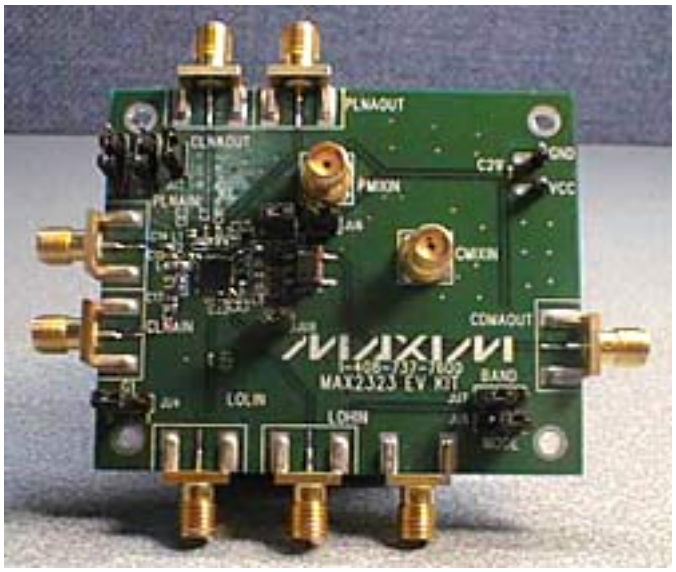
Nov 01, 2000

REP008: Dual-Band Front-End IC Tuned for CDMA, PCS, and AMPS at a Common 85MHz Low IF

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 and measure this dual-band triple-mode front-end IC using only 85MHz IF centers for processing PCS, cellular CDMA, and cellular AMPS.

The MAX2323 offers a single-path output for cellular and PCS digital mixers. In this application, the object was to assess performance with a common low IF at 85.38MHz. The high IP2 performance of the PCS mixer combined with the rejection from the RF filter's band edge

provided reasonable although not excellent 1/2 IF image rejection. This was an experimental prototype done to assess the limitations of the MAX2320, and the results were surprisingly good, even with a low IF at the PCS band.

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 sensitivity switchover and hysteresis margin. It also comes in a smaller package (28-QFN) and offers increased third-order input intercept.

Schematic of the MAX2323 Evaluation Kit (PDF, 61K)
Bill of Materials, Part 1
Bill of Materials, Part 2
Bill of Materials, Part 3

REPCA11Q300, November 2000

More Information

MAX2323: QuickView -- Full (PDF) Data Sheet -- Free Samples