

1. Product Overview

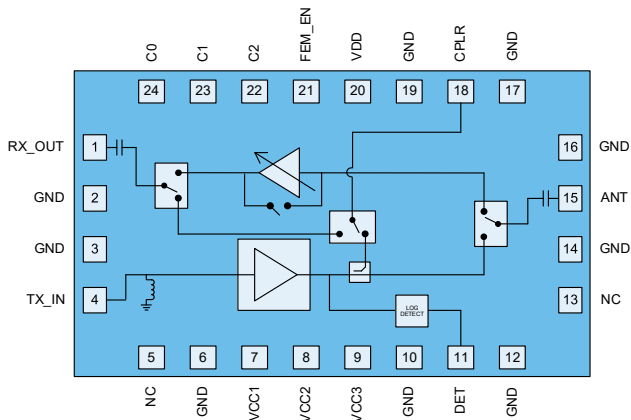
The Qorvo® QPF4607 is an integrated front end module (FEM) designed for Wi-Fi 7 (802.11be) systems. The compact form factor and integrated matching minimize layout area in the application.

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. This is done across a wide bandwidth enabling operation in all channels from UNII5-8 (5.945 to 7.125 GHz)

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 broad range, constant slope voltage logarithmic power detector is provided for application feedback. The module includes a state to turn the FEM on and off, which could reduce bill of material or give an option to reduce current draw.

The QPF4607 integrates a 6 GHz power amplifier (PA), single pole two throw switch (SP2T) and by passable multi-mode low noise amplifier (LNA) into a single device.

2. Functional Block Diagram



Top View



24 Pad 5 x 3 mm Laminate Package

3. Key Features

- 5945 – 7125 MHz
 - $P_{SAT} = +30$ dBm
 - Corrected DEVM¹
 - $P_{OUT} = +20.5$ dBm MCS13 EHT320 -43dB Dynamic EVM
 - $P_{OUT} = +21.5$ dBm MCS11 EHT160 -43dB Dynamic EVM
 - $P_{OUT} = +23$ dBm MCS9 HE80 -35dB Dynamic EVM
 - $P_{OUT} = +24$ dBm MCS0 EHT160 Spectral Mask Compliance
 - Optimized for +5 V Operation
 - DC Power = 1.45 W at +24 dBm
 - 32 dB Tx Gain
 - 1.8/3 dB Noise Figure
 - 13.5/4 dB Rx Gain & 7 dB Bypass Loss
 - 25 dB 2.4 GHz Rejection on Rx Path
 - Integrated RF & DC Logarithmic Power Detector
- ¹Memoryless LUT DPD Correction

4. Applications

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

5. Ordering Information

Part Number	Description
QPF4607TR13	13" reel with 5,000 pieces
QPF4607SR	7" reel with 100 pieces
QPF4607SB	Sample bag with 5 pieces
QPF4607EVB	Assembled Evaluation Board



Contact Information

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

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