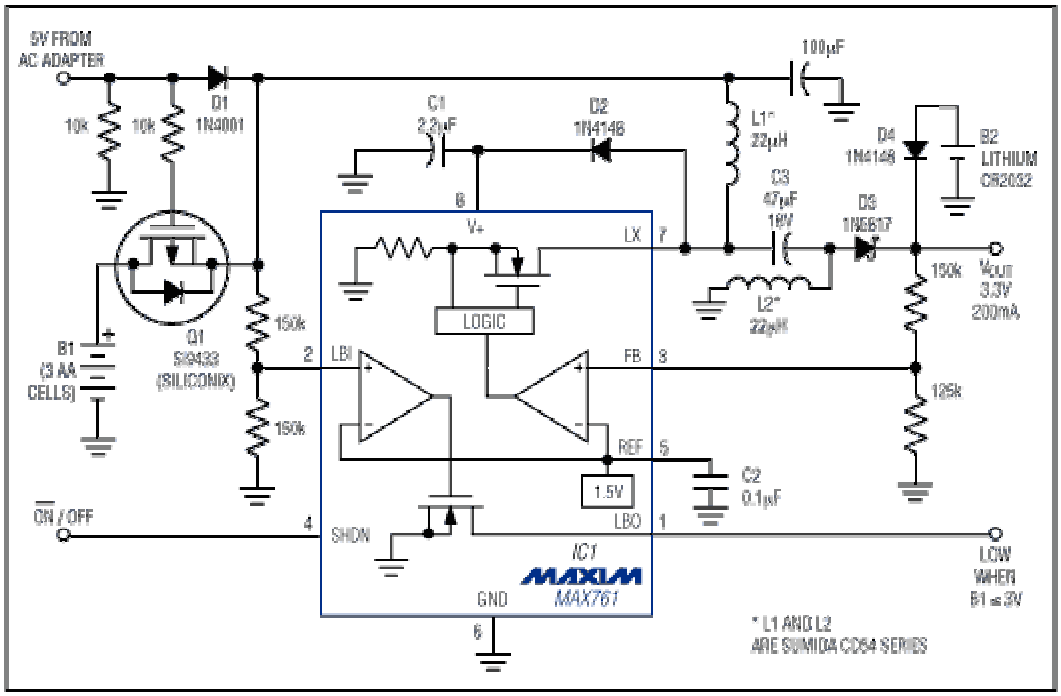
Application Note 331: Nov 01, 2000

REP018: Dual-Band Dual-Mode FE IC with Common 183.6MHz 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 apply and measure this dual-band triple-mode CDMA front-end IC in a receiver with all 183MHz IFs.

The MAX2323 was developed with a single, digital, IF output port. Having a common 183MHz IF, both digital mixers' gain is still adequate for good receiver sensitivity, and their IP2 performance and other related parameters offer sufficient margin for meeting 1/2 IF and additional interferers in a CDMA handset. In this application, the MAX2323 was tested for and successfully applied to a CDMA dual-band dual-mode handset front-end design. The circuit modification requirement for this project was to retune the FM analog and the cellular/PCS digital mixers to 183MHz IF.

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.

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

REPPC08Q300, November 2000

MORE INFORMATION

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