

### Typical Applications

The TRFS-202 is a Receiver VCO Chip for use in such applications as:

- WCDMA Systems
- UMTS Systems

### Product Overview

TRFS-202 WCDMA Rx VCO is a fully integrated voltage controlled oscillator operating at a frequency of 4.28GHz for WCDMA receiver applications. The differential architecture of the oscillator, along with local bias generation, improves the rejection of common mode interference and provides noise immunity. The VCO output buffer provides high isolation with a pulling sensitivity of 2.9MHz. The low phase noise of the circuit over a nominal tuning range of 85MHz/Volt makes it suitable for receiver applications. The digital band select allows selection of 16 frequency bands in 68 MHz steps. The core circuitry can be easily integrated with other circuits as well as packaged alone into a leadless chip carrier.

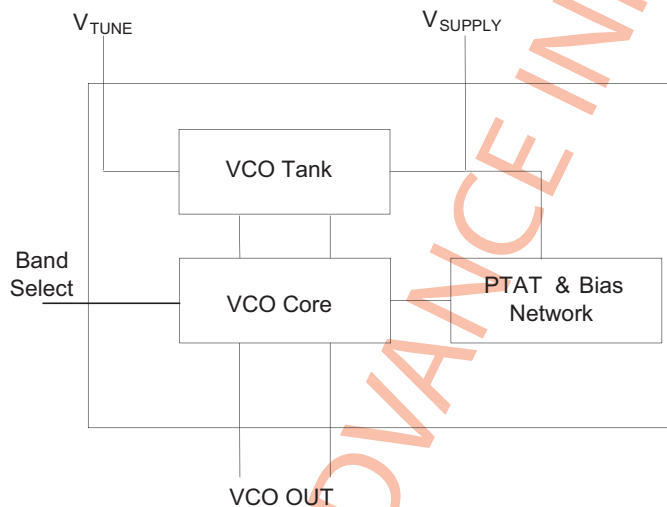
### Key Features

- Compatible with WCDMA standard
- Fully integrated with internal output buffer
- Fully differential design
- Low phase noise of -77dBc/Hz @10kHz offset
- Tuning range of 85MHz/Volt
- Digital band select - 16bands, in 68MHz steps

### Performance Summary

Item	Unit	Min	Typical	Max	Notes
Operating Frequency	MHz	4240	4280	4340	
Supply Voltage (Vcc)	V	2.7	2.85	3.3	
Phase Noise					
10kHz offset	dBc/Hz		-77		
1 MHz offset	dBc/Hz		-117		
20 MHz offset	dBc/Hz		-144		
Tuning Sensitivity	MHz/Volt		85.8		
Frequency Bands			16		Four bit digital input
Frequency Range/Band	MHz		68		Over operating frequ
Pulling Sensitivity	MHz		2.9		50% change in load impedance
Pushing Sensitivity	MHz/0.2 Volt		7.5	11.1	0.2 Volt change in V
Vtune Bandwidth	MHz	13	17	22	-3dB bandwidth
Vtune Input Range	Volts	0.5		Vcc - 0.5	
Supply Current	mA		4.2	6.8	

### Block Diagram



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