



# QPF4211

## Wi-Fi 6 Front End Module

### Product Overview

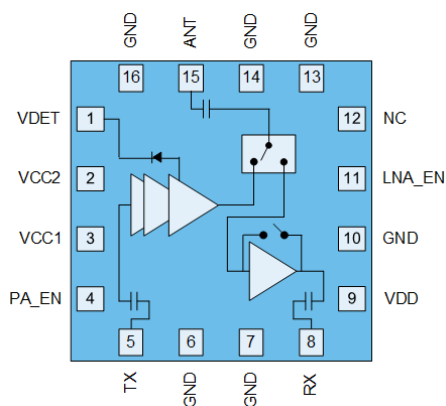
The Qorvo® QPF4211 is an integrated medium power front end module (FEM) designed for Wi-Fi 6 (802.11ax) systems. The small form factor and integrated matching minimizes layout area in the application.

Performance is focused on optimizing the PA for a 5V supply voltage, while providing optional operation over a wide range, 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.

Integrated die level filtering for 2nd and 3rd harmonics as well as 5 GHz rejection for DBDC operation are included. An DC power detector with a voltage output provides feedback.

The QPF4211 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



16 Pad 2.5 x 2.5 mm Laminate Package

### Key Features

- 2412-2484 MHz
- $P_{OUT} = +19$  dBm MCS11 HE40 -43dB Dynamic EVM
- $P_{OUT} = +22.5$  dBm MCS9 HT40 -35dB Dynamic EVM
- $P_{OUT} = +23.5$  dBm MCS7 HT20/40 -30dB Dynamic EVM
- $P_{OUT} = +25.5$  dBm MCS0 HT20 Spectral Mask Compliance
- Optimized for +5 V Operation while maintaining a wider range of capability
- 33 dB Tx Gain
- 1.8 dB Noise Figure
- 15 dB Rx Gain & 7 dB Bypass Loss
- 12 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
QPF4211SB	Sample bag with 5 pieces
QPF4211SR	7" reel with 100 pieces
QPF4211TR13	13" reel with 10,000 pieces
QPF4211EVb	Assembled Evaluation Board

## Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	Class 2 (2000V)	ANSI/ESD/JEDEC JS-001
ESD – Charged Device Model (CDM)	Class C3 (1000V)	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: Electroless Ni/Electroless Pd/Immersion Au (ENEPIG)

## 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:

- Product uses RoHS Exemption 7c-I to meet RoHS Compliance requirements.
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A (C<sub>15</sub>H<sub>12</sub>Br<sub>4</sub>O<sub>2</sub>) Free
- SVHC Free
- PFOS Free

## Contact Information

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

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