

ITM2520

Cellular/GPS Image-Reject Receiver RF Front-end IC

Product Description :

The ITM2520 is an optimized LNA/Mixer IC for dual-band tri-mode applications. It provides a receiver front-end for cellular CDMA/AMPS and GPS functions on a single chip. The LNAs/Mixers for both bands are designed for high gain, high linearity, and low noise figure with flexible optimization of performance. The device offers an easy control of linearity and current, using one external resistor, as well as a gain control to minimize intermodulation and cross-modulation due to strong jammers. The image-reject mixer (IRM) has high image-reject ratio at low current consumption, eliminating external RF SAW filter on GPS signal path. This feature saves the foot-print space and manufacturing cost simultaneously. The ITM2520 includes an internal LO frequency divider which allows the use of a single VCO for both bands.

The ITM2520 is fabricated on an advanced SiGe BiCMOS process, and is available in a small 24-pin Leadless Plastic Chip Carrier (LPCC) package.

Product Features :

- Operating frequency :
 - Cellular: 869 ~ 894 MHz
 - GPS: 1540 ~ 1600 MHz
- Easily adjustable Gain, NF, and IIP3
- Two step LNA gain control
- GPS image-reject mixer eliminating RF SAW filter
- 40dB Gain, 2.2dB NF for GPS signal path
- Internal LO divider for use of single VCO
- On-chip Tx-LO buffer
- Small 24-pin LPCC package : 4.0mm × 4.0mm × 0.9mm

Applications :

- Cellular CDMA/AMPS Mobile Phone
(@ IS-95A/B/C, CDMA2000, CDMA20001X)
- 800 MHz CDMA and TDMA Receivers
- GPS Receiver for E911 and Traveler Assistance
- Portable Radio Handset and Equipments

Functional Block Diagram

