

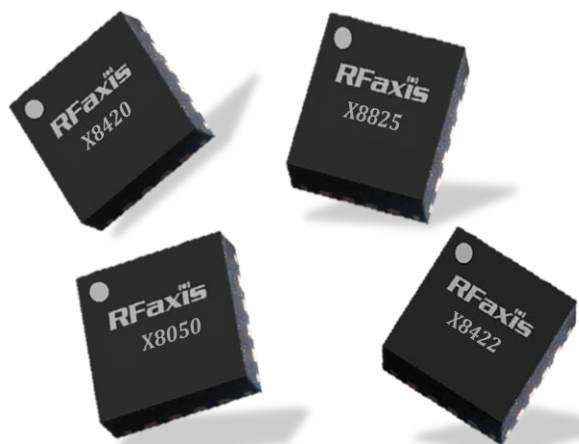
CMOS RFeIC Portfolio for WLAN in Mobile Devices

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 Solutions
- 4.8V Battery Voltage Supply Support

Applications

- Smartphones, Feature Phones
- Laptops / Ultrabooks
- Tablets / E-Readers
- Gaming
- Portable Devices with Embedded Wi-Fi/BT



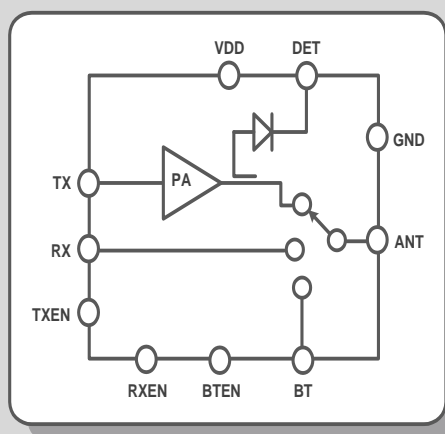
The RFaxis family of CMOS RF Front-end IC (RFeIC) products for WLAN 802.11n and 802.11ac includes the industry's most densely integrated, high performance wireless connectivity solutions targeted for Wi-Fi mobile devices, gaming, and portable computing markets. Built upon RFaxis' patented single-chip/single-die 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 CMOS single-die, single-chip device. Dual-band, dual-mode architectures are also available in single-die, single-chip, which is intended for WLAN/BT MIMO applications. 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 802.11a/b/g/n/ac single antenna and MIMO products. Common to most mobile devices is a 4.8V battery voltage, and a direct connection to this supply voltage which is supported.

P/N	Description	Frequency	Vcc	Tx Gain	Tx Pout	Rx Gain	Rx NF	Package
		(GHz)	(V)	(dB)	(dBm)	(dB)	(dB)	
RFX8420	2.4GHz WLAN/BT 11n RFeIC with PA, SP3T Switch	2.4-2.5	3.6	27	+18 11n 3% EVM	-0.7	n/a	2.5x2.5mm QFN16
RFX8422	2.4GHz WLAN/BT 11n RFeIC with PA, LNA SP3T Switch	2.4-2.5	3.6	25	+18 11n 3% EVM	12	2.5	2.5x2.5mm QFN16
RFX8825 RFX8826	2.4GHz PA,WLAN/BT SP3T Switch 5GHz WLAN 11ac PA, LNA, Switch	2.4-2.5 5.15-5.85	3.6	28 2G 28 5G	+18 2G, +17 5G 11n 3% EVM	n/a 2G 12 5G	3	3x4mm QFN28
RFX8050	5GHz WLAN 11ac RFeIC with PA, LNA, Tx/Rx Switch	5.15-5.85	3.6	30	+16 11ac 1.8% EVM	13	3	2.5x2.5mm 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
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

RFX8420 CMOS 2.4GHz WLAN/BT TRANSMIT/RECEIVE RFeIC with PA/SP3T

Size: 2.5 x 2.5 x 0.45 mm
 Package: 16-L QFN

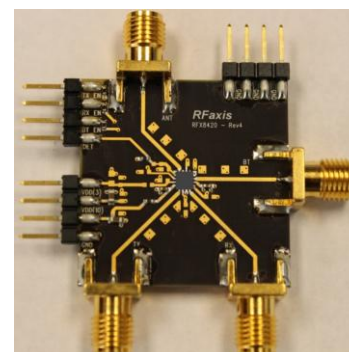


Product Overview

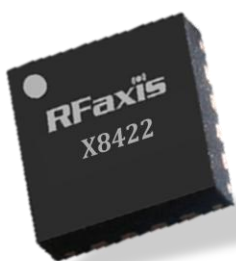
- Single-Chip, Single-Die RF Front-end IC
- PA + SP3T Switch + Harmonic Filters
- Dual-Mode 802.11 b/g/n WLAN & BT
- Pure CMOS
- 2.4 – 2.5 GHz Operation
- Direct Battery Operation
- Pin-Compatible with RFFM8204

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



RFX8422 2.4GHz WLAN/BT TRANSMIT/RECEIVE RFeIC with PA/LNA/SP3T



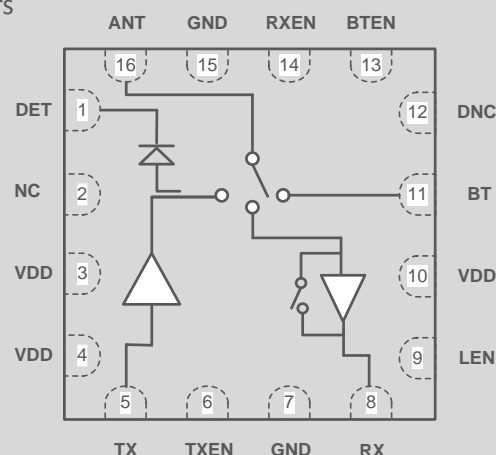
Size: 2.5 x 2.5 x 0.45 mm
 Package: 16-L QFN

Product Overview

- Single-Chip, Single-Die RF Front-end IC
- PA + LNA + SP3T Switch + Harmonic Filters
- Dual-Mode 802.11 b/g/n WLAN & BT
- Pure CMOS
- 2.4 – 2.5 GHz Operation
- Direct Battery Operation
- Pin-Compatible with MDFE2PFA-046, RFFM8202, SKY65534-11, AWL9280

Key Features

- Fully Integrated Single-Placement FE
- 25dB Tx Gain
- 140mA @ 18dBm with 3% EVM
- 14dB Rx Gain
- 2.5dB Noise Figure at Antenna
- 3dB Noise Figure
- Low Noise Amplifier with Bypass Mode



RFX8825 DUAL-BAND DUAL-MODE WLAN/BT TRANSMIT/RECEIVE RFeIC

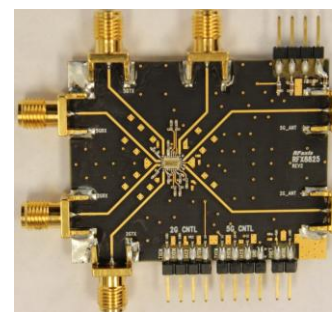
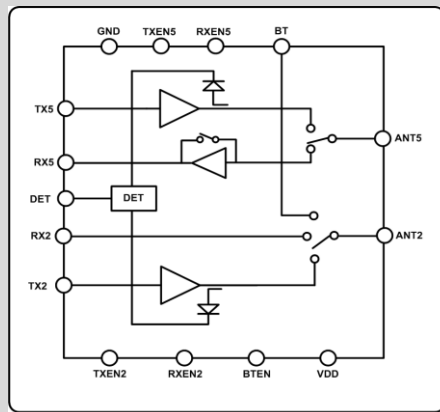
Size: 3 x 4 x 0.55 mm
 Package: 28-L QFN

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 WLAN & BT
- Dual-Band 2.4–2.5/ 4.9–5.85GHz Operation
- Direct Battery Operation
- Pin-Compatible with Skyworks SE5510T

Key Features

- Fully Integrated Single-Placement FE
- +17dBm for EVM<3% 11a OFDM 64QAM
- +18dBm for EVM<3% 11g OFDM 64QAM
- 28dB Tx Gain, Rx Gain
- 12dB Rx Gain (5GHz)
- 3dB Noise Figure (5GHz)



RFX8826 DUAL-BAND DUAL-MODE WLAN/BT TRANSMIT/RECEIVE RFeIC

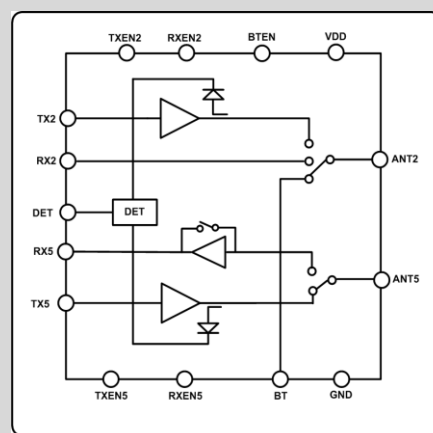
Size: 3 x 4 x 0.55 mm
 Package: 28-L QFN

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 WLAN & BT
- Dual-Band 2.4–2.5/ 4.9–5.85GHz Operation
- Direct Battery Operation
- Pin-Compatible with Skyworks SE5510T

Key Features

- Fully Integrated Single-Placement FE
- +17dBm for EVM<3% 11a OFDM 64QAM
- +18dBm for EVM<3% 11g OFDM 64QAM
- 28dB Tx Gain, Rx Gain
- 12dB Rx Gain (5GHz)
- 3dB Noise Figure (5GHz)



RFX8050 5GHz WLAN 11a/n/ac TRANSMIT/RECEIVE RFeIC

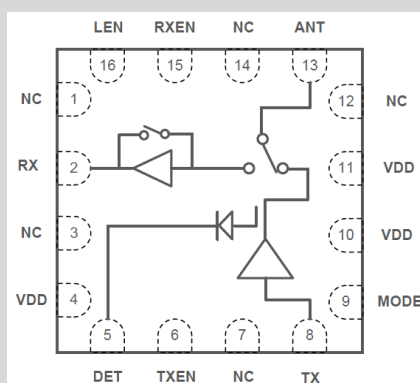
Size: 2.5 x 2.5 x 0.45 mm
 Package: 16-L QFN

Product Overview

- Single-Chip, Single-Die RF Front-end IC
- PA + LNA + SPDT + Harmonic Filters
- Pure CMOS
- WLAN 802.11a/n/ac Applications
- 5.15–5.85 GHz Operation
- Direct Battery Operation
- Pin-Compatible with RFFM8502, SKY65535-11

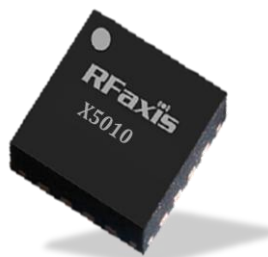
Key Features

- Fully Integrated Single-Placement FE
- +18dBm Pout @ 3% EVM 11a/n
- +16dBm Pout @ 1.8% EVM 11ac
- 200mA at +18dBm Pout
- 30dB 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

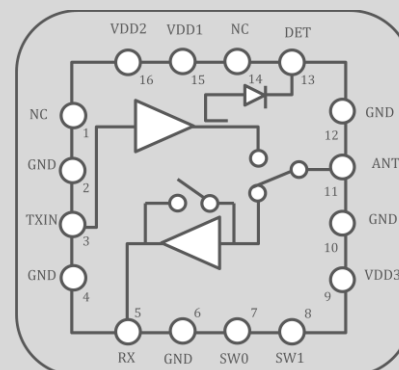


Product Overview

- 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



RFX5000 5GHz WLAN TRANSMIT/RECEIVE RFeIC

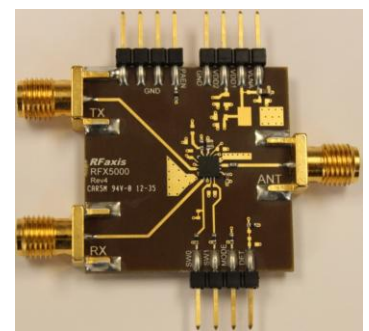
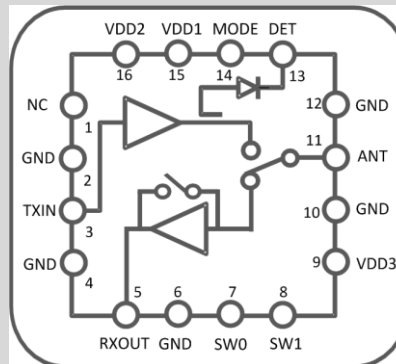
Size: 3 x 3 x 0.55 mm
 Package: 16-L QFN

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
- Low Noise Amplifier with Bypass Mode



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

