Functional Description 25/Apr/2001

MITSUMI
Bluetooth Module " WML-C06##"

Hardware: Version 1

Ultra-small and thin size achieved through use of high density mounting technology.

1. APPLICATIONS

Notebook PCs, mobile phones, digital cameras, PC peripherals, PDA.

2. DESCRIPTIONS

Wireless communication module conforming to Bluetooth Ver.1.1.

3. FEATURES

1) Ultra-small and thin size achieved through use of high density mounting technology.
2) SMD type can be surface mounted.
3) High sensitivity supports communications of up to 1 0 m.
4) UART, USB and PCMIF interfaces enable wide range of applications.
5) Conforms to FCC, CE and other countries' EMI standards.
6) Supports Bluetooth Class2.

Note) The BLUETOOTH trademarks are owned by Telefonaktiebolaget L M, Ericsson, Sweden.

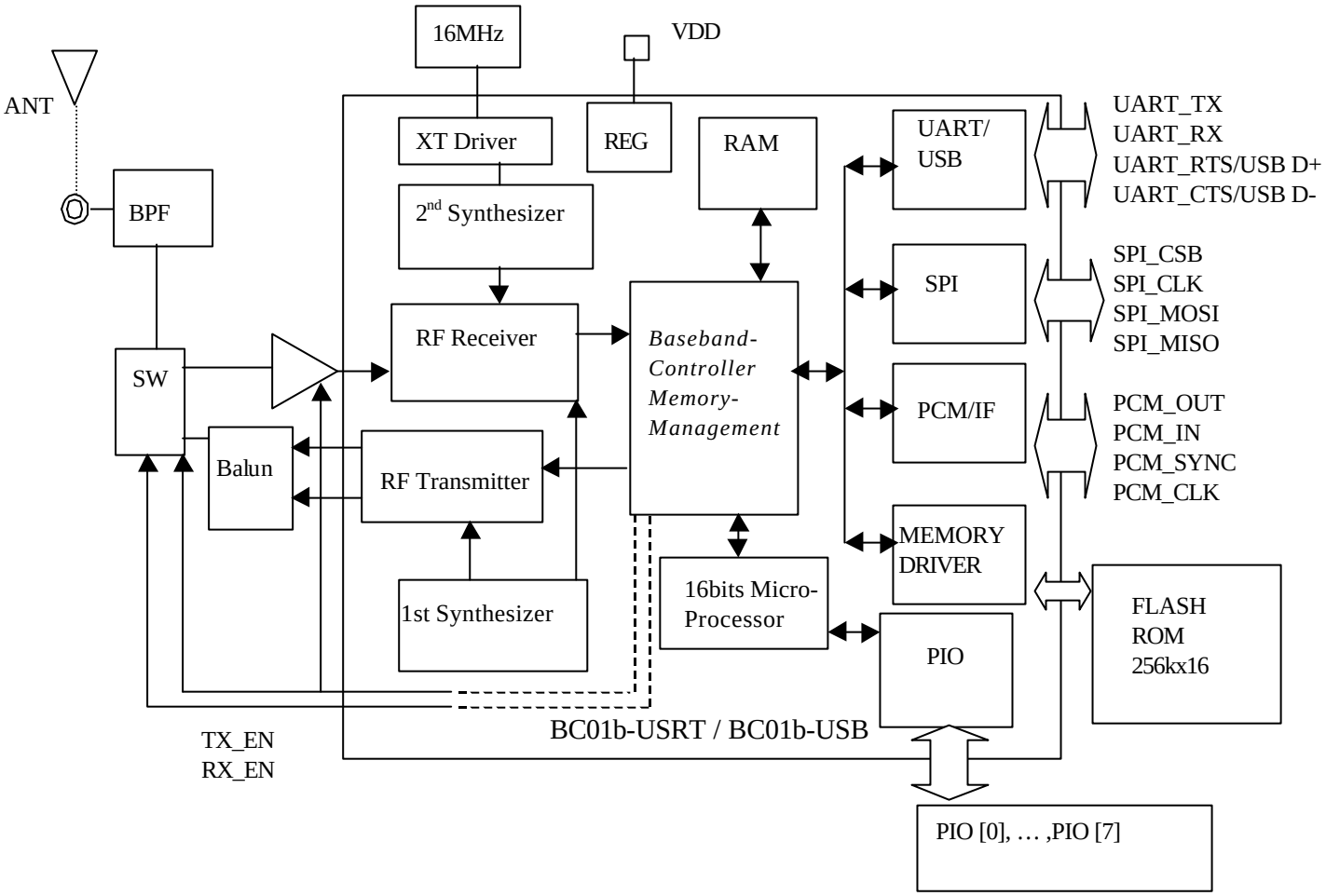
4. SPECIFICATIONS

Item	Specifications
Frequency	2402 to 2480 MHz
Modulation	FHSS / GFSK
Channel intervals	1 MHz
Number of channels	7 9 CH
Power supply voltage	3.0 V (typ.), 2.9 ~ 3.4V
Transmission rate	7 2 1 kbps
Receive sensitivity	-88 dBm typ.
Output level (Class2)	4 dBm max.

5. TERMINAL DESCRIPTION

No.	Symbol	I/O	Description
1	PIO [0] / RXEN	O	Control output for external LNA (=PIO [0])
2	PIO [1] / TXEN	O	Control output for external PA (=PIO [1])
3	GND		Ground
4	GND		Ground
5	PIO [4] / IRQ1	I/O	Programmable I/O line/Interrupt request1
6	PIO [5] / IRQ2	I/O	Programmable I/O line/Interrupt request2
7	PIO [6]	I/O	Programmable I/O line
8	PIO [7]	I/O	Programmable I/O line
9	PCM_OUT	O	Synchronous PCM data out
10	PCM_CLK	I/O	Synchronous PCM data clock
11	PCM_IN	I	Synchronous PCM data input
12	PCM_SYNC	I/O	Synchronous data strobe
13	GND		Ground
14	VDD		Supply voltage 3.0
15	GND		Ground
16	SPI_CSB	I	Chip select for Synchronous Serial Interface
17	SPI_MOSI	I	Synchronous Serial Interface data input
18	SPI_CLK	I	Synchronous Serial Interface Clock
19	SPI_MISO	O	Synchronous Serial Interface data output
20	UART_CTS/USB_D-	I	Asynchronous serial data CTS/USB Data-
21	UART_RTS/USB_D+	O	Asynchronous serial data RTS/USB Data+
22	UART_RX	I	Asynchronous serial data input
23	UART_TX	O	Asynchronous serial data output
24	PIO [3]	I/O	Data line for EEPROM
25	PIO [2]	I	CLOCK for EEPROM
26	RST	I	Not Available
27	GND		Ground
28	ANT	I/O	RF input/output

6. BLOCK DIAGRAM



7. PCM IF

PCM_OUT, PCM_IN, PCM_CLK, PCM_SYNC carry one of bi-directional channel of voice data using 13bits PCM at 8ks/s.

PCM_SYNC operates at a fixed clock frequency of 8kHz.

PCM_CLK operates at a fixed clock frequency of 256kHz.

Bits 1 to 13 of the PCM_OUT data carry the current output sample value.
Bits 14 to 16 carry a three bit signal level value.

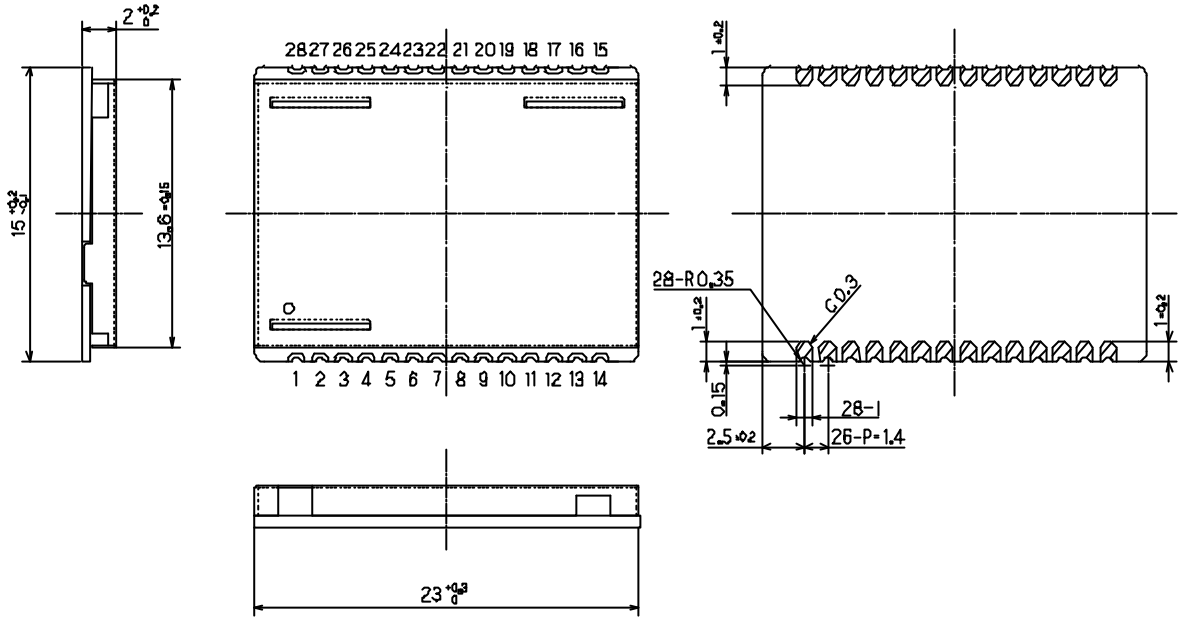
Reference PCM audio device is MC145483.

8. PIO PORT

The PIO port is general purpose IO interface and the ports consists of 8 programmable, Bi-directional PIO [0:7]. The maximum current drive capability is 4mA.
PIO [0], PIO [1] are recommended to be open if they are not used.

9. OVERALL APPEARANCE

Module without antenna WML-C06N#



Module with antenna WML-C06A#