

Product Overview

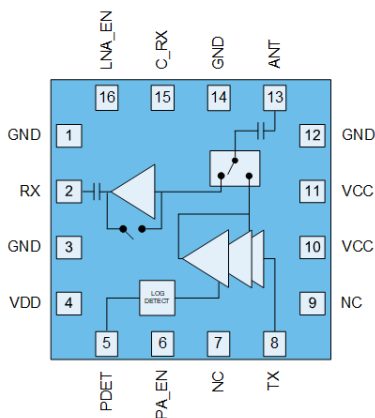
The Qorvo® QPF4551 is an integrated front end module (FEM) designed for Wi-Fi 6 (802.11ax) systems. The compact form factor and integrated matching minimizes layout area in the application.

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.

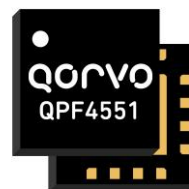
Integrated die level filtering for 2nd and 3rd harmonics as well as 2.4 GHz rejection for DBDC operation are included. A broadrange, constant slope voltage logarithmic power detector is provided for application feedback

The QPF4551 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



16 Pad 2.5 x 2.5 mm Laminate Package

Key Features

- 5150 – 5850 MHz
- P_{OUT} = +17 dBm MCS11 HE160 -43dB Dynamic EVM
- P_{OUT} = +19 dBm MCS11 HE80 -43dB Dynamic EVM
- P_{OUT} = +23.5 dBm MCS9 VHT80/160 -35dB Dynamic EVM
- P_{OUT} = +27 dBm MCS0 VHT20 Spectral Mask Compliance
- Optimized for +5 V Operation
- 32 dB Tx Gain
- 2 dB Noise Figure
- 13.5 dB Rx Gain & 8 dB Bypass Loss
- 25 dB 2.4 GHz Rejection on Rx Path

Applications

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

Ordering Information

| Part Number | Description |
|-------------|-----------------------------|
| QPF4551SB | Sample bag with 5 pieces |
| QPF4551SR | 7" reel with 100 pieces |
| QPF4551TR13 | 13" reel with 10,000 pieces |
| QPF4551EVb | 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
- PFOS Free

Contact Information

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

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