

ADVANCE INFORMATION

All information in this data sheet is preliminary and subject to change.

6/98



Direct-Conversion Tuner IC for Digital DBS Applications

MAX2107†

General Description

The MAX2107 is a low-cost, direct-conversion tuner IC designed for use in digital, direct-broadcast-satellite (DBS) television set-top box units. Its direct-conversion architecture reduces system cost compared to devices with IF-based architectures.

The MAX2107 directly tunes L-band signals to baseband using a broadband I/Q downconverter. Operating frequency range spans from at least 950MHz to 1450MHz.

The IC includes an LNA with AGC, two downconverter mixers, an oscillator with 90° quadrature generator and prescaler, and baseband amplifiers.

Applications

- DirectTV, PrimeStar, EchoStar DBS Tuners
- DVB-Compliant DBS Tuners
- Cellular Base Stations
- Wireless Local Loop
- Broadband Systems
- LMDS

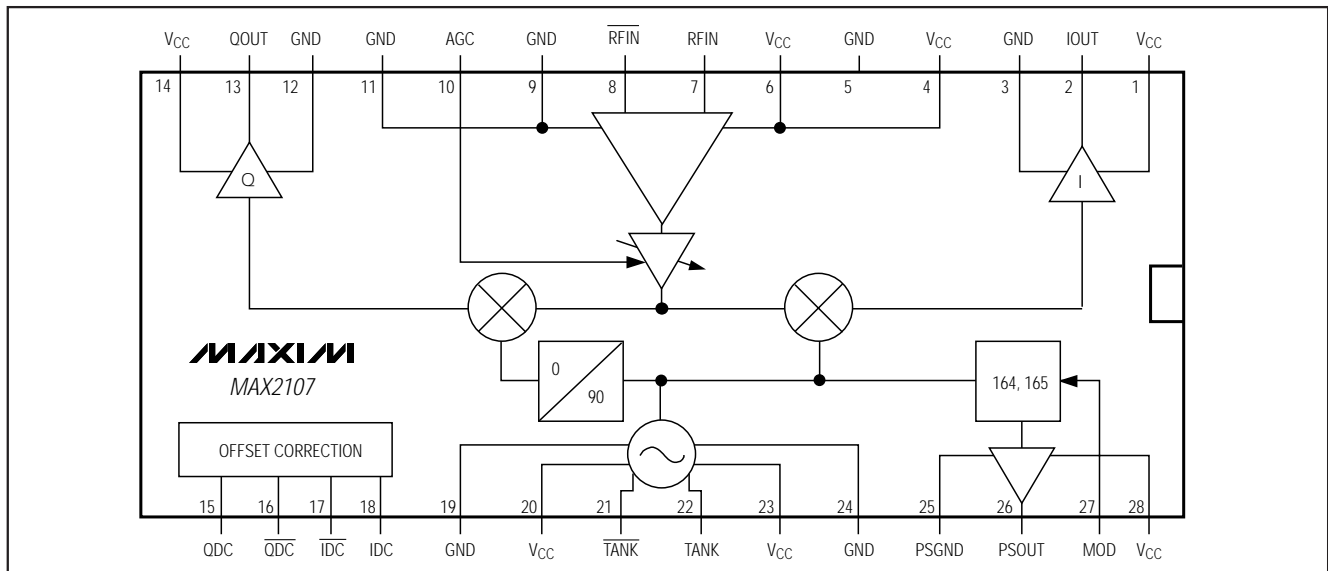
Features

- ◆ **Low-Cost Bipolar Design, Lowest Cost Architecture**
- ◆ **Operates from Single +5V Supply**
- ◆ **950MHz to 1450MHz Input Frequency Range**
- ◆ **On-Chip Oscillator**
- ◆ **On-Chip Quadrature Generator, Dual-Modulus Prescaler (/64, /65)**
- ◆ **Input Levels: -19dBm to -61dBm per Carrier**
- ◆ **Over 40dB AGC Control Range**
- ◆ **Noise Figure = 13.2dB; IIP3 = 6.5dBm (at 1450MHz)**
- ◆ **Automatic Baseband Offset Correction**
- ◆ **Easy Interface to MAX1002/MAX1003 Dual ADC and Popular Baseband ICs**
- ◆ **Evaluation Kit Available, Tuner Reference Design Assistance Available**

Ordering Information

PART	TEMP. RANGE	PIN-PACKAGE
MAX2107CWI	0°C to +70°C	28 Wide SO

Functional Diagram



† Patents pending



Maxim Integrated Products 1

For free samples & the latest literature: <http://www.maxim-ic.com>, or phone 1-800-998-8800. For small orders, phone 408-737-7600 ext. 3468.

