# rfmd 》) QOధvo 

RFMD + TriQuint = Qorvo

## RFFM4554

## Wi-Fi Integrated Front End Module 4.9 GHz to 5.925 GHz

The RFFM4554 is a front end module (FEM) designed for $802.11 \mathrm{a} / \mathrm{n} / \mathrm{ac}$ applications. The integrated single-pole double throw switch and low noise amplifier with bypass greatly reduces the layout area, bill of materials and manufacturability cost in the customer application. The RFFM4554 has a unique structure where the switch to LNA path has pins so filtering can be added in the ideal path for current Wi-Fi circuit applications. The device is provided in a $2.3 \mathrm{~mm} \times 2.3 \mathrm{~mm} \times 0.45 \mathrm{~mm} 16$ pin QFN package that meets or exceeds the power requirements of IEEE802.11a/n/ac Wi-Fi RF systems.


Functional Block Diagram

## Ordering Information

| RFFM4554SB | Standard 5-piece Sample Bag |  |
| :--- | :--- | :--- |
| RFFM4554SQ | Standard 25-piece Sample Bag |  |
| RFFM4554SR | Standard 100-piece Reel |  |
| RFFM4554TR7 | Standard 2500-piece Reel |  |
| RFFM4554PCK401 | Fully Assembled Evaluation Board |  |
| Revision DS20160930 Brief |  |  |
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Package: QFN, 16-pin, $2.3 \mathrm{~mm} \times 2.3 \mathrm{~mm} \times 0.45 \mathrm{~mm}$

## Features

- 13.5dB LNA Gain
- 5 dB Bypass Loss
- 1.7 dB Noise Figure
- TX to ANT path loss of 0.5 dB
- Max Power at TX Input of 30 dBm
- 2.4GHz Rejection
- Input and Output Matched to $50 \Omega$
- Break out path between switch and LNA for optimal filter placement


## Applications

- Customer Premise Equipment (CPE)
- Wireless Access Points, Gateways
- Routers
- Set-Top Box Applications
- Picocell/Femtocell
- Internet of Things

Disclaimer: Subject to change without notice www.rfmd.com / www.qorvo.com

Pin Names and Descriptions

| Pin | Name |  |
| :---: | :---: | :--- | :--- |
| 1 | C0 | Control pin 0. See truth table for proper voltage level. |
| 2 | RX | RF output port for the RX throw of the T/R switch. This port is matched to $50 \Omega$ and AC coupled internally |
| 3 | GND | Ground connection |
| 4 | LNAIN | RF input port for the LNA. This port is matched to $50 \Omega$ and AC coupled internally |
| 5 | GND | Ground connection |
| 6 | LNAOUT | RF output port for the LNA. This port is matched to $50 \Omega$ and AC coupled internally |
| 7 | GND | Ground connection |
| 8 | VCC | Supply voltage for the module. See applications schematic for bypassing components. |
| 9 | GND | Ground connection |
| 10 | GND | Ground connection |
| 11 | TX | RF input port for the TX throw of the T/R switch. This port is matched to $50 \Omega$ and AC coupled internally |
| 12 | GND | Control pin 1. See truth table for proper voltage level. |
| 13 | Ground connection |  |
| 14 | ANT | Ground connection |
| 15 | GF bidirectional antenna port matched to $50 \Omega$ and AC coupled |  |
| 16 | GND | Ground connection |
| Pkg Base | Ground connection. The back side of the package should be connected to the ground plan though as short of <br> a connection as possible. PCB vias under the device are recommended. |  |

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