

**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<sup>®</sup> V, 5GHz radio chipset.

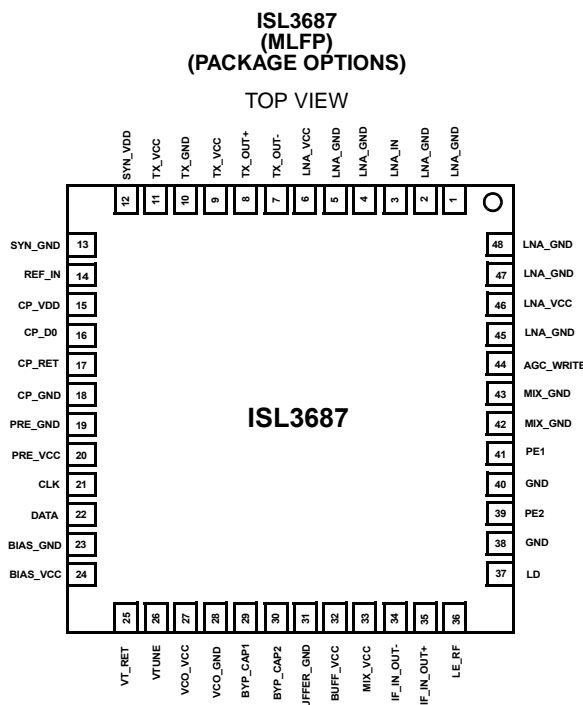
The ISL3687 directly interfaces with Intersil's ISL3787 1.2GHz IF Converter with AGC and Synthesizer to allow operation with a single SAW filter for both Transmit and Receive functions. The addition of the Intersil's ISL3877 Wireless LAN Media Access Controller and Baseband Processor completes a Wireless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

The ISL3687 combines all the necessary RF front end functions into a Micro Lead Frame Plastic Package suitable for Mini-PCI and PCMCIA applications..

**Ordering Information**

PART NUMBER	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
ISL3687IR	-40 to 85	48-Lead MLFP	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, Mini-PCI 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**

