QPF4219

Wi-Fi Front End Module

Product Overview

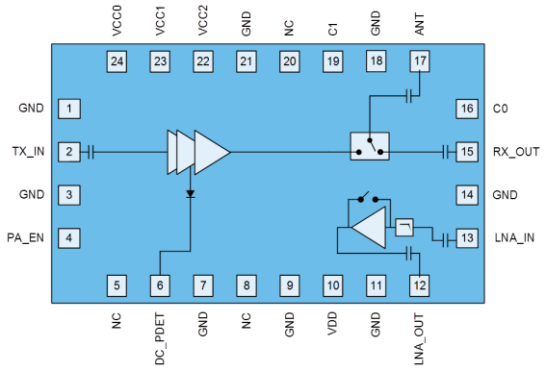
The Qorvo® QPF4219 is an integrated front end module (FEM) designed for Wi-Fi 5 (802.11ac) systems. The compact form factor and integrated matching minimizes layout area in the application.

Performance is focused on optimizing the PA for a 5V supply voltage that conserves power consumption while maintaining the highest linear output power and leading edge throughput. Receive path matches the optimal technologies to maximize Rx sensitivity through noise figure performance that is consistent over a wider variety of conditions.

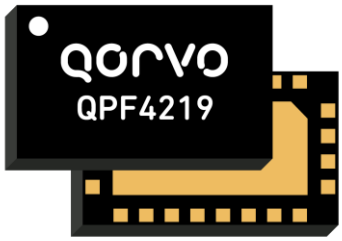
The receive path is pinned out so external filtering can be added in the optimal position. Integrated die level filtering for 2nd and 3rd harmonics as well as 5 GHz rejection for DBDC operation are included.

The QPF4219 integrates a 2.4 GHz power amplifier (PA), regulator, single pole two throw switch (SP2T), bypassable low noise amplifier (LNA) and DC power detector into a single device.

Functional Block Diagram



Top View



24 Pin 5x3 mm Laminate Package

Key Features

- 2400-2500 MHz
- P_{OUT} = +24.5 dBm MCS8/9 VHT40 -35 dB Dynamic EVM
- P_{OUT} = +25.5 dBm MCS7 HT20/40 -30 dB Dynamic EVM
- P_{OUT} = +26.5 dBm MCS0 HT20 Spectral Mask Compliance
- P_{OUT} = +28 dBm 802.11b Spectral Mask Compliance
- Optimized for +5 V Operation
- 33 dB Tx Gain
- 1.9 dB Noise Figure
- 15.5 dB Rx Gain & 7 dB Bypass Loss
- 15 dB 5 GHz Rejection on Rx Path
- Integrated DC Power Detector

Applications

- Access Points
- Wireless Routers
- Residential Gateways
- Customer Premise Equipment
- Internet of Things

Ordering Information

Part Number	Description
QPF4219SB	Sample bag with 5 pieces
QPF4219SQ	Sample bag with 25 pieces
QPF4219SR	7” reel with 100 pieces
QPF4219TR13-5K	13” reel with 5,000 pieces
QPF4219EVB-01	Assembled Evaluation Board

Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	Class 1B (500V)	ANSI/ESD/JEDEC JS-001
ESD – Charged Device Model (CDM)	Class C3 (1kV)	ANSI/ESD/JEDEC JS-002
MSL – Moisture Sensitivity Level	Level 3	IPC/JEDEC J-STD-020



Caution!

ESD sensitive device

Solderability

Compatible with both lead-free (260 °C max. reflow temperature) and tin/lead (245 °C max. reflow temperature) soldering processes.

Package lead plating: Electrolytic plated Au over Ni

RoHS Compliance

This part is compliant with the 2011/65/EU RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment), as amended by Directive 2015/863/EU.

This product also has the following attributes:

- Lead free
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A ($C_{15}H_{12}Br_4O_2$) Free
- SVHC Free

Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

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Email: customer.support@qorvo.com

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