

Product Overview

The Qorvo® QPF4538 is an integrated front end module (FEM) designed for Wi-Fi 802.11a/n/ac systems. The compact form factor and integrated matching minimizes layout area in the application.

Performance is focused on optimizing the PA for PoE applications by centering on 0.5W power consumption while maintaining the highest linear output power and leading edge throughput.

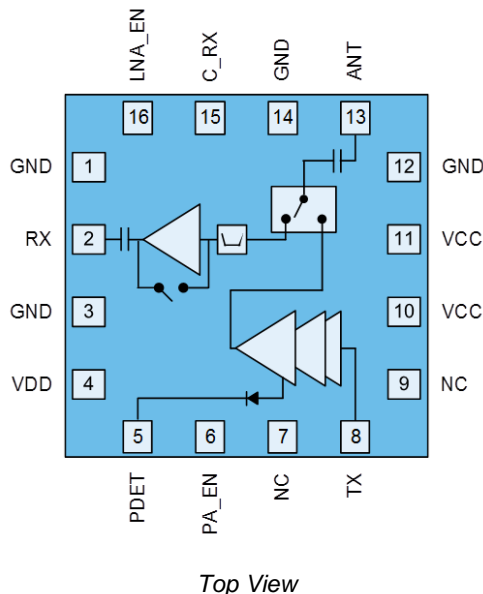
Integrated die level filtering for 2nd and 3rd harmonics as well as 2.4 GHz rejection for DBDC operation are included.

The QPF4538 integrates a 5 GHz power amplifier (PA), single pole two throw switch (SP2T) and bypassable low noise amplifier (LNA) into a single device.



16-Pin, 2.5x2.5 mm Module Package

Functional Block Diagram



Key Features

- 4900 – 5925 MHz
- P_{OUT} = +17.5dBm MCS9 VHT80 -35dB Dynamic EVM
- P_{OUT} = +18.5dBm MCS7 HT20/40 -30dB Dynamic EVM
- P_{OUT} = +21dBm MCS0 HT20 Spectral Mask Compliance
- 160MHz Bandwidth and MCS11 Capable
- Optimized for +3.3 V Operation
- Low Power Consumption ~ 0.5W
- 30 dB Tx Gain
- 2.5 dB Noise Figure
- 14.5 dB Rx Gain & 6 dB Bypass Loss
- 15 dB 2.4 GHz Rejection on Rx Path
- Integrated DC Power Detector

Applications

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

Ordering Information

Part Number	Description
QPF4538SB	Sample bag with 5 pieces
QPF4538SQ	Sample bag with 25 pieces
QPF4538SR	7" reel with 100 pieces
QPF4538TR7	7" reel with 2,500 pieces
QPF4538TR13	13" reel with 10,000 pieces
QPF4538PCK-01	Assembled Evaluation Board + 5 pcs

Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	Class 1B	ANSI/ESD/JEDEC JS-001
ESD – Charged Device Model (CDM)	Class C3	JESD22-C101
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: Electrolytic plated Au over Ni

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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