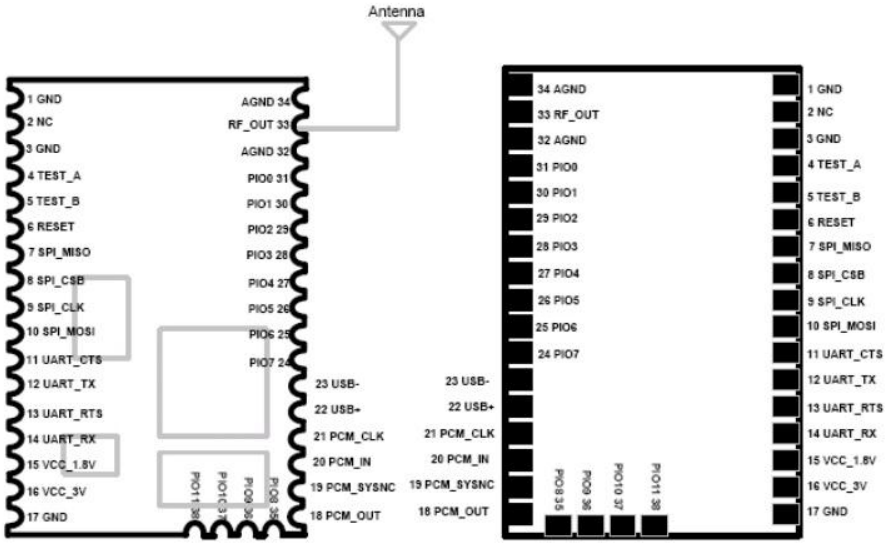
LAMPIRAN D

DATASHEET

1. Hardware & Technical Information

1.1 Pin definition

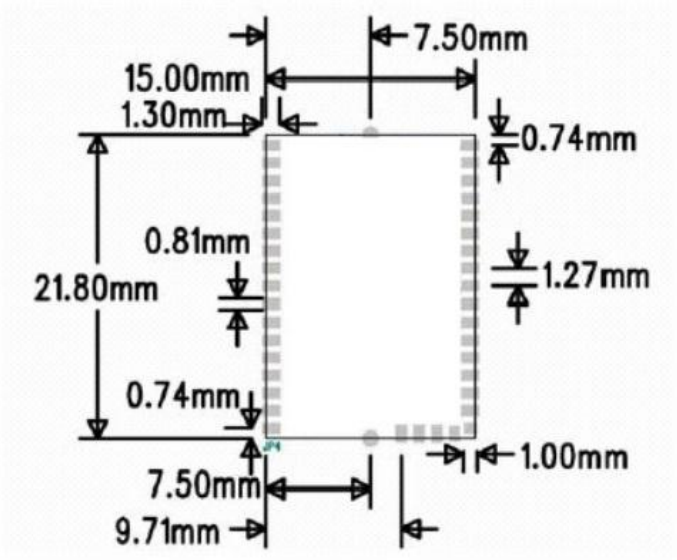


Pin No.	Name	Type	Description	Pin No.	Name	Type	Description
1	GND		Ground connection for digital/analogy	34	GND		Ground connection for digital/analogy
2	NC		Leave it open	33	RF_OUT	O	RF Output
3	GND		Ground connection for digital/analogy	32	GND		Ground connection for digital/analogy
4	TestA		Internal test only	31	PIO0	I/O	Programmable input/output line
5	TestB		Internal test only	30	PIO1	I/O	Programmable input/output line
6	Reset	I	Active low for reset. Input debounced so must be high for > 5ms to cause a reset	29	PIO2	I/O	Programmable input/output line
7	SPI_MISO		Serial Peripheral Interface data output	28	PIO3	I/O	Programmable input/output line
8	SPI_CSB		Chip select for Synchronous Serial Interface, active low	27	PIO4	I/O	Programmable input/output line
9	SPI_CLK		Serial Peripheral	26	PIO5	I/O	Programmable

			Interface clock				input/output line
10	SPI_MOSI		Serial Peripheral Interface data input	25	PIO6	I/O	Programmable input/output line
11	UART_CTS	I	UART clear to send active low	24	PIO7	O	
12	UART_TX	O	UART data output	23	USB-		USB data minus(Not implemented)
13	UART_RTS	O	UART request to send active low	22	USB+		USB data plus with selectable internal 1.5 ohm pull-up resistor(Not implemented)
14	UART_RX	I	UART data input	21	PCM_CLK	I/O	Synchronous data clock
15	VCC_1.8V	O	Regulated voltage 1.8V output	20	PCM_IN	I	Synchronous data input
16	VCC_3.3V	I	Voltage supplier from 2.8 to 4V	19	PCM_SYNC	I/O	Synchronous data sync
17	GND		Ground connection for digital/analogy	18	PCM_OUT	O	Synchronous data output

Pin No.	Name	Type	Description	Pin No.	Name	Type	Description
35	PIO8	I/O	Programmable input/output line	37	PIO10	I/O	Programmable input/output line
36	PIO9	I/O	Programmable input/output line	38	PIO11	I/O	Programmable input/output line

1.2 Recommended PCB Layout Outline



15.0 * 21.8 * 2.7 mm (L * W * H) +- 0.1 mm

Layout Note:

1.Use solid power and ground planes
2.Ensure there is defined returned path for the signals
3.Power plane extent should be within ground plane extent

1.3 Block Diagram

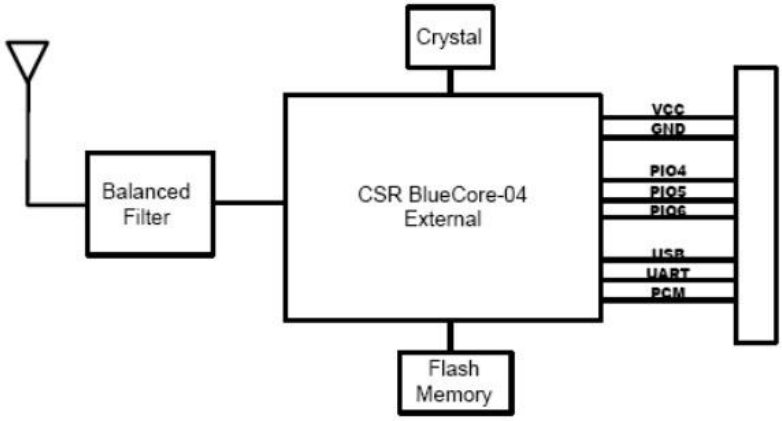


Fig 1.3.1 BT- Class2 Module Block Diagram

1.4 Electrical Characteristics

BT- Class 2

	Min	Typ.	Max.	Unit
Supply Voltage	3.0	3.3	3.6	V
RX Supply Current	-	30	-	mA
TX Supply Current(Normal)	-	40	-	mA
TX Supply Current(Continuous)	-	65	-	mA
Sleep Supply Current	-	1	-	mA
Storage Temperature	-20	-	+85	°C

■Power Consumption

BT-Class 2

Mode	Avg.
Standby	1mA
Transmit	40mA
Receive	30mA

■Operating Conditions

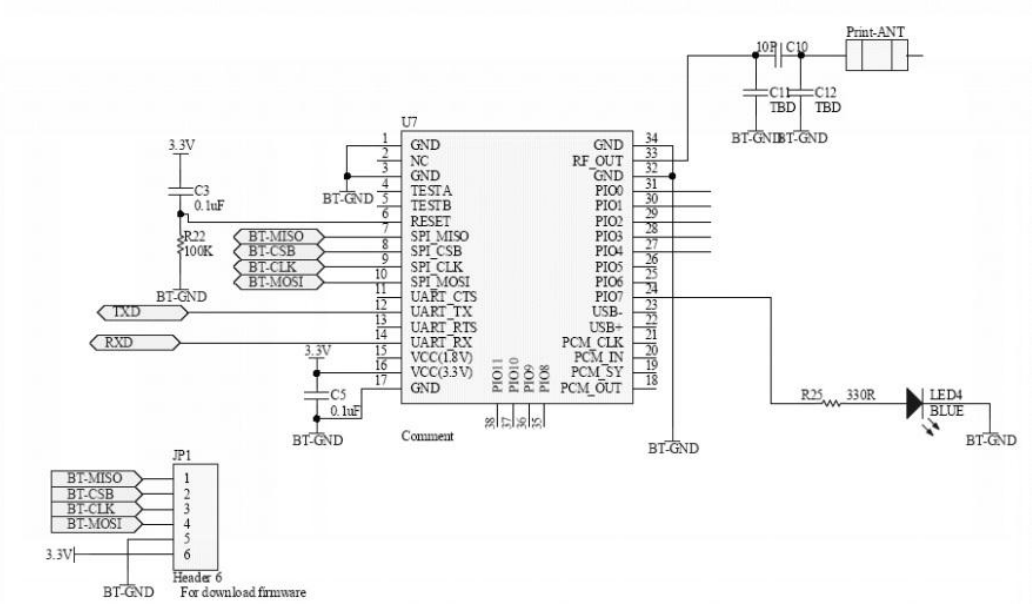
Voltage Range	3.3V±0.3V
Operating Temperature Range	-20 °C ~ 60 °C
Storage Temperature Range	-20 °C ~ 80 °C
Relative Humidity (Operating)	≤90%
Relative Humidity (Storage)	≤90%

1.5 Radio Characteristics

■ BT- Class2 BT2.0 Module

	Frequency (GHz)	Min	Typ	Max	BT Spec.	Unit
Sensitivity at 0.1%BER	2.402	-	-80	-86	≤ −70	dBm
	2.441	-	-80	-86		dBm
	2.480	-	-80	-86		dBm
RF Transmit Power	2.402	-	0	-	≤0	dBm
	2.441	-	0	-		dBm
	2.480	-	0	-		dBm
Initial Carrier Frequency Tolerance	2.402	-	5	75	75	kHz
	2.441	-	5	75		kHz
	2.480	-	5	75		kHz
20dB bandwidth for modulated carrier		-	900	1000	≤ 1000	kHz
Drift (Five slots packet)		-	15	-	40	kHz
Drift Rate		-	13	-	20	kHz
$\Delta f1_{avg}$ "Maximum Modulation"	2.402GHz	140	165	175	$140 < \Delta f1_{avg}$	kHz
	2.441GHz	140	165	175		kHz
	2.480GHz	140	165	175		kHz
$\Delta f2_{max}$ "Minimum Modulation"	2.402GHz	115	190	-	115	kHz
	2.441GHz	115	190	-		kHz
	2.480GHz	115	190	-		kHz

Reference Schematics



2. Software / Profile

2.1 MB-C04-SPP Software function

Stack / Profile	BT-Class2 (Class2 BT2.0 Module)
SPP	■

a. Pairing mode

Power on the module and MB-C04-SPP will be stay in pairing mode

b. Connection

Turn on Bluetooth function/Software in master device(like PC with BT dongle) and make a search for Bluetooth device. When master device found Bluetooth device named “SPP”, make Bluetooth connection with SPP with pin code “0000”. MB-C04-SPP will automatically response itself and established the connection.

c. Data Transmission / Receiving

When the Connection was established, User can input data to UART_RX. MB-C04-SPP will send data out via UART_RX to Master device.

User can get the data sent from Master device as well from UART_RX.

d. AT command

MB-C04-SPP will not response to any AT command send from user. If there is a specified function to implement, we can accept OEM custom f/w.

2.2 MB-C04-AT Software function

a. AT command

MB-C04-AT will act only when you send AT command. You can find the detailed command list in “MBC04 AT command” document.

3. Packing & Label Information

3.1 Label Information

■ PCB Label

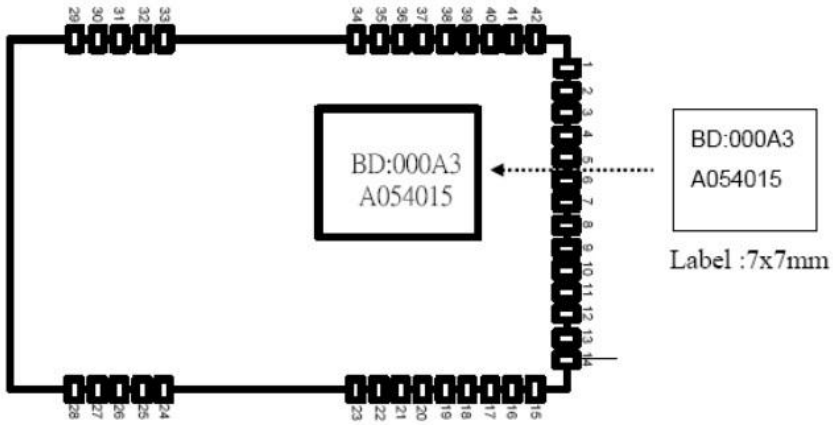


Fig 3.1.1 Class2 BT2.0 Module **PCBA Label**

4. Standard Setup Information

	Parameter		Value
1	Part number		MB-C04-SPP
2	Baud Rate		9600
3	Pin Code Prompt		“0000”
4	Local Name		SPP
5	LED PIN24(PIO 7)	Power on	Flash 26 times[ON time frame: 80ms, OFF time frame: 140ms]
		Connect	Flash with ON one time within 1 second,[ON time frame: 35ms]
		Disconnected	Flash with ON one time within 3 seconds,[ON time frame：35ms]