QPF4288A

Wi-Fi 6 Front End Module

Product Overview

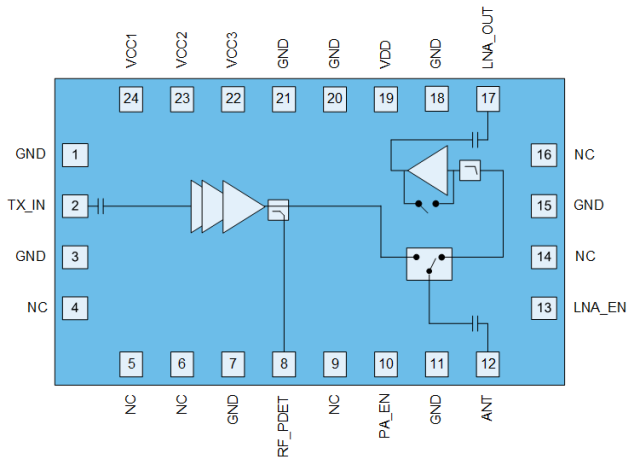
The Qorvo® QPF4288A is an integrated high power front end module (FEM) designed for Wi-Fi 6 (802.11ax) systems. The compact form factor and integrated matching minimizes layout area in the application.

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.

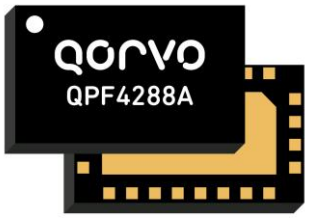
Integrated die level filtering for 2nd and 3rd harmonics as well as 5 GHz rejection for DBDC operation are included. An RF power detector with an RF output from a directional coupler provides feedback.

The QPF4288A integrates a 2.4 GHz power amplifier (PA), regulator, single pole two throw switch (SP2T), bypassable low noise amplifier (LNA) and coupler into a single device.

Functional Block Diagram



Top View



24 Pad 5 x 3 mm Laminate Package

Key Features

- 2412-2484 MHz
- P_{OUT} = +22 dBm MCS11 HE40 -43dB Dynamic EVM
- P_{OUT} = +24 dBm MCS9 HT40 -35dB Dynamic EVM
- P_{OUT} = +25.5 dBm MCS7 HT20/40 -30dB Dynamic EVM
- P_{OUT} = +27 dBm MCS0 HT20 Spectral Mask Compliance
- Optimized for +5 V Operation
- 33 dB Tx Gain
- 1.9 dB Noise Figure
- 14 dB Rx Gain & 5 dB Bypass Loss
- 8 dB 5 GHz Rejection on Rx Path
- Integrated RF Power Detector Coupler

Applications

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

Ordering Information

Part Number	Description
QPF4288ASB	Sample bag with 5 pieces
QPF4288ASR	7” reel with 100 pieces
QPF4288ATR13	13” reel with 5,000 pieces
QPF4288AEVB01	Assembled Evaluation Board

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QPF4288A
Wi-Fi 6 Front End Module

Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	Class 1A (250V)(1)	ANSI/ESD/JEDEC JS-001
ESD – Charged Device Model (CDM)	Class C3 (1000V)	ANSI/ESD/JEDEC JS-002
MSL – Moisture Sensitivity Level	MSL 3	IPC/JEDEC J-STD-020



Caution!

ESD sensitive device

Notes:
1. All pins are ESD -HBM complaint to Class 1C (1000V) except Pin 19 - VDD

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:

- Product uses RoHS Exemption 7c-I to meet RoHS Compiance requirements.
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A ($C_{15}H_{12}Br_40_2$) Free
- SVHC Free

Contact Information

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

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