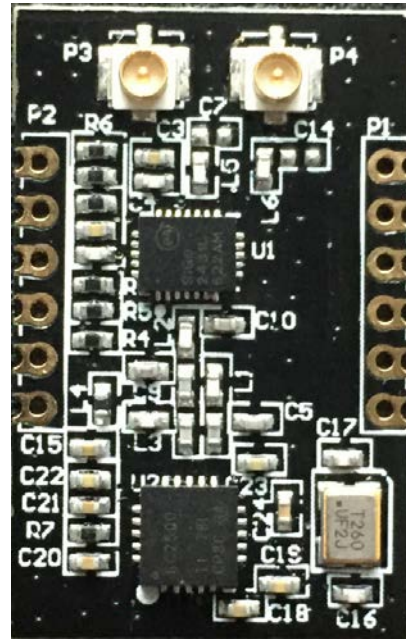




CC2500PATR2.4SK

带 PA 和 LNA 的 2.4G 双天线无线模块



一般描述

CC2500PATR2.4SK是集FSK/ASK/OOK/MSK.调制方式于一体的收发模块。它提供扩展硬件支持实现信息包处理、数据缓冲、群发射、空闲信道评估、链接质量指示和无线电波唤醒，可以采用曼彻斯特编码进行调制解调它的数据流。性能优越并且易于应用到你的产品设计中，它可以应用于2400-2483.5MHz ISM/SRD频段的系统，消费类电子产品、无线游戏控制器、无线音频传输和 其他的无线系统中。

Features

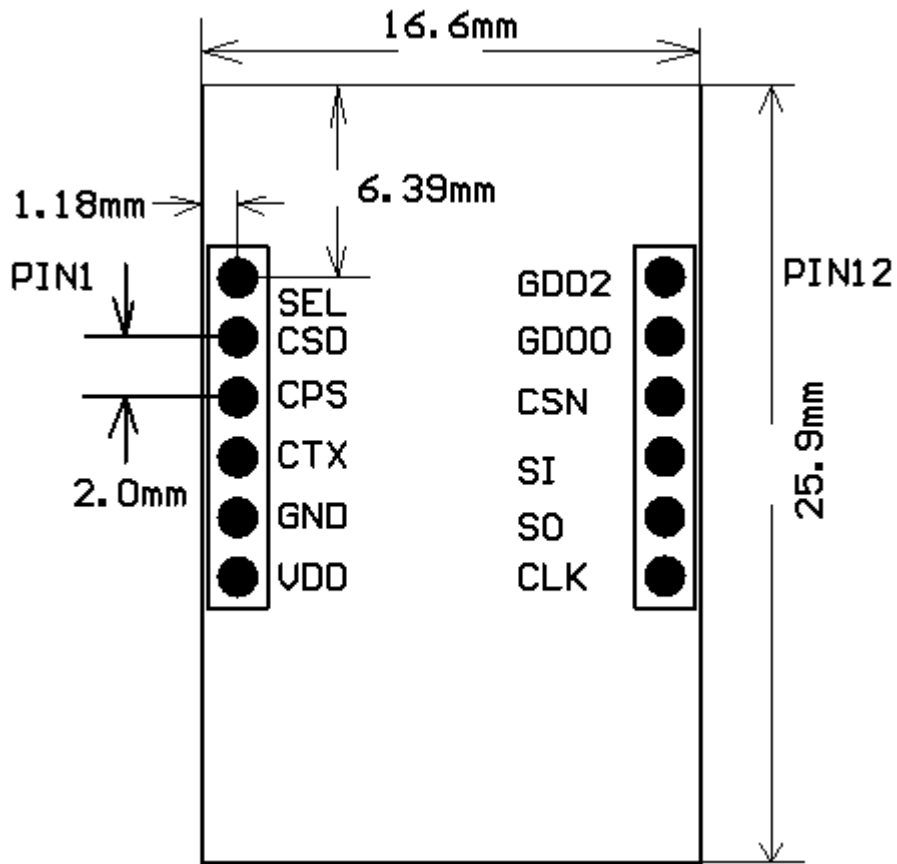
Low current consumption.
Easy for application.
Efficient SPI interface
Operating temperature range
Operating voltage
Available frequency at
Programmable output power and hi sensitivity

基本特征

- 低电流损耗
- 方便投入应用
- 高效的串行编程接口
- 工作温度范围： - 40℃~+85℃
- 工作电压： 1.8~ 3.6 Volts.
- 有效频率： 2.4-2.483GHz
- 灵敏度高、输出功率可编程



尺寸描述





管脚描述

Pin No	Pin Name	Pin Type	Description
1	SEL	ANT control	Antenna switch
2	CSD	PA/LNA control	Control the SE2431L modes
3	CPS	PA/LNA control	Control the SE2431L modes
4	CTX	PA/LNA control	Control the SE2431L modes
5	GND	Ground	Ground
6	VDD	Power	1.8V-3.6V power
7	CLK	Digital Input	Serial configuration interface, clock input
8	SO	Digital Output	Serial configuration interface, data output.
9	SI	Digital Input	Serial configuration interface, data input
10	CSN	Digital Input	Serial configuration interface, chip select
11	GDO0	Digital Output	Digital output pin for general use
12	GDO2	Digital Output	Digital output pin for general use

PA/LNA (SE2341L) 控制逻辑

Mode	Description	CPS	CSD	CTX	ANT_SEL
0	All off (sleep mode) (Note 2)	0	0	0	X
1	Rx or Tx bypass mode	0	1	0	X
2	Rx LNA mode	1	1	0	X
3	Tx mode	X	1	1	X
	ANT1 port enabled	X	1	X	0
	ANT2 port enabled	X	1	X	1



电气特性

Tc = 25℃, VDD = 3.0V

Parameter	Min	Typ	Max	Unit	Condition
Current consumption, 消耗电流		150		mA	Transmit mode, +20dBm output power

接收部分

Tc = 25℃, VDD = 3.0V

Parameter	Min	Typ	Max	Unit	Condition/Note
Receiver sensitivity 接收灵敏度		-112		dBm	2-FSK, 2.4kbps, 38kHz deviation, 1% packet error rate, 20 bytes packet length, 203 kHz digital channel filter bandwidth
		-105		dBm	10 kbps data rate, FSK, 1% packet error rate, 20 bytes packet length, 232 kHz digital channel filter bandwidth
		-95		dBm	250kbps, MSK, 1% packet error rate, 20 bytes packet length, 540 kHz digital channel filter bandwidth
		-89		dBm	500kbps, MSK, 1% packet error rate, 20 bytes packet length, 812 kHz digital channel filter bandwidth
Saturation 输入饱和度		-13		dBm	
Digital channel filter bandwidth 数字通道滤波器带宽	58		650	kHz	User programmable. The bandwidth limits are proportional to crystal frequency (given values assume a 26.0MHz crystal).

发射部分

Tc = 25℃, VDD = 3.0V

Parameter	Min	Typ	Max	Unit	Condition/Note
Differential load impedance 差分负载阻抗		80 + j74		Ω	Differential impedance as seen from the RF-port (RF_P and RF_N) towards the antenna. Follow the CC2500EM reference design available from the TI and Chipcon websites.
Output power, highest setting 最大输出功率		18.5	22	dBm	Output power is programmable, and full range is available in all frequency bands. Delivered to a 50Ω single-ended load via Chipcon reference RF matching network.