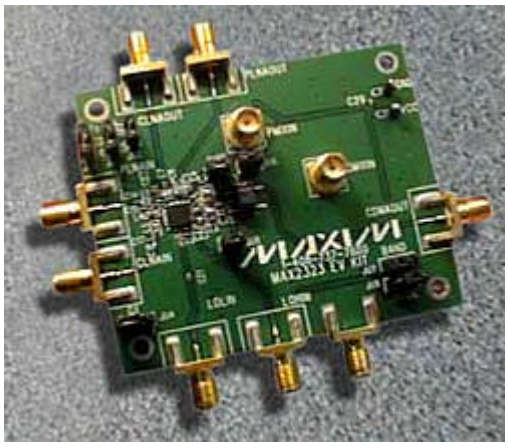
Application Note 318: Nov 01, 2000

REP007: Cellular Front-End IC Drives IFR3100 IF Demodulator

Rapid Engineering Prototypes are real circuits that Maxim application engineers have built and measured in our labs. They can provide a starting point for new RF designs. They are not available as Evaluation Kits.

Additional Information: Wireless Product Line Page
Quick View Data Sheet for the MAX2323/MAX2325
Applications Technical Support



Objective: To develop a suitable IF match between this dual-band triple-mode front-end IC and the IFR3100 IF demodulator IC, and to measure the front-end performance.

The MAX2323 offers very attractive Icc versus noise figure and linearity, so this front-end IC is found in applications replacing poorer-performing ICs from other non-Maxim chipsets. This application was developed to match the IF port to the MSM-based IFT3100 IF demodulator. Note that the MAX2323 PCS LNA was measured at a 1.9dB noise figure, which could likely be improved further given the time.

The MAX2323 low-noise amplifier (LNA) plus mixer is designed for dual-band CDMA cellular-phone handsets, but it can also be used in dual-band TDMA, GSM, EDGE, or WCDMA applications. It differs from its predecessor (the MAX2320) by adding a third "mid-

gain" state for the cellular-band LNA that improves switchover hysteresis margin. It also comes in a smaller package (28-QFN) and offers increased third-order input intercept.

Block Diagram of the Receive-Path Application
Schematic of the MAX2323 Evaluation Kit (PDF, 55K)
Bill of Materials, Part 1
Bill of Materials, Part 2
Performance Results of the MAX2323

MORE INFORMATION

MAX2323: QuickView -- Full (PDF) Data Sheet (176k) -- Free Sample