

Movon Bluetooth Module Application Note

Module Feature

- Bluetooth® 2.0 Spec Copliant
- Bluetooth® Class2 and Class3 Support
- Full Bluetooth data rate over UART and USB
- Internal Stereo Audio CODEC

Features

- Size(12.5 X 14.2 X 2.2mm)
- Class2 and 3 Support
- Surface Mountable
- Single 2.8 ~3.3V Power Supply (MD-10MMXX33)

Specification

-Operating Conditions

Support Voltage : 1.70V~1.85V

Temperature Range : -20~+70°C (-40~+90C available)

-Radio Characteristics

Receiver Sensitivity : -82dBm

Transmitter Power : +2.0dBm(Typical)

-Audio Interface Characteristics

Input full scale at maximum gain : 4mV rms

Input full scale at minimum gain : 400mV rm

Max Output Voltage : 2.0 Vpk-pk

Power Consumption

- Stand by Mode : 1mA
- Pairing Mode : 30mA
- (Mono)Talking Mode : 30mA
- (Stereo)Playing Mode : 40mA

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MD-10MM Rev 1.0 Pin Description

| Pin No. | Pin Name | Description | Pad Type |
|---------|------------|--|-----------------------|
| 1 | GN D | Common Ground | VSS |
| 2 | ANT | Connect to Antenna(for RF Signal) | Analogue |
| 3 | GN D | Common Ground | VSS |
| 4 | AUD_OUT_RP | Speaker output positive (Right channel) | Analogue |
| 5 | AUD_OUT_RN | Speaker output negative (Right channel) | Analogue |
| 6 | AUD_OUT_LP | Speaker output positive (Left channel) | Analogue |
| 7 | AUD_OUT_LN | Speaker output negative (Left channel) | Analogue |
| 8 | AUD_IN_LN | Microphone & Audio Signal input negative(Left channel) | Analogue |
| 9 | AUD_IN_LP | Microphone & Audio Signal input positive(Left channel) | Analogue |
| 10 | AUD_IN_RP | Microphone & Audio Signal input positive (Right channel) | Analogue |
| 11 | AUD_IN_RN | Microphone & Audio Signal input negative(Right channel) | Analogue |
| 12 | AIO_0 | Programmable input/output line | Bi-directional |
| 13 | GN D | Common Ground | VSS |
| 14 | AIO_1 | Programmable input/output line | Bi-directional |
| 15 | AIO_3 | Programmable input/output line | Bi-directional |
| 16 | PIO_6 | Programmable input/output line | Bi-directional |
| 17 | PIO_7 | Programmable input/output line | Bi-directional |
| 18 | PIO_5 | Programmable input/output line | Bi-directional |
| 19 | PIO_4 | Programmable input/output line | Bi-directional |
| 20 | USB_DN | USB data minus | Bi-directional |
| 21 | USB_DP | USB data plus | Bi-directional |
| 22 | VDD_IN | Module power supply | VDD |
| 23 | GN D | Common Ground | VSS |
| 24 | UART_RTS | UART request to send active low | CMOS output Tri-state |
| 25 | UART_CTS | UART clear to send active low | CMOS input |
| 26 | UART_TX | UART data output | CMOS output Tri-state |
| 27 | UART_RX | UART data input | CMOS input |
| 28 | PCM_IN | Pulse Code Modulation Synchronous data input | CMOS input |
| 29 | PCM_CLK | Pulse Code Modulation Synchronous data clock | Bi-directional |
| 30 | PCM_SYNC | Pulse Code Modulation Synchronous data sync | Bi-directional |
| 31 | PCM_OUT | Pulse Code Modulation Synchronous data output | CMOS output Tri-state |
| 32 | RESET_IN | Module reset input. Reset if high>5ms to cause a reset | CMOS input |
| 33 | SPI_MOSI | Serial Peripheral Interface data input | CMOS input |

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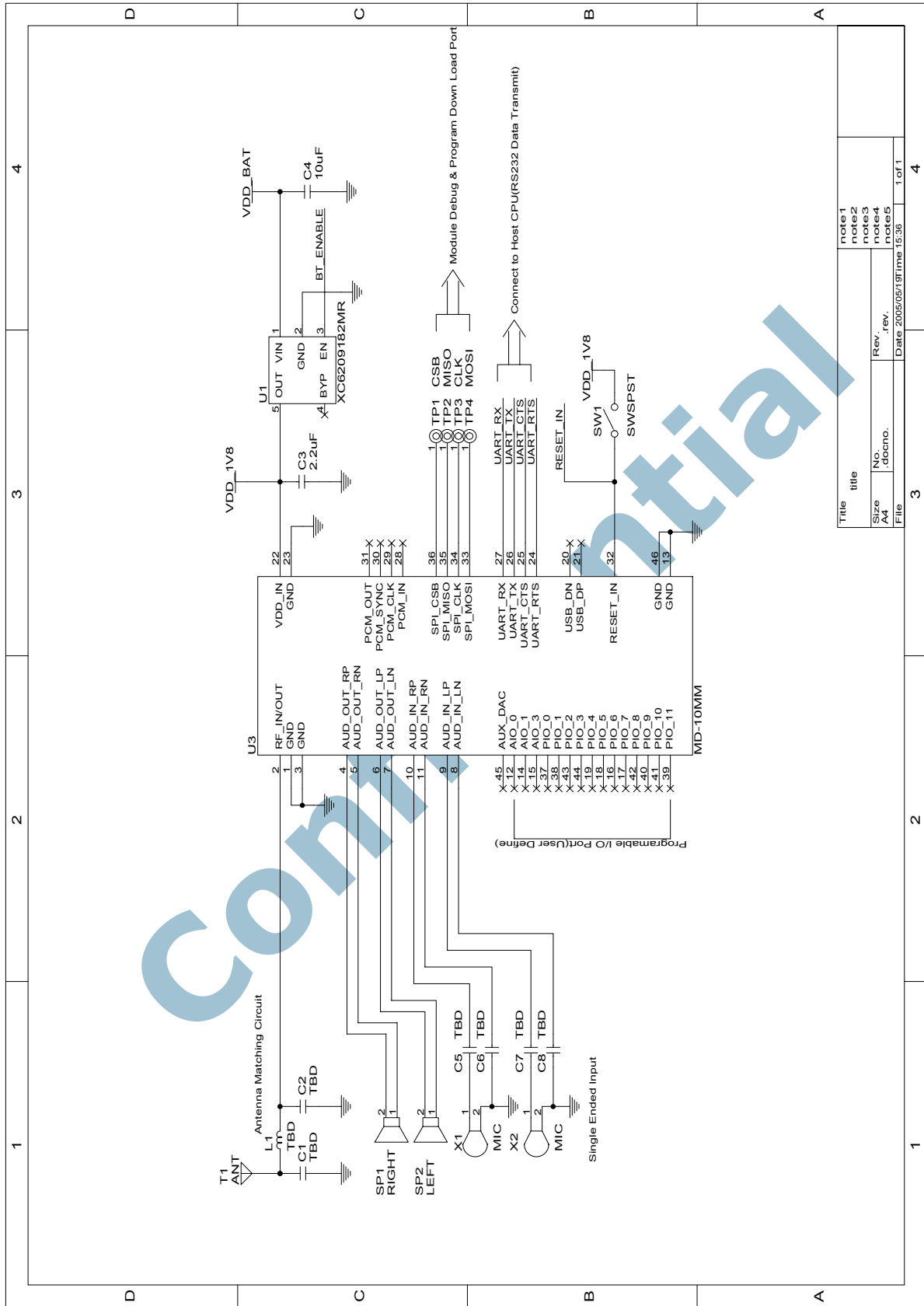
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| | | | |
|----|----------|---|-----------------------|
| 34 | SPI_CLK | Serial Peripheral Interface data clock | CMOS input |
| 35 | SPI_MISO | Serial Peripheral Interface data output | CMOS output Tri-state |
| 36 | SPI_CSB | Chip select for Synchronous Serial Interface active low | CMOS input |
| 37 | PIO_0 | Programmable input/output line | Bi-directional |
| 38 | PIO_1 | Programmable input/output line | Bi-directional |
| 39 | PIO_11 | Programmable input/output line | Bi-directional |
| 40 | PIO_9 | Programmable input/output line | Bi-directional |
| 41 | PIO_10 | Programmable input/output line | Bi-directional |
| 42 | PIO_8 | Programmable input/output line | Bi-directional |
| 43 | PIO_2 | Programmable input/output line | Bi-directional |
| 44 | PIO_3 | Programmable input/output line | Bi-directional |
| 45 | AUX_DAC | Voltage DAC output | Analogue |
| 46 | GND | Common Ground | VSS |

Confidential

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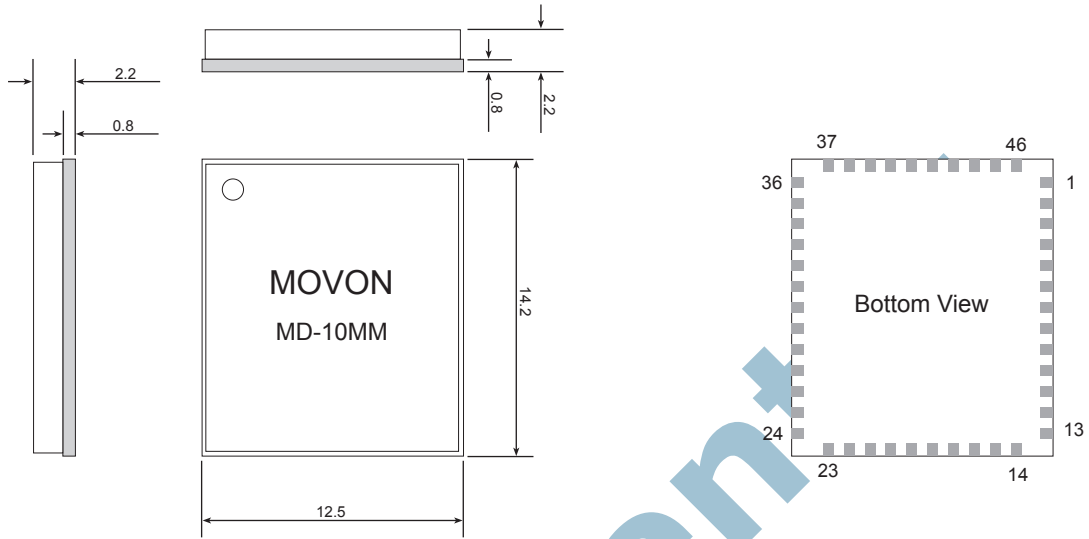
Example Schematic Circuit



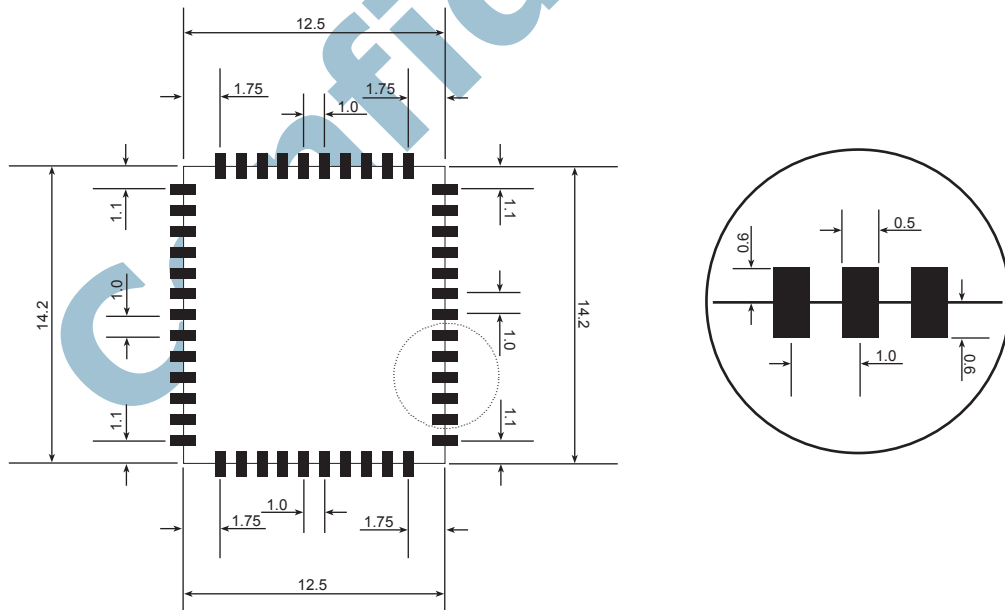
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| Part No. | rev | note3 | |
| File | Date 2005/05/19/Time 15:38 | note4 | |
| | | note5 | 1 of 1 |

Size & Dimensions

-Unit : mm(+/-0.1)



Module Size & Pin Number



PCB Layout(Top View)

