

Product Overview

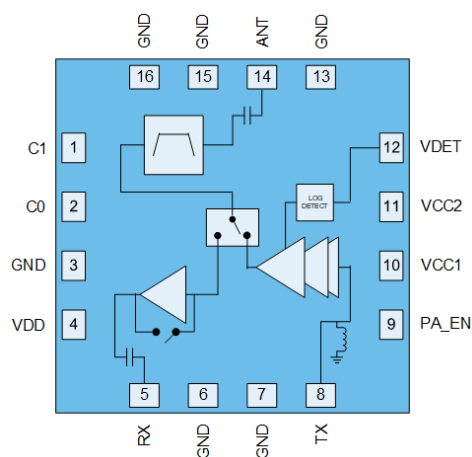
The Qorvo® QPF7552 is an integrated high power front end module (iFEM) designed for Wi-Fi 6 (802.11ax) systems. This iFEM integrates bandBoost technology to create an easier to use and extremely compact solution for Wi-Fi tri-band applications where operating in two radios simultaneously within the 5GHz frequency band is needed. 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. Qorvo bandBoost technology is integrated to allow operation in UNII2c-3 while reducing out of band power in UNII1-2a to a level that is appropriate for use on the same board. 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, a DC power detector is integrated in the package providing a proportional voltage for a given output power from the transmit path.

The QPF7552 integrates a 5 GHz power amplifier (PA), UNII2c-3 bandBoost BAW filter, single pole two throw switch (SP2T) and bypassable low noise amplifier (LNA) into a single device.

Functional Block Diagram



Top View



16 Pad 3 x 3 mm Laminate Package

Key Features

- 5490 – 5835 MHz
- P_{OUT} = +16dBm MCS11 HE160 -43dB Dynamic EVM
- P_{OUT} = +18dBm MCS11 HE80 -43dB Dynamic EVM
- P_{OUT} = +21dBm MCS9 VHT80/160 -35dB Dynamic EVM
- P_{OUT} = +25dBm MCS0 HT20 Spectral Mask Compliance
- Optimized for +5 V Operation
- 31 dB Tx Gain
- 55 dB Out of Band Rejection in U-NII 1-2a
- 3.5 dB Noise Figure
- 12 dB Rx Gain & 10 dB Bypass Loss
- 60 dB 2.4 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
QPF7552SB	Sample bag with 5 pieces
QPF7552SR	7" reel with 100 pieces
QPF7552TR13	13" reel with 10,000 pieces
QPF7552EVB	Assembled Evaluation Board

Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	Class 1C (1,000V)	ANSI/ESD/JEDEC JS-001
ESD – Charged Device Model (CDM)	Class C3 (1,000V)	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:

- 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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