



QPF4528

Wi-Fi Front End Module

Product Overview

The Qorvo® QPF4528 is an integrated front end module (FEM) designed for Wi-Fi 802.11ax systems. The compact form factor and integrated matching minimizes layout area in the application.

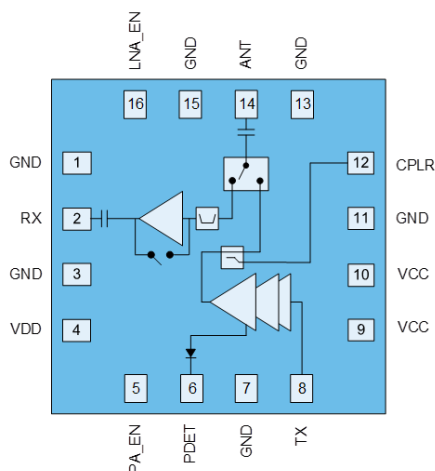
Performance is focused on optimizing the PA for a 3.3V supply voltage that conserves power consumption while maintaining the highest linear output power and leading edge throughput. Receive path matches the optimal technologies to maximize Rx sensitivity through noise figure performance that is consistent over a wider variety of conditions.

The receive path is pinned out so external filtering can be added in the optimal position. Integrated die level filtering for 2nd and 3rd harmonics as well as 2.4 GHz rejection for DBDC operation are included.

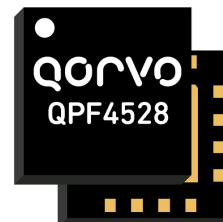
There are two options for power detect, a DC power detector which has voltage output and an RF power detector with an RF output from a directional coupler.

The QPF4528 integrates a 5 GHz power amplifier (PA), regulator, single pole two throw switch (SP2T), bypassable low noise amplifier (LNA), coupler and voltage power detector into a single device

Functional Block Diagram



Top View



16 Pad 3x3 mm Laminate Package

Key Features

- 5150 – 5925 MHz
- $P_{OUT} = +12.5\text{dBm}$ MCS11 HE80 -47dB Dynamic EVM
- $P_{OUT} = +15\text{dBm}$ MCS11 HE80 -43dB Dynamic EVM
- $P_{OUT} = +18\text{dBm}$ MCS9 VHT80 -35dB Dynamic EVM
- $P_{OUT} = +19\text{dBm}$ MCS7 HT20/40 -30dB Dynamic EVM
- $P_{OUT} = +21\text{dBm}$ MCS0 HT20 Spectral Mask Compliance
- Optimized for +3.3 V Operation
- 0.5W Power Consumption at $P_{OUT} +17\text{dBm}$
- 30 dB Tx Gain
- 2 dB Noise Figure
- 15 dB Rx Gain & 7 dB Bypass Loss
- 35 dB 2.4 GHz Rejection on Rx Path
- Integrated RF Coupler as well as DC Power Detector

Applications

- Access Points
- Wireless Routers
- Client Equipment
- Customer Premise Equipment
- Internet of Things

Ordering Information

Part Number	Description
QPF4528SB	Sample bag with 5 pieces
QPF4528SQ	Sample bag with 25 pieces
QPF4528SR	7" reel with 100 pieces
QPF4528TR13-5K	13" reel with 5,000 pieces
QPF4528PCK-01	Assembled Evaluation Board + 5 pcs

Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	Class 1B (500V)	ANSI/ESD/JEDEC JS-001
ESD – Charged Device Model (CDM)	Class C3 (1kV)	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



Contact Information

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

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