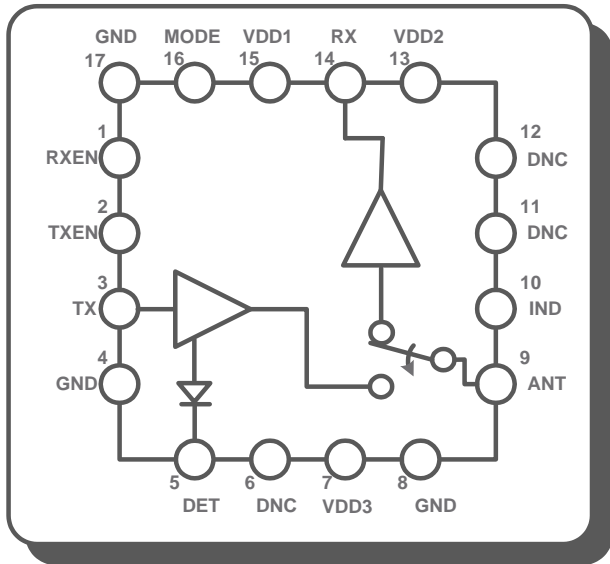


# 700/800/900MHZ 0.5 WATT BROADBAND CMOS RFeIC



## Description

The RFX1010 is a broadband, fully integrated, single-chip, single-die RFeIC (RF Front-end Integrated Circuit) which incorporates all the RF functionality needed for a TDD-mode RF front-end operated in the 700/800/900MHz frequency bands.

The RFX1010 architecture integrates the PA, LNA, Transmit and Receive switching circuitry, associated matching networks, and harmonic filters all in a CMOS single-chip device. The RFX1010 requires minimal external components including the power supply bypass capacitors.

This RFeIC is designed for medium to high output power, and consumes low current in receive mode. The combination of superior output power, high sensitivity and efficiency, low noise, small form factor and low cost makes RFX1010 the ideal solution for multiple applications including IEEE 802.15.4, ZigBee, AMR, Smart Home Area Network and other ISM applications in the sub-GHz bands from 780 to 960MHz.

## Applications

- ▶ N. America 900MHz ISM Systems
- ▶ E Europe 870MHz SRD Systems
- ▶ Smart Grid/AMR/AMI
- ▶ Smart Home Appliances
- ▶ Remote Sensor and Control
- ▶ Other 700/800/900MHz Radios

Parameter	Typical	Conditions
<b>TX</b>		
Small-Signal Gain	30dB	
TX Saturated Output Power	+27dBm	
Large Signal Gain	25dB	At +27dBm Output Power
Large Signal Current	350mA	At +27dBm Output Power
Quiescent Current	40mA	
2 <sup>nd</sup> Harmonic	-35dBc	At +27dBm Output Power
3 <sup>rd</sup> Harmonic	-25dBc	At +27dBm Output Power
<b>RX</b>		
Gain	13dB	High Gain Mode
Noise Figure	3dB	High Gain Mode
Quiescent Current	16mA	
Input P1dB	-5dBm	
<b>CHIP</b>		
Operating Frequency	780MHz – 960MHz	Operational between 780-960MHz
Supply VCC	2.7 – 3.6VDC	
Shut-down Current	1uA	
Input / Output Return Loss	-10dB	
RF Port Impedance	50-Ohm	Single-ended
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.