

5GHz RF/IF Converter with Integrated Synthesizer



The ISL3687 is a highly integrated, SiGe, Half Duplex RF/IF Converter with integrated PLL Synthesizer and

VCO IC device. It is part of the Intersil PRISM® V, 5GHz radio chipset.

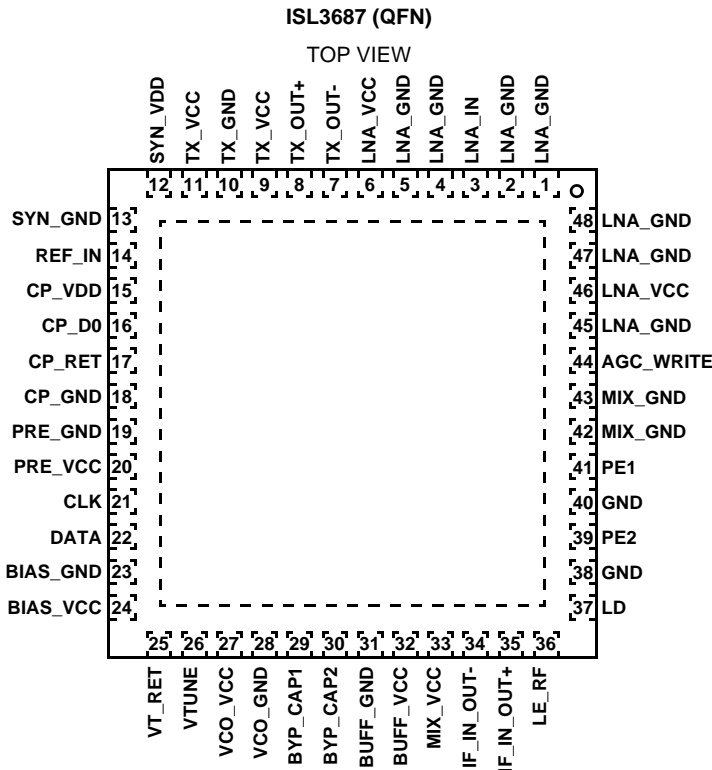
The ISL3687 directly interfaces with Intersil's ISL3787 1.2GHz IF Converter with AGC and Synthesizer to allow operation with a single SAW filter for both Transmit and Receive functions. The addition of the Intersil's ISL3877 Wireless LAN Media Access Controller and Baseband Processor completes a Wireless LAN radio application for the 802.11a 5GHz standard.

The ISL3687 combines all the necessary RF front end functions into a QFN Package suitable for miniPCI and PCMCIA applications..

Ordering Information

| PART NUMBER | TEMP. RANGE (°C) | PACKAGE | PKG. DWG. # |
|--------------|------------------|---------------|-------------|
| ISL3687IR | -40 to 85 | 48-Lead QFN | L48.7 X 7 |
| ISL3687IR-TK | -40 to 85 | Tape and Reel | |

Pinout



Features

- RF Input Range 5.15 to 5.35GHz
- IF Output 750 to 870MHz
- Receive Cascaded Noise Figure 5.4dB
- Selectable LNA Gain Step 22dB
- Transmit Power 0 dBm
- Integrates a VCO and a Synthesizer PLL
- Internally Matched
- Integrated Image and SSB TX filters
- Multiplexed Port for Single IF Filter application
- Low Supply Operation 2.7-3.3V

Applications

- High Data Rate Wireless LAN Systems Targeting the IEEE 802.11a Standard
- PCI, miniPCI and PCMCIA Wireless LAN Adapters
- Spread Spectrum WLAN RF Modems
- TDMA or CSMA Packet Protocol Radios
- PCN/ Wireless PBX/Wireless Local Loop

Simplified Block Diagram

