

# TQF9046

## 802.11b/g/n + BT WLAN Front End Module



### Applications

- IEEE802.11b/g/n WLAN + BT Applications
- Single-Chip RF Front-end Module
- Wireless LAN Systems
- Portable Battery-Powered Equipment

### Product Features

- Fully Integrated, 802.11b/g/n +BT front-end module
- Internally matched input/output
- Integrated directional detector
- Temperature Compensated Bias Network
- Single battery voltage of 3.2V- 4.6V
- Leadless 2.5 x 2.5 x 0.40 mm SMT Pb-Free
- Typ. Pout (+25C, V<sub>DD</sub> = +3.8V) = 19.3dBm, EVM=3.0%, 802.11n/MCS7
- Typ. Pout (+25C, V<sub>DD</sub> = +3.8V) = 20.2dBm, EVM=4.6%, 64QAM, 54Mbps OFDM

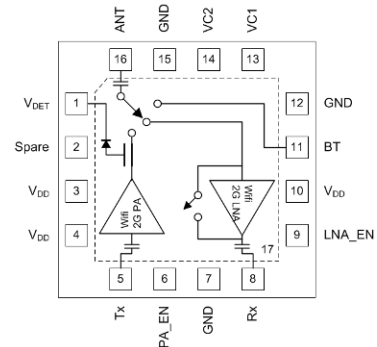
### General Description

The TQF9046 is full WLAN front-end module in an ultra small 2.5mm x 2.5mm footprint package for 802.11b/g/n + BT applications. The TQF9046 contains 2.4GHz PA, directional detector, front-end SP3T switch, and LNA with bypass mode. The architecture and interface are optimized for next generation WLAN integration into handset devices.

The front-end module features CMOS compatible control voltages to facilitate ease of use. With its low power dissipation, the front-end Module contributes to the extended battery life of next generation WLAN solutions.

The front-end module is manufactured in TriQuint's high-reliability E/D pHEMT technology and is assembled in ultra thin profile 2.5mm x 2.5mm x 0.40mm QFN - 16 Pb-Free package.

### Functional Block Diagram



### Pin Configuration

| Pin #         | Symbol                                                                  |
|---------------|-------------------------------------------------------------------------|
| 7, 12, 15, 17 | GND                                                                     |
| 1             | Detector Pin for 2.4G TX                                                |
| 2             | Spare                                                                   |
| 3             | Vdd3, DC supply pin for 2.4GHz PA(final stage)                          |
| 4             | Vdd2, DC supply pin for 2.4GHz PA(1st stage) and PA logic and regulator |
| 5             | Tx                                                                      |
| 6             | PA_Enable                                                               |
| 8             | Rx                                                                      |
| 9             | LNA_Enable                                                              |
| 10            | Vdd1, DC supply pin for 2.4GHz LNA and Switch logic                     |
| 11            | Bluetooth port                                                          |
| 13            | Vcontrol 1                                                              |
| 14            | Vcontrol 2                                                              |
| 16            | ANT                                                                     |

### Ordering Information

| Part No. | Description   |
|----------|---------------|
| TQF9046  | Packaged part |

Standard T/R size = 2.5K pieces on a 7" reel.