

Typical Applications

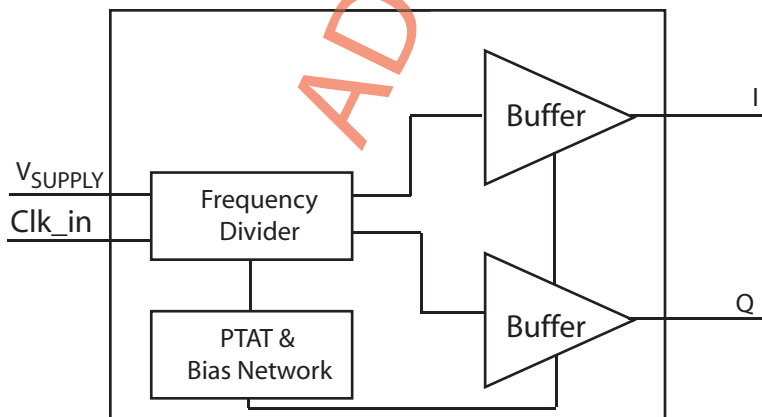
The TRFS-154 is a quadrature generator core circuit for use in such applications as:

- Receiver and transmitter front ends
- WCDMA, UMTS, CDMA, GSM, PCS, WLAN, GPS, AMPS systems
- General-purpose applications

Product Overview

The TRFS-154 is an I/Q quadrature generator for the mixer LO in receiver and transmitter front-end applications. The quadrature signal, generated using a master-slave toggle flip-flop, has low phase mismatch, low duty cycle imbalance, and low noise due to the differential architecture. The mode control allows shutdown of the generator. This core circuitry can be easily integrated with other circuits as well as packaged individually in a leadless chip carrier.

Block Diagram



Key Features

- Compatible with transceiver front end
- Low I/Q phase mismatch $<0.4^\circ$
- Duty cycle imbalance $<0.1\%$
- Noise output -149dBc @ $>10\text{MHz}$ offset

Performance Summary

Item	Unit	Min	Typical	Max	Notes
Input Frequency	MHz	3000	4300	5500	
Output Frequency	MHz		2150		
Supply Voltage	V	2.7	2.85	3.3	
Duty Cycle Balance	%			0.1	For I and Q separately
I/Q Phase Error	Degree			0.4	
Noise Floor Output	dBc		-149		@ > 10MHz offset
Output Signal Level	mVp-p (diff)		320		
Supply Current	mA		4.5		

ADVANCE INFORMATION

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