

A8106 4dBm module specification

CM2401PA05

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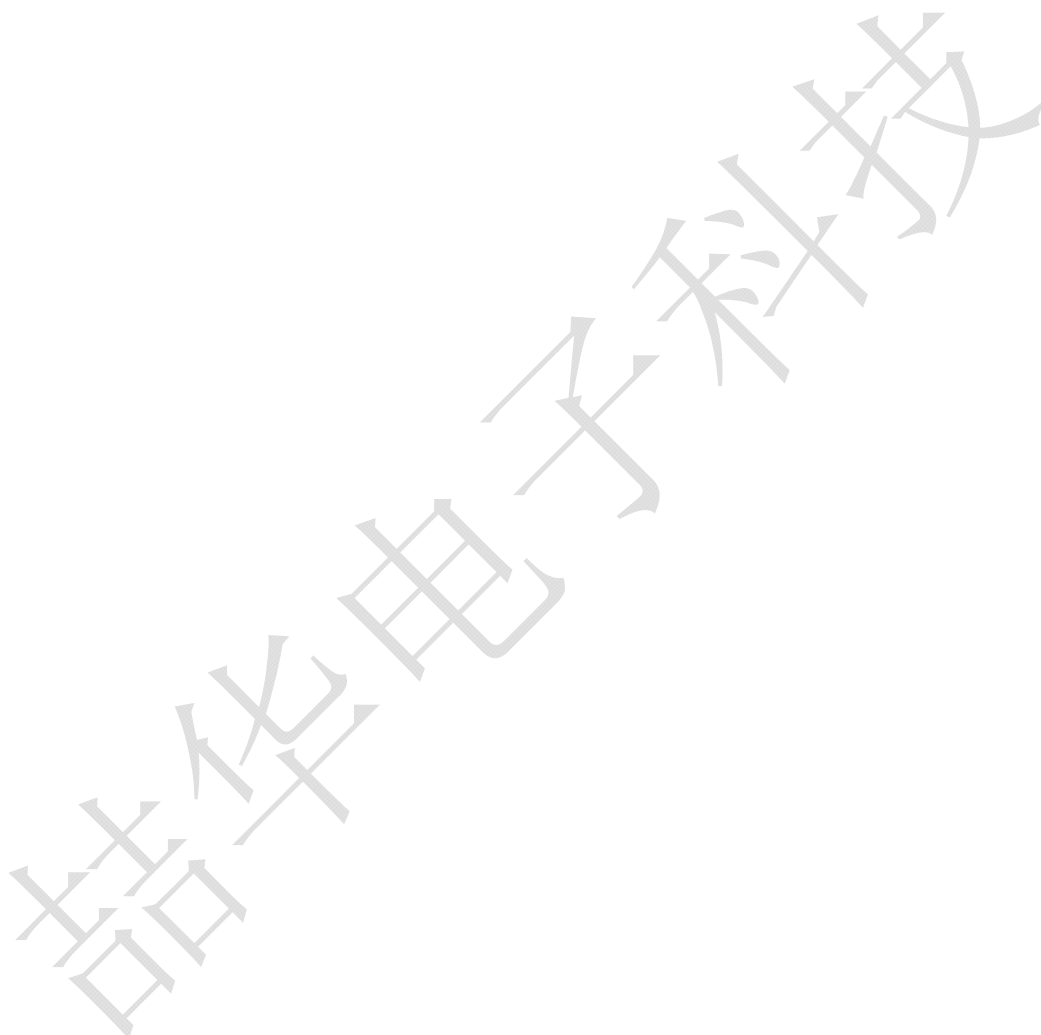
Revision History

Rev. No.	History	Issue Date	Remark
1.0	Initial issue CM2401PA05	October-2015	Preliminary



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1.General Description

The CM2401PA05 module is a high performance and low cost 2.4GHz FSK/GFSK system-on-chip(SOC)wireless transceiver. With on chip fraction-N synthesizer, it can support the application of data rate from 4Kbps to 500Kbps and frequency hopping system.This device integrates high speed pipeline 8051 MCU,16Kbytes In-system programmable flash memory or 8Kbytes OTP (One Time Programmable) memory, 2KB SRAM,various powerful functions and excellent performance of a leading 2.4GHZ FSK/GFSK RF transceiver. It can be operated with wide voltage from 2.0V ~ 3.6V.A8106 has various operating modes,making it highly suited for systems where ultra-low power consumption is required. The device is in QFN5X5 40 pin package. Beside, A8106 has two memory types.One is 16Kbytes flash memory (A8106F4) and the other is 8Kbytes OTP memory(A8106T3).

2. Electrical specification

Item	Specification	Remark
Supply voltage	2.0V~3.6V	
Current consumption	0.8uA @PM3 without Sleep timer 3.8mA @Stand by mode 10mA @PLL mode 16mA @Rx mode 24mA @Tx mode (Pout = 4dBm)	typical
Frequency	2402 – 2480 MHz	ISM band
Transmit output power	4dBm @ room temperature	Typical <u>Annotation1</u>
Rx sensitivity	99 dBm (typical) @ 500Kbps mode	Typical, BER 1E 3,
Modulation	GFSK	
Interface	19 pin 1.27mm header	
PCB Dimension	15.5(L) x 13.5(W)mm2 without PCB antenna	
Operating temperature	20 ~ 70	

Annotation1:

1. Tx output power = 4dBm,

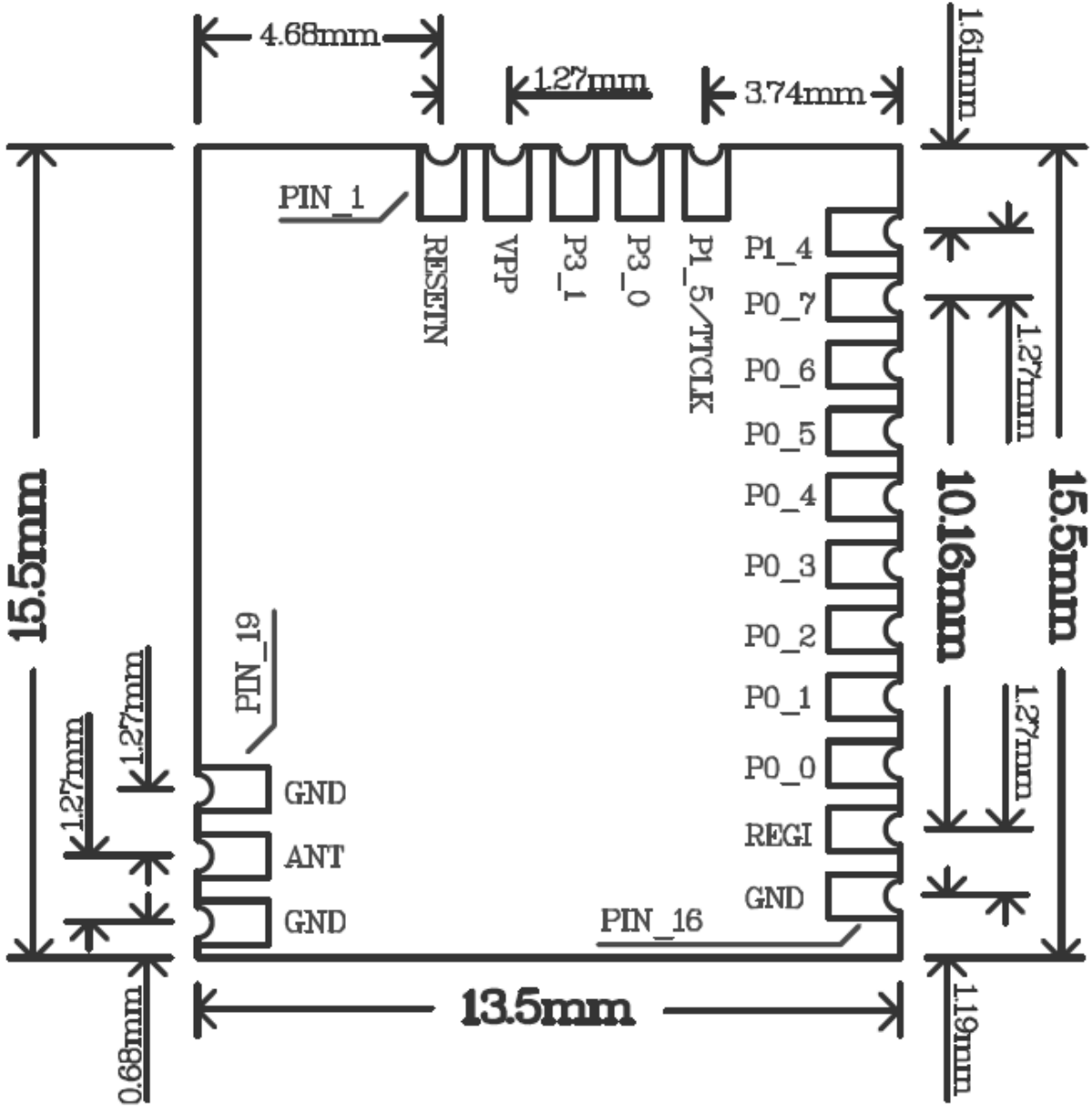
Register: [0827] Tx test(TBG :7, PAC :3, TXCS:High Current) value:0X3F.

2. Tx output power can be set by Register: [0827] Tx test

3.Interface

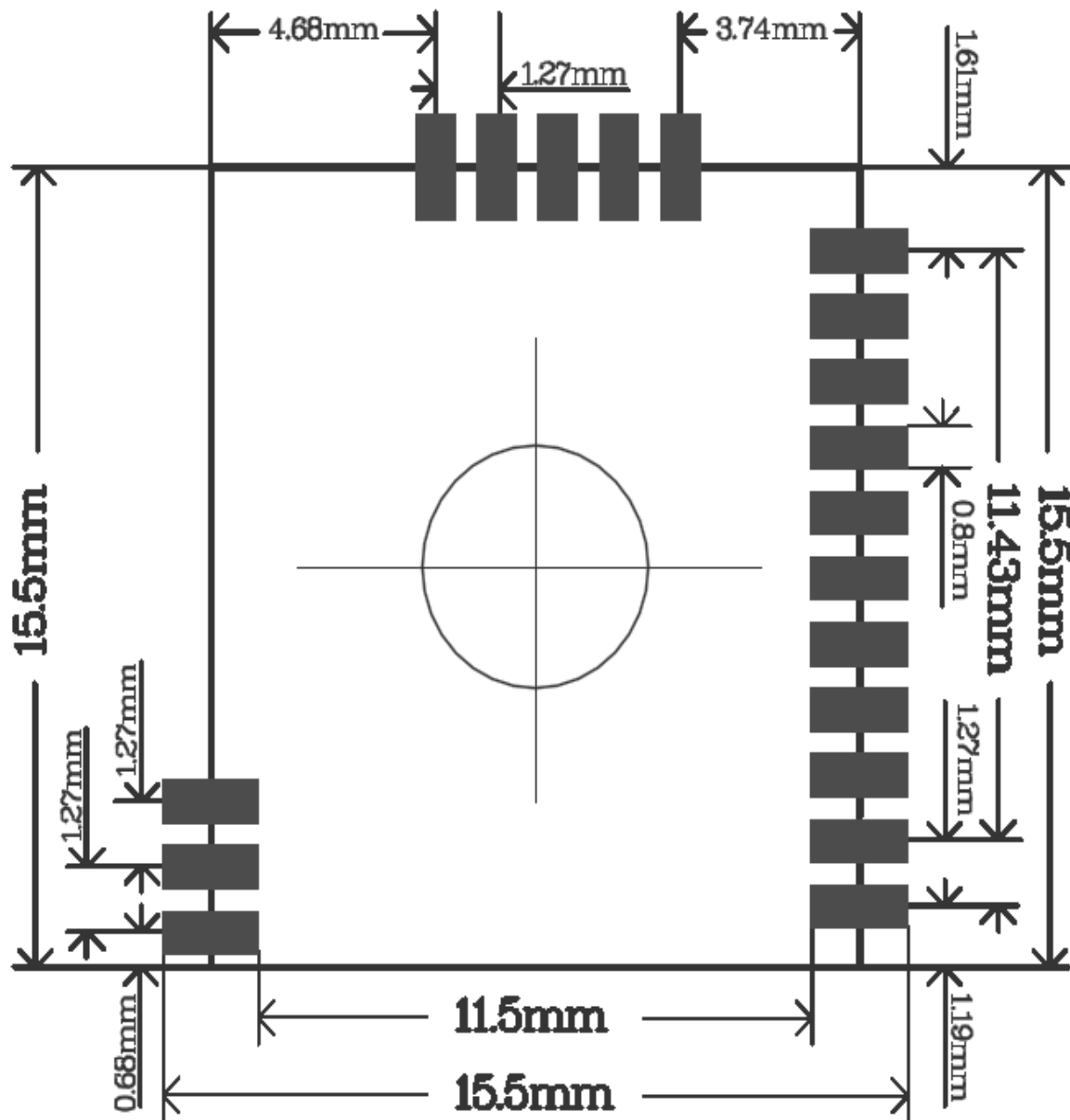
Pin No.	Symbol	Function Description	Remark
1	RESETN	RESETN	
2	VPP	High voltage pin used for OTP ROM program	
3	P3_1	UART0_TX/ADC7	
4	P3_0	UART0_RX/ADC6	
5	P1_5	TTAG_TTCLK	
6	P1_4	TTAG_TTDIO	
7	P0_7	INT2/GIO1	
8	P0_6	12C_SDA	
9	P0_5	12C_SCL	
10	P0_4	GPIO/ICE mode	
11	P0_3	SPI_SSEL/RT0	
12	P0_2	SPI_MISO/RS0	
13	P0_1	SPI_MOSI/CS0	
14	P0_0	SPI_SCLK/IN0	
15	REG1	RF Module supply voltage supply input	2.0V 3.6V
16	GND	Ground	
17	GND	Ground	
18	RF	RF	
19	GND	Ground	

4. Module packaging information



TOP View

5.Circuit Board size



(Vertical view)