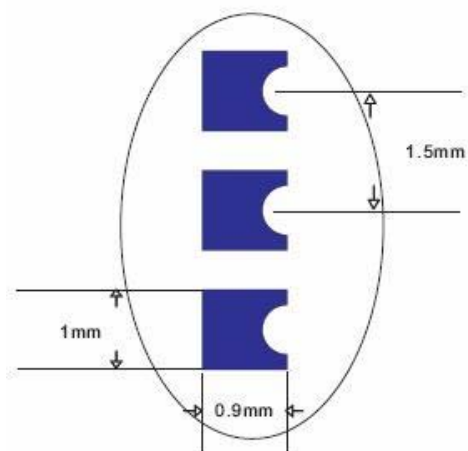
8. Pin Definition
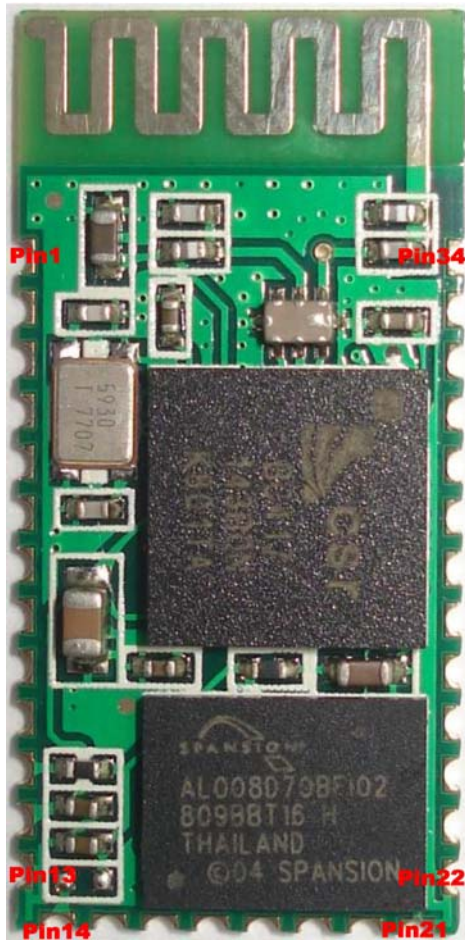
Pin	Description
1	UART_TXD
2	UART_RXD
3	UART_CTS
4	UART_RTS
9~11	NA
12	3.3V Supply input
13	GND
14~20	NA
21,22	GND
23	PIO0 Programmable IO port
24	PIO1 Programmable IO port
25	PIO2 Programmable IO port
26	PIO3 Programmable IO port
27	PIO4 Programmable IO port
28	PIO5 Programmable IO port
29	PIO6 Programmable IO port
30	PIO7 Programmable IO port
31	PIO8 Programmable IO port
32	PIO9 Programmable IO port
33	PIO10 Programmable IO port
34	PIO11 Programmable IO port

9. Package Description and Dimensions

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