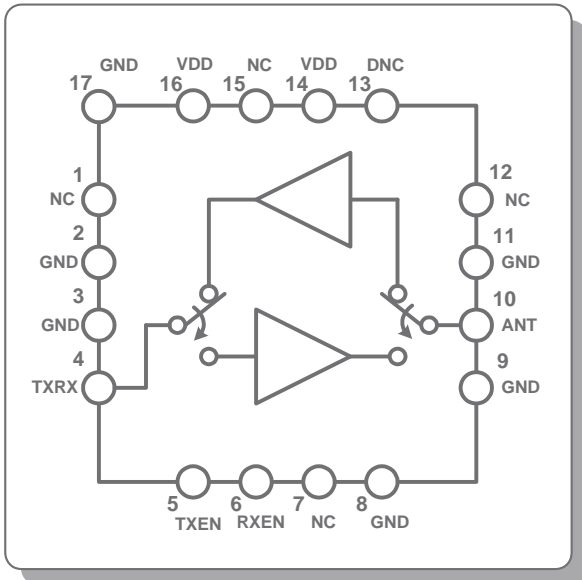


CMOS 2.4GHZ ZIGBEE/ISM TRANSMIT/RECEIVE RFeIC



Description

The RFX2401C is a fully integrated, single-chip, single-die RFeIC (RF Front-end Integrated Circuit) which incorporates all the RF functionality needed for IEEE 802.15.4/ZigBee, wireless sensor network, and any other wireless systems in the 2.4GHz ISM band. The RFX2401C architecture integrates the PA, LNA, Transmit and Receive switching circuitry, the associated matching network, and the harmonic filter all in a CMOS single-chip device.

Typical high power applications include home and industrial automation, smart power, and RF4CE among others. Combining superior performance, high sensitivity and efficiency, low noise, small form factor, and low cost, RFX2401C is the perfect solution for applications requiring extended range and bandwidth. RFX2401C has simple and low-voltage CMOS control logic, and requires minimal external components for system implementation.

Applications

- ▶ ZigBee Extended Range Devices
- ▶ ZigBee Smart Power
- ▶ Mobile and Battery ZigBee Systems
- ▶ Home and Industrial Automation
- ▶ RF4CE Remote Control
- ▶ Custom 2.4GHz Radio Systems

Parameters	Typical	Conditions
TX		
Small-Signal Gain	25dB	In-band
Quiescent Current	17mA	
Saturated Output Power	+22dBm	
Output Current	100mA	Pout=+20dBm at ANT
2 nd Harmonic	-15dBm/MHz	Pout=+20dBm, IEEE 802.15.4 OQPSK Modulation Signal
3 rd Harmonic	-20dBm/MHz	Pout=+20dBm, IEEE 802.15.4 OQPSK Modulation Signal
RX		
Small-Signal Gain	12dB	In-band
Noise Figure	2.5dB	In-band
Input P1dB	-8dBm	In-band
Quiescent Current	10mA	
CHIP		
Operating Frequency	2.4-2.5GHz	
Supply VDD	2.0-3.6V	4.5V Max
Shut-down Current	1uA	
RF Port Impedance	50-Ohm	Single-ended
Control Signals	High Enable	CMOS Logic, <0.3V Low >1.2V High
Package	16-QFN	3.0mm x 3.0mm x 0.55mm

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This product brief is a general list of parameters to provide information on the capabilities of this device and is subject to change without notice.