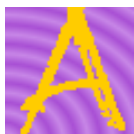# A7121 module specification

MD7121_A05

Important Notice:

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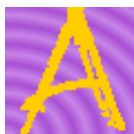
General Description

The MD7121_A05 module is designed for 2.4GHz ISM band wireless applications using AMIC-COM A121 GFSK transceiver. This module features a fully programmable frequency synthesizer by SPI. The data rate is 1Mbps or 3Mbps.
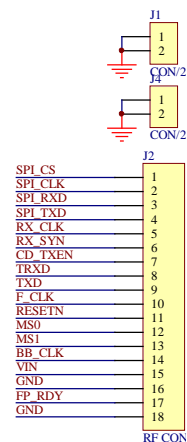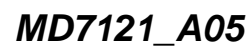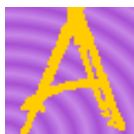
Electrical specification

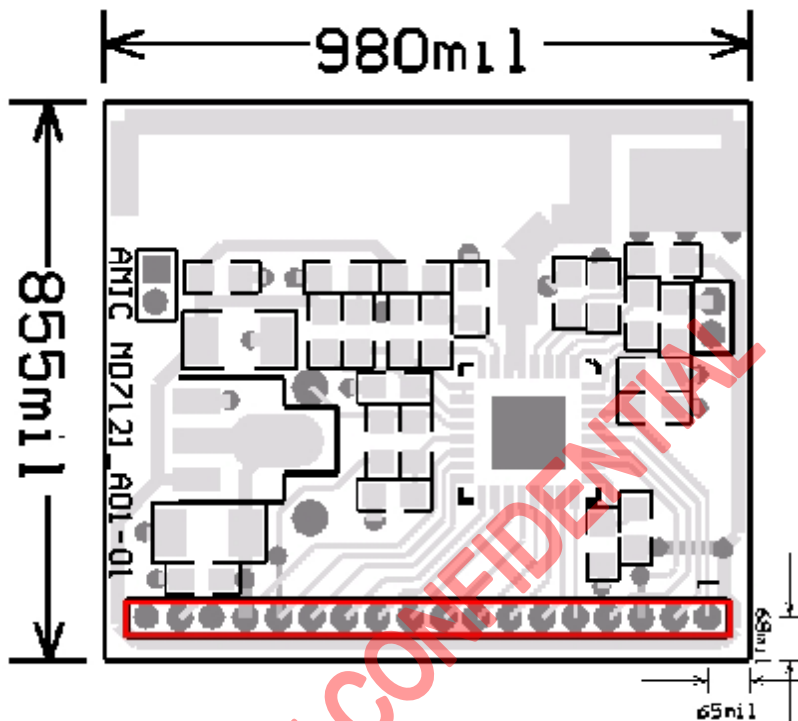| Item	Specification	Remark
Supply voltage	2.7V~7V	
Current consumption	2uA (typical) @Sleep mode 1.5mA (typical) @Stand-by mode 10mA (typical) @Synthesizer Mode 34mA (typical) @Tx power = 0dBm 24mA (typical) @Tx mode = -6dBm 28mA (typical) @Rx mode	
Frequency	2400 – 2483.5 MHz	ISM band
Transmit output power	0 ± 2 dBm @ Maximum Power Setting	
Rx sensitivity	-85 dBm (typical) @ 1M mode, Dev = 250 k -80 dBm (typical) @ 3M mode, Dev = 750 k	BER$\leqq$1E-3
Modulation	GFSK	
Transmission distance	10~20 meters (typical)	
Interface	18 pin 1.27mm header	
Dimension	24.89(L) x 21.72(W) x 0.8(H) mm^3 with antenna 24.89(L) x 16.77(W) x 0.8(H) mm^3 w/o antenna	
Operating temperature	-20 ~ 85 ℃	

Interface

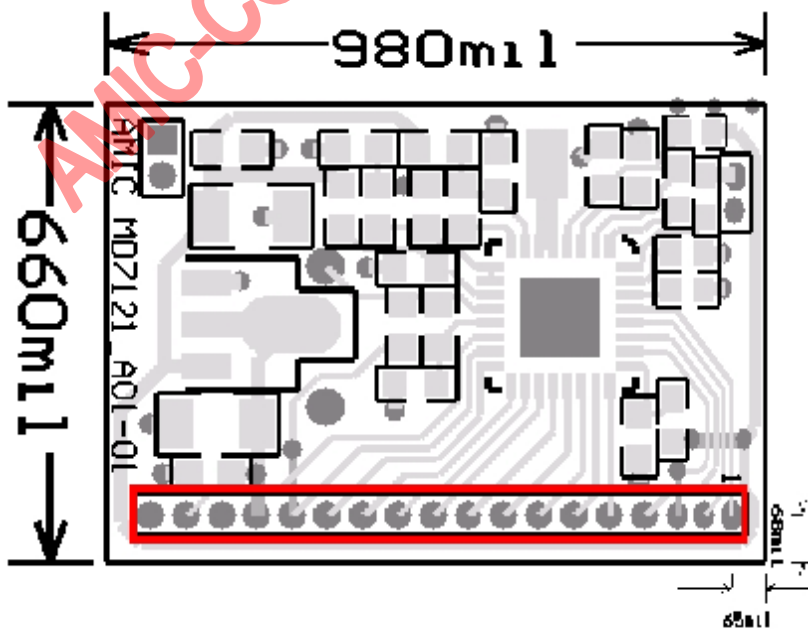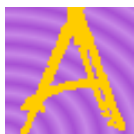| Pin No.	Pin name	Comment	Note
1	SPI_CS	SPI chip select	
2	SPI_CLK	SPI clock	
3	SPI_RXD	SPI data input	
4	SPI_TXD	SPI data output	
5	RX_CLK	RX data sampling clock output	
6	RX_SYN	RX sync signal output	
7	CD_TXEN	TX mode: Modulation enable Rx mode: Carrier detector	
8	TRXD	Input: TX data input Output: 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	

Application circuit

Module dimension drawings

With Antenna

Without Antenna

Module photograph