

*JSW*

# Data Sheet

CUSTOMER \_\_\_\_\_

PRODUCT : 2.4GHz Wireless digital  
Transceiver Module

MODEL NO. RFB02

DATE: 2011-11-4

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<b>Rev. NO.</b>	<b>History</b>	<b>Issue Date</b>	<b>Remark</b>
<b>0.0</b>			
<b>0.1</b>			
<b>0.2</b>			
<b>0.3</b>			

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## 1. General Description

The MD7121 module is designed for 2.4GHZ ISM band with 17dBm output power wireless applications using AMICCOM's A7121 FSK/GFSK transceiver and A7700 RF Front End IC, This module features a fully programmable frequency synthesizer by SPI, The data rata is 1Mbps and 3Mbps.

## 2. Electrical speification

Item	Specification	Remark
Supply voltage	3.3V+/-0.1(V)	
Current consumption	15uA@Sleep mode (Sleep current includes power consumption of LDO) <u>1.5mA@Stand-by</u> mode 11ma@Synthesizer Mode 130mA@Tx power =17dBm 36mA@ Rx mode	typical
Frequency	<b>2408.625~2474.875</b> MHz	ISM band
Tranmit output power	17dBm@Maximum Power Setting* <sup>1</sup>	typical
Rx sensitivity	-93dBm(typical)@ 1M mode,Dev=250KHZ -88dBm(typical)@3M mode,Dev=750KHZ	BER ≤ 1E-3, FSK/GFSK
Modulation	FSK/GFSK	
Interface	20 pin1.27mm header	
PCB Dimension	29(L)*29(W)*0.8(H)mm <sup>3</sup> without antenna	
Operating temperature	0~50°C	

## 3. Interface

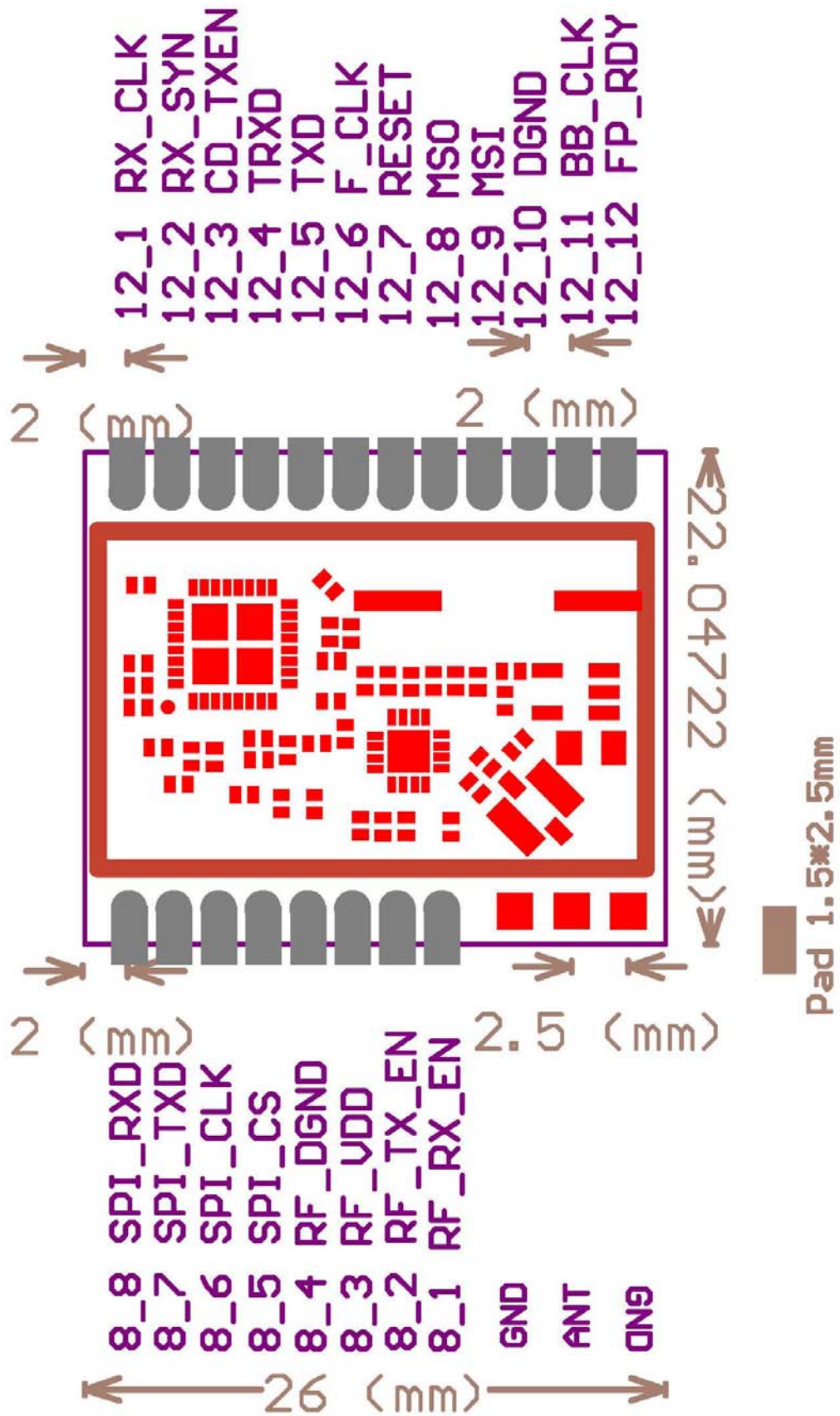
Pin NO.	Pin name	Comment	Note
1	SPI_CS	SPI chip select	
2	SPI_CLK	SPI clock	
3	SPI_RXD	SPI data input	

4	SPI_TXD	SPI data output	
5	SPI_CLK	RX data sampling clock output	
6	SPI_SYN	RX sync signal output	
7	SPI_TXEN	TX mode:Modulation enable RX mode:Carrier detector	
8	TRXD	Input:TX data input Output:RX data output	
9	TXD	TX data input	
10	F_CLK	Clock for FIFO data	
11	RESETN	Chip reset	
12	MS0	Transceiver operation mode selection input	
13	MS1	Transceiver operation mode selection input	
14	BB_CLK	Clock output	
15	VIN	RF module supply voltage input	
16	GND	GND	
17	FP_RDY	Multi-function pin of FIFO packet R/W Complete or ready signal	
18	GND	GND	
19	TXSW	RF front end PA/LNA select	
20	RXSW	RF front end PA/LNA select	

#### 4. PA&LNA control state

Control function	RX ON	TX ON	TRX OFF	Inhibit
TXSW	1	0	1	0
RXSW	0	0	1	0

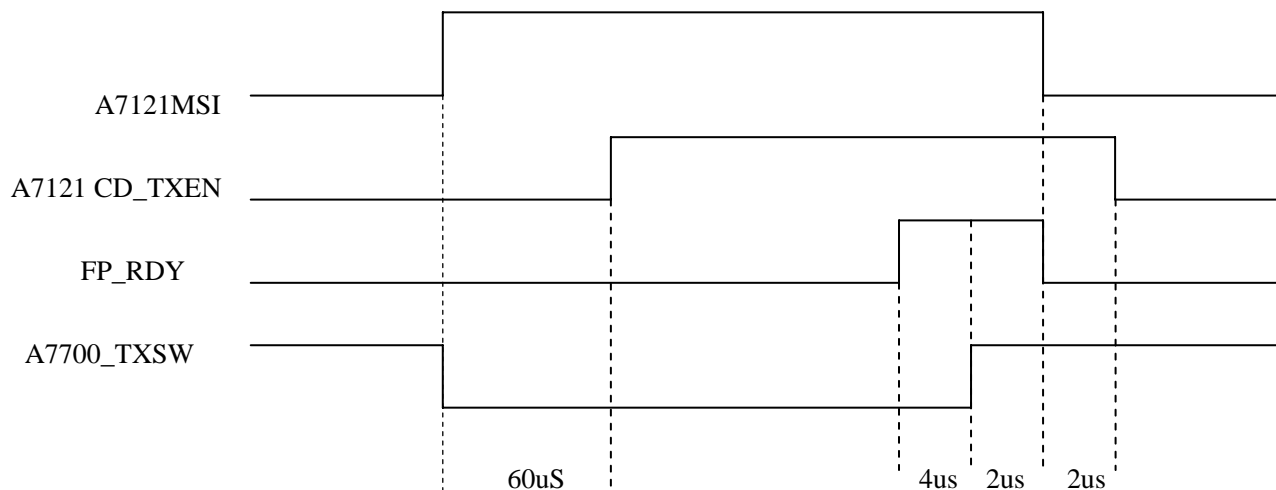
#### 5. Pin Configuration and Mechanical Information



6. Timing Control for passing CE/FCC:

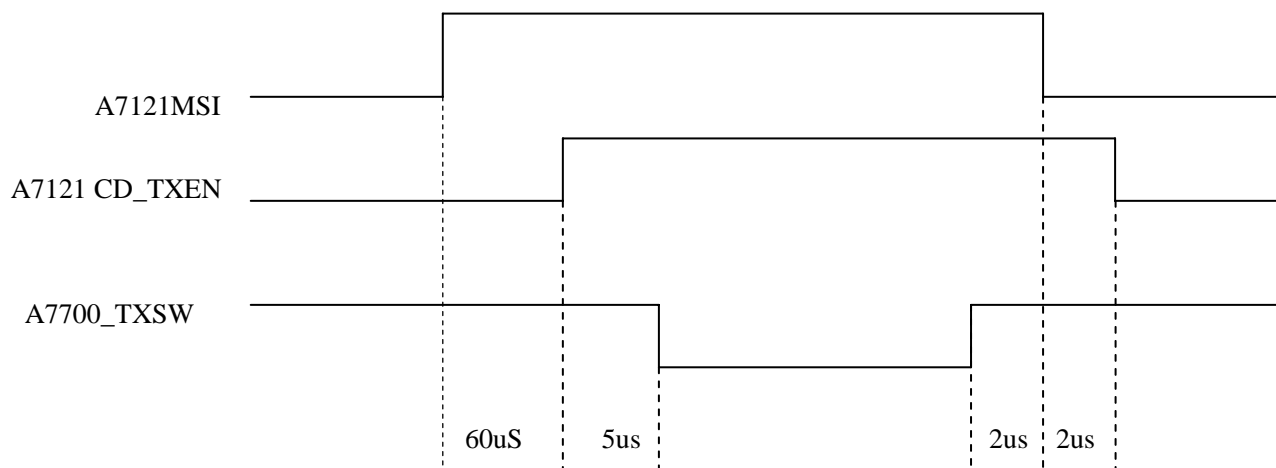
**(1) FOR FIFO mode operation:**

If customers use FIFO Mode, the max. output power of MD7172-F07 should be set to 15dBm in order to pass CE/FCC



**(2) FOR FIFO mode operation:**

For passing CE/FCC regulation, customers can use the timing control below and set the output power to 17dBm.



FCC NOTE:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operated in conjunction with any other antenna or transmitter.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

Note: This equipment contains module , FCC ID LE2RFB02, which qualifies as an UNLICENSED MODULAR TRANSMITTER per FCC Public Notice DA 00-1407. It has been tested and found to comply with Part 15.247 of the FCC Rules. This module has been designed for use by the JSW Pacific Corp.

Required labeling. Any device incorporating this module must include an external, visible, permanent marking or label which states: "Contains FCC ID: LE2RFB02." Failure to comply with this requirement will void the user's authority to operate any device that incorporates this module.

This equipment complies with FCC radiation exposure limits set forth for uncontrolled equipment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65.

This equipment has very low levels of RF energy that it is deemed to comply without testing of specific absorption ratio(SAR).