



QPF4207

Wi-Fi 7 Front End Module

Product Overview

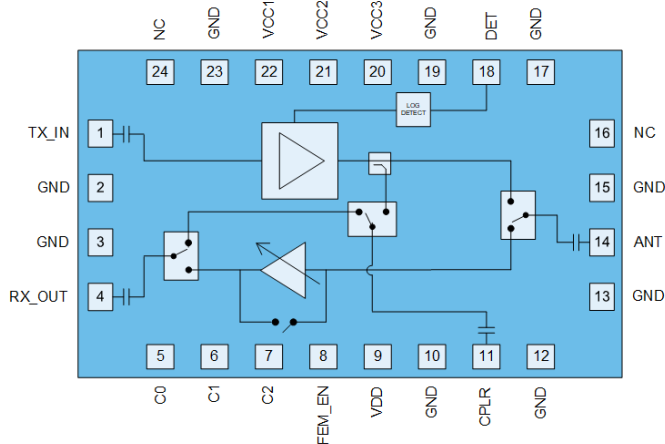
The Qorvo® QPF4207 is an integrated front end module (FEM) designed for Wi-Fi 7 (802.11be) systems. The small form factor and integrated matching minimizes layout area in the application.

Performance is focused on optimizing the PA for a 5V supply voltage that minimizes power consumption to allow for systems that use digital pre-distortion to achieve the highest linear output power and leading edge throughput for the RF chain.

A coupler with RF output is integrated for DPD feedback training. Options for alternate routing of the feedback are included with low loss. For power control a broadrange, constant slope voltage logarithmic power detector is provided for power control. The module includes a state to turn on and off, which could reduce bill of material or give an option to reduce current draw.

The QPF4207 integrates a 2.4 GHz power amplifier (PA), single pole two throw switch (SP2T), coupler structure and bypassable multimode low noise amplifier (LNA) into a single device.

Functional Block Diagram



Top View



24 Pad 5 x 3 mm Laminate Package

Key Features

- 2412–2484 MHz
 - $P_{SAT} = +32$ dBm
 - Corrected DEVM¹
 - $P_{OUT} = +22$ dBm MCS13 HE20 -43dB Dynamic EVM
 - $P_{OUT} = +23$ dBm MCS11 HE20 -38dB Dynamic EVM
 - $P_{OUT} = +24$ dBm MCS8 VHT20 -35dB Dynamic EVM
 - $P_{OUT} = +26$ dBm MCS7 HT20 -30dB Dynamic EVM
 - $P_{OUT} = +27$ dBm MCS0 HT20 Spectral Mask Compliance²
 - Optimized for +5 V Operation
 - DC Power = 1.75 W at +27dBm
 - 32 dB Tx Gain
 - 1.7 dB Noise Figure
 - 15.5/3.5 dB Rx Gain & 7 dB Bypass Loss
 - >17 dB 5-7 GHz Rejection on Rx Path
 - Integrated RF Coupler & DC Logarithmic Power Detector
- ¹Memoryless LUT DPD Correction
²No DPD

Applications

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

Ordering Information

Part Number	Description
QPF4207SB	Sample bag with 5 pieces
QPF4207SR	7" reel with 100 pieces
QPF4207TR13	13" reel with 2,500 pieces
QPF4207EVB	Assembled Evaluation Board



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Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	Class 2 (2,000V)	ANSI/ESD/JEDEC JS-001
ESD – Charged Device Model (CDM)	Class C3 (1,000V)	ANSI/ESD/JEDEC JS-002
MSL – Moisture Sensitivity Level	MSL 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:

- Lead Free
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A (C₁₅H₁₂Br₄O₂) Free
- SVHC Free
- PFOS Free

Contact Information

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

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