

# RIF211

## 2.4GHz RF Front End Module



### Product Description

The RIF211 is an integrated RF Front End Module designed for ISM band applications at 2.4GHz. The device consists of an integrated Power Amplifier, LNA and Switch. The Device can be used for Class 1 Bluetooth and Cordless Phone Applications. Typically the device operates at 3.3 V DC with an output power of 20 dBm. The FEM is fully matched internally to a 50 ohm input and output impedance.

### Applications

- IEEE 802.15.4 and ZigBee Systems
- Wireless Audio Systems
- Wireless Consumer Systems
- Wireless Sensor Networks
- All 2.4GHz ISM Band Systems
- Wireless Industrial Systems

### Features

- ISM Band @ 3.3V Operation
- Integrated PA/LNA/SPDT switch
- Operation from 2.7V to 3.6V
- Matched to 50 Ohms
- Package: 3.0 x 3.0 x 0.75mm<sup>3</sup> QFN16 Package

### Advantages

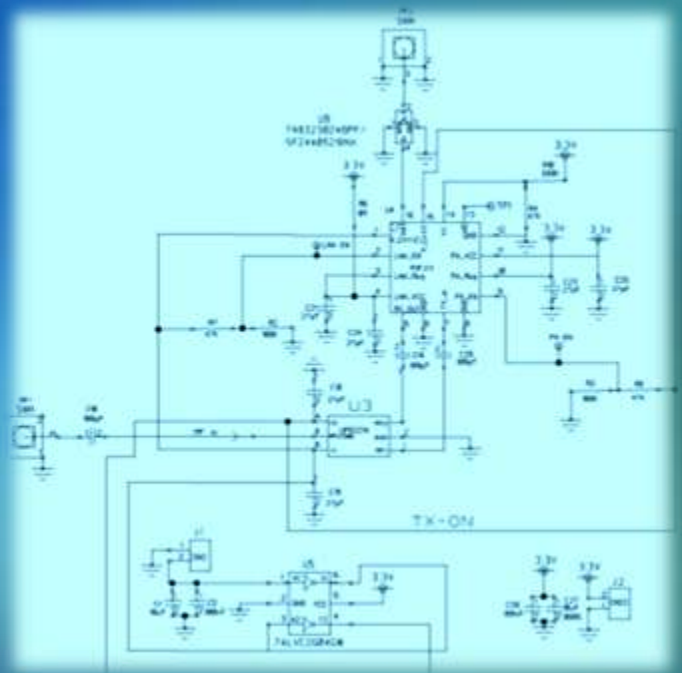
- Integrated Single Chip Solution
- Very Low Current Consumption
- Low Noise Figure
- Miniature Package

### Transmit Path Electrical Characteristics at 25°C

Name	Condition	Unit	Typical
Frequency		GHz	2.45
Small Signal Gain		dB	26.5
P1dB		dBm	19
Output Power	Vcc @ 3.3 V, Pin @ 0 dBm	dBm	20
Quiescent Current	Vcc @ 3.3 V	mA	23
Peak Current	Pout @ 20 dBm	mA	100
Input Return Loss		dB	9
Output Return Loss		dB	11
Isolation: Tx-Rx		dB	22
Rx-Antenna		dB	22
2nd Harmonic	Pout @ 20 dBm	dBm	-14
3rd Harmonic	Pout @ 20 dBm	dBm	-32

### Receiver Path Electrical Characteristics at 25°C

Name	Condition	Unit	Typical
Frequency		GHz	2.45
Small Signal Gain		dB	15
Noise Figure		dB	2.2
P1dB		dBm	14.5
Quiescent Current	Vcc @ 3.3 V	mA	9
IIP3		dBm	3
Input Return Loss		dB	9
Output Return Loss		dB	7
Tx-Antenna Isolation		dB	22



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