

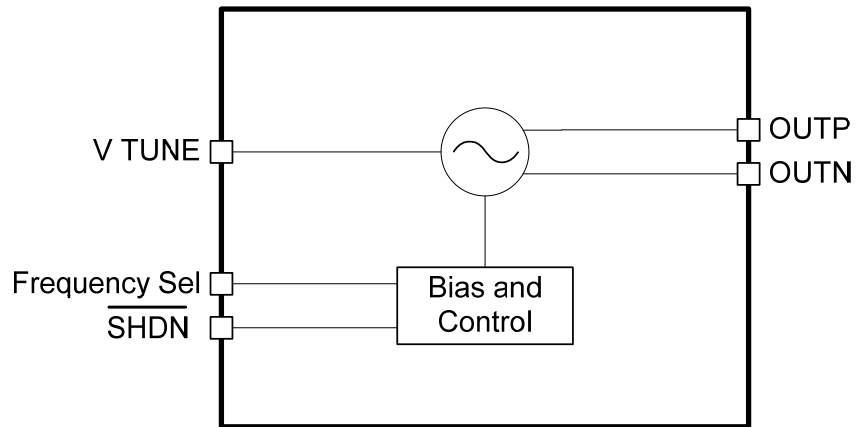
### Typical Applications

- GPS Receivers
- Galileo Receivers
- GLONASS Receivers
- L1 and L2 Dual Band Receivers

### Key Features

- Band Switching to
  - 1400MHz
  - 1530MHz
- 5mA Current Consumption @2.8V
- Shutdown Mode
- -125dBc/Hz @1MHz Phase noise

### Block Diagram



### IP Block Overview

The TRFS20009 is a VCO core designed for positioning receivers. It operates from a 2.7V to 3.0V supply. One of its unique features is band switching capability. With an electronic control signal, the frequency can be shifted by 130MHz to allow reception in different bands. The center frequencies and magnitude of the frequency shift can be adjusted in a custom modification of this cell. The VCO output is differential designed to drive a downconverter mixer or a divider.

# IP Block Performance Summary

Specification	Conditions	MAX	TYP	MAX	Units
Temperature Range		-40	25	85	°C
VDD		2.7	2.85	3.0	V
IDD	In operation		5		mA
IDD	In shutdown mode			10	μA
RF Frequency	Frequency Sel = Low		1400		MHz
RF Frequency	Frequency Sel = High		1530		MHz
Phase Noise	@1MHz offset		-125		dBc/Hz

# Known Limitations/Issues

# Revision History

Revision #	Date	Notes
V1.0	14-Dec-2008	Initial Draft
V1.1	14-Jan-2009	Initial Customer Release