

Product Overview

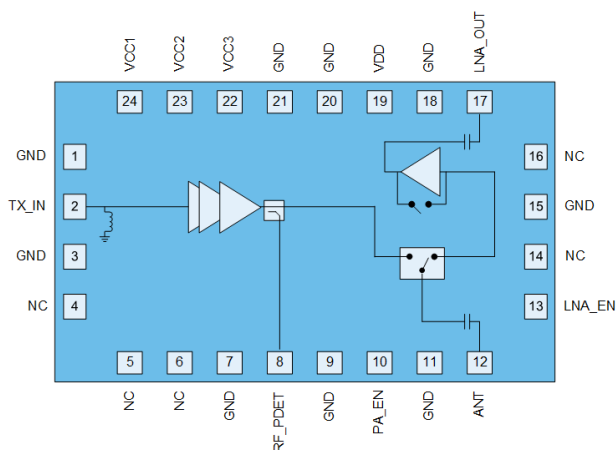
The Qorvo® QPF4588A is an integrated medium power front end module (FEM) designed for Wi-Fi 6 (802.11ax) systems. The small form factor and integrated matching minimizes layout area in the application.

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.

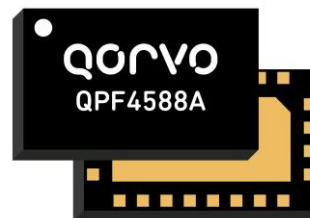
Integrated die level filtering for 2nd and 3rd harmonics as well as 2.4 GHz rejection for DBDC operation are included. For application feedback, an RF power detector is integrated in the package providing a coupled signal from the transmit path.

The QPF4588A integrates a 5 GHz power amplifier (PA), single pole two throw switch (SP2T) and bypassable low noise amplifier (LNA) into a single device.

Functional Block Diagram



Top View



24 Pad 5 x 3 mm Laminate Package

Key Features

- 5150 – 5895 MHz
- P_{OUT} = +17dBm MCS11 HE160 -43dB Dynamic EVM
- P_{OUT} = +19dBm MCS11 HE80 -43dB Dynamic EVM
- P_{OUT} = +23.5dBm MCS9 VHT80/160 -35dB Dynamic EVM
- P_{OUT} = +27dBm MCS0 VHT20 Spectral Mask Compliance
- Optimized for +5 V Operation
- 33 dB Tx Gain
- 2 dB Noise Figure
- 14 dB Rx Gain & 8 dB Bypass Loss
- 23 dB 2.4 GHz Rejection on Rx Path
- Integrated RF Power Detector

Applications

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

Ordering Information

Part Number	Description
QPF4588ASB	Sample bag with 5 pieces
QPF4588ASR	7" reel with 100 pieces
QPF4588ATR13	13" reel with 10,000 pieces
QPF4588AEVB	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	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

Contact Information

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

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