

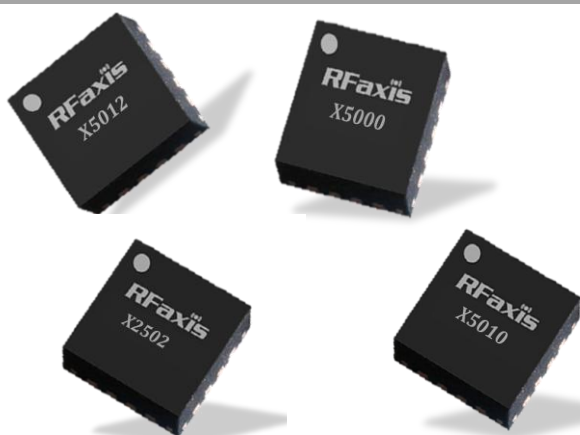
CMOS RFeIC Portfolio for WLAN Computing & Infrastructure

Features and Benefits

- Single-Chip/Single-Die RFeIC in pure CMOS
- Highest Level of Integration with Smallest Size
- Easy PCB Design with Complete On-Chip Impedance Matching and RF Decoupling
- Industry's Most Cost-Effective Front-End Solution

Applications

- WLAN 802.11 MIMO Access Points
- Wireless Video Bridges / Gateways
- Enterprise / Outdoor Routers
- Laptops / Ultrabooks
- Tablets / E-Readers
- Home Entertainment



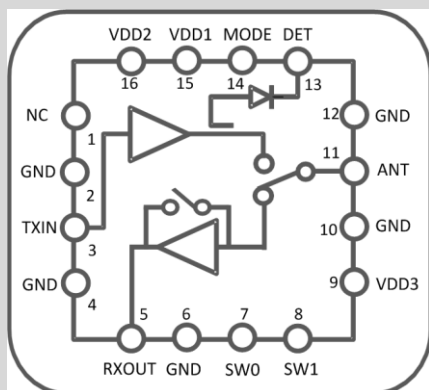
The RFaxis family of CMOS RF Front-end IC (RFeIC) and discrete high power amplifier (PA) products for WLAN 802.11n and 802.11ac includes the industry's most densely integrated, high performance RF front-end solutions targeted for Wi-Fi computing and infrastructure markets. Built upon RFaxis' patented single-chip/single-die RFeIC architecture, these miniature ICs come complete with on-chip input and output impedance matching and are fully RF decoupled on all DC voltage supply pins, thus requiring the minimum number of external components and typically take only a fraction of PCB footprint when compared with competitor solutions.

The RFeIC architecture integrates the PA, LNA, Transmit and Receive switching circuitry, the associated matching network, and the harmonic filter all in a single-die, single-chip CMOS device. Combining superior performance, high sensitivity, high efficiency, low noise, small form factor, and low cost, the RFaxis RFeICs offer the ideal solution for the latest WLAN 802.11 single antenna and MIMO products. Complimenting the portfolio of single-die, single-chip RF front-ends are discrete high power amplifiers for circuit design flexibility on dual-band concurrent or non-concurrent, high output power Wi-Fi infrastructures.

P/N	Description	Frequency	Vcc	Tx Gain	Tx Pout	Rx Gain	Rx NF	Package
		(GHz)	(V)	(dB)	(dBm)	(dB)	(dB)	
RFX5000 RFX5000B	5GHz WLAN 11n RFeIC with PA, LNA, Tx/Rx Switch	4.9-5.85	3.3	32	+17 11n 3% EVM	12	3	3x3mm QFN16
RFX5010	5GHz WLAN 11ac RFeIC with PA, LNA, Tx/Rx Switch	5.15-5.85	3.3	32	+15 11ac 1.8% EVM	12	3	3x3mm QFN16
RFX5012	5GHz WLAN 11ac RFeIC with PA, LNA, Tx/Rx Switch	5.15-5.85	5	32	+18 11ac 1.8% EVM	12	3	3x3mm QFN16
RFX5023	5GHz WLAN 11ac RFeIC 2.4GHz WLAN/BT SP3T Switch	2.4-2.5 5.15-5.85	3.3	30	+15 11ac 1.8% EVM	n/a	n/a	3x4mm QFN28
RFX503	5GHz WLAN 11ac Power Amp	5.15-5.85	5	32	+20 11ac 1.8% EVM	n/a	n/a	4x4mm QFN20
RFX240	2.4GHz WLAN 11n Power Amp	2.4-2.5	5	32	+26 11n 3% EVM	n/a	n/a	3x3mm QFN16
RFX2502	2.4GHz WLAN 11n RFeIC with PA, LNA, Tx/Rx Switch	2.4-2.5	3.3	28	+18 11n 3% EVM	13	2.7	3x3mm QFN16

RFX5000 5GHz WLAN TRANSMIT/RECEIVE RFeIC

Size: 3 x 3 x 0.55 mm
 Package: 16-L QFN

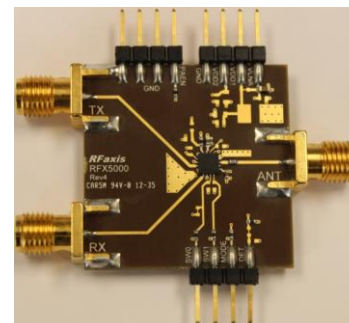


Product Overview

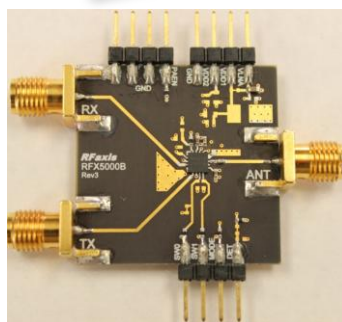
- Single-Chip, Single-Die RF Front-end IC
- PA + LNA + SPDT + Harmonic Filters
- Pure CMOS
- WLAN 802.11a/n Applications
- 4.9–5.85 GHz Operation
- Pin-Compatible to Skyworks SE5007T/SE5012T

Key Features

- Fully Integrated Single-Placement FE
- +18dBm Pout @ 3% EVM OFDM 64QAM
- 170mA @ +17dBm (Low-Current Mode)
- 24dBm P1dB
- 32dB Tx Gain, 13dB Rx Gain
- 3dB Noise Figure



RFX5000B 5GHz WLAN TRANSMIT/RECEIVE RFeIC



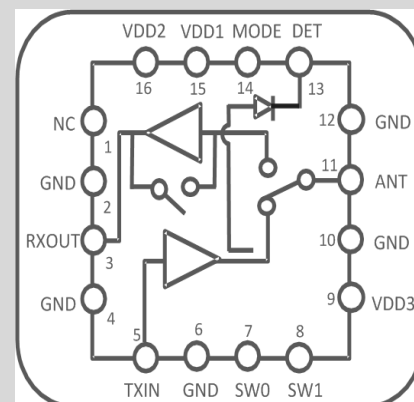
Size: 3 x 3 x 0.55 mm
 Package: 16-L QFN

Product Overview

- Single-Chip, Single-Die RF Front-end IC
- PA + LNA + SPDT + Harmonic Filters
- Pure CMOS
- WLAN 802.11a/n Applications
- 4.9–5.85 GHz Operation
- Pin-Compatible to Skyworks SE500B7T/SE5012BT

Key Features

- Fully Integrated Single-Placement FE
- +18dBm Pout @ 3% EVM OFDM 64QAM
- 170mA @ +17dBm (Low-Current Mode)
- 24dBm P1dB
- 32dB Tx Gain, 13dB Rx Gain
- 3dB Noise Figure
- Low Noise Amplifier with Bypass Mode



RFX5010 5GHz WLAN 11a/n/ac TRANSMIT/RECEIVE RFeIC

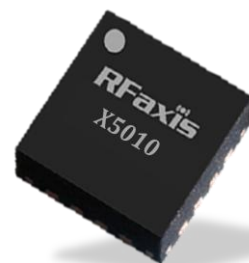
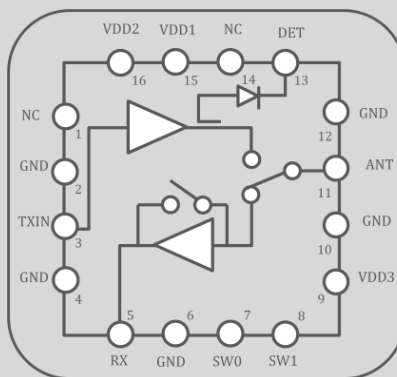
Size: 3 x 3 x 0.55 mm
 Package: 16-L QFN

Product Overview

- Single-Chip, Single-Die RF Front-end IC
- PA + LNA + SPDT + Harmonic Filters
- Pure CMOS
- WLAN 802.11a/n Applications
- 5.15–5.85 GHz Operation
- Pin-Compatible to Skyworks SE5007T/SE5012T

Key Features

- Fully Integrated Single-Placement FE
- +17dBm Pout @ 3% EVM 11n MCS7
- +15dBm Pout @ 1.8% EVM 11ac MCS9
- 24dBm P1dB
- 32dB Tx Gain, 13dB Rx Gain
- 3dB Noise Figure
- Low Noise Amplifier with Bypass Mode



RFX5012 5GHz WLAN 11a/n/ac TRANSMIT/RECEIVE RFeIC

Size: 3 x 3 x 0.55 mm
 Package: 16-L QFN

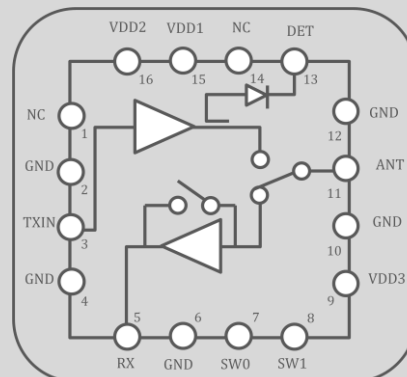


Product Overview

- Single-Chip, Single-Die RF Front-end IC
- PA + LNA + SPDT + Harmonic Filters
- Pure CMOS
- WLAN 802.11a/n Applications
- 5.15–5.85 GHz Operation
- Pin-Compatible to Skyworks SE5007T/SE5012T

Key Features

- Fully Integrated Single-Placement FE
- +20dBm Pout @ < 3% EVM 11a/n
- +18dBm Pout @ < 1.8% EVM 11ac MCS9
- 250mA @ +20dBm
- 32dB Tx Gain, 13dB Rx Gain
- 3dB Noise Figure
- Low Noise Amplifier with Bypass Mode



RFX5023 DUAL-BAND DUAL-MODE WLAN 11ac & BT RFeIC

Size: 3 x 4 x 0.55 mm

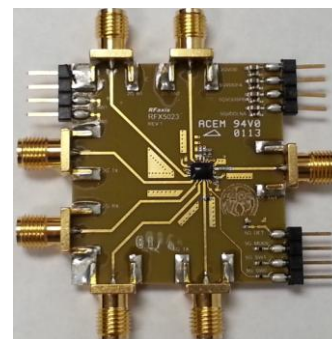
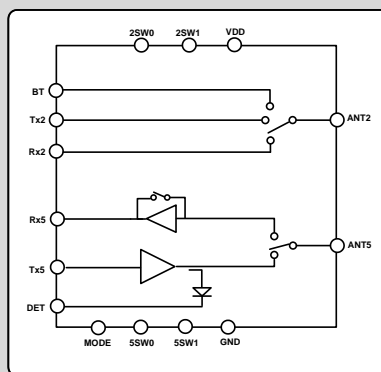
Package: 28-L QFN

Product Overview

- Single-Chip, Single-Die RF Front-end IC
- PA + LNA + SPDT/SP3T + Harmonic Filters
- 5GHz LNA Bypass Mode
- Pure CMOS
- Dual-Mode 802.11 a/b/g/n/ac WLAN & BT
- Dual-Band 2.4–2.5/ 5.1–5.85GHz Operation

Key Features

- Fully Integrated Single-Placement FE
- +17dBm for EVM<3% 11a/n MCS7/64QAM
- +15dBm for EVM<1.8% 11ac MCS9/64QAM
- 30dB Tx Gain
- 12dB Rx Gain (5GHz)
- 3dB Noise Figure (5GHz)



RFX503 5GHz WLAN POWER AMPLIFIER for 802.11a/n/ac

Size: 4 x 4 x 0.55 mm

Package: 20-L QFN

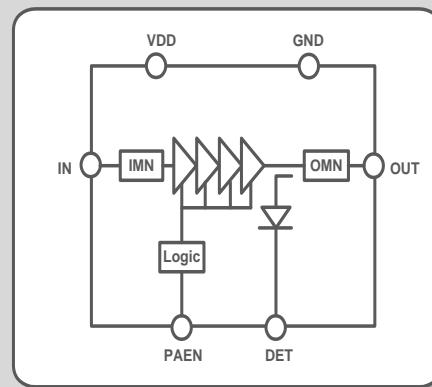


Product Overview

- High-Gain, High-Linearity, High-Efficiency 5GHz 11a/n/ac Power Amplifier
- Pure CMOS
- Directional-Coupler Based Power Detector
- On-Chip Impedance Match and Harmonic Filters
- WLAN 802.11a/n/ac Applications
- 5.15–5.85 GHz Operation
- SE5005L/SE5003L1 Pin-Compatible

Key Features

- 32dB Gain
- +23dBm Pout @ 3% EVM for 11a/n, 5V
- +21dBm Pout @ 1.8% EVM for 11ac, MCS9
- 340mA @ +23dBm
- 3.8GHz Notch Filter 3dB Noise Figure



RFX240 2.4GHz HIGH-POWER WLAN POWER AMPLIFIER

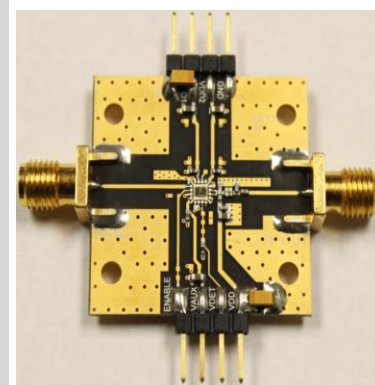
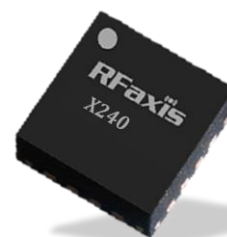
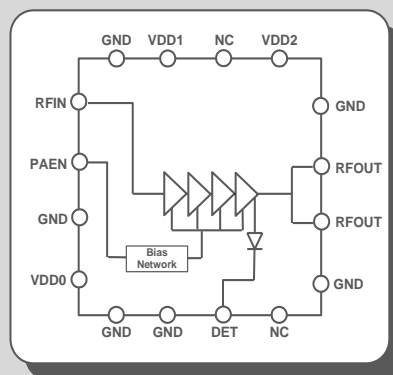
Size: 3 x 3 x 0.55 mm
 Package: 16-L QFN

Product Overview

- Highly Integrated WLAN Power Amplifier
- CMOS Process
- On-Chip Input Match and Power Detector
- 2.4 – 2.5 GHz Operation
- 802.11 b/g/n High Power Devices
- Pin-Compatible with Skyworks SE2576L/SE2565T

Key Features

- +26dBm Pout @ 11g/n 54Mbps OFDM
- +29dBm Pout @ 11b 1Mbps CCK
- 490mA @ Pout=26dBm
- 34dB Power Gain



RFX2502 2.4GHz TRANSMIT/RECEIVE WLAN 11b/g/n/ac RFeIC

Size: 3 x 3 x 0.55 mm
 Package: 16-L QFN



Product Overview

- Single-Chip, Single-Die RF Front-End IC
- PA + LNA + SPDT + Harmonic Filters
- Pure CMOS
- WLAN b/g/n Applications
- 2.4 – 2.5 GHz Operation

Key Features

- Fully Integrated Single-Placement FE
- +18dBm Pout @ 11g 54Mbps OFDM
- +21dBm Pout @ 11b 1Mbps CCK
- 3% EVM
- 140mA @ +18dBm
- 29dB Tx Gain, 12dB Rx Gain
- 2.7dB Noise Figure

