



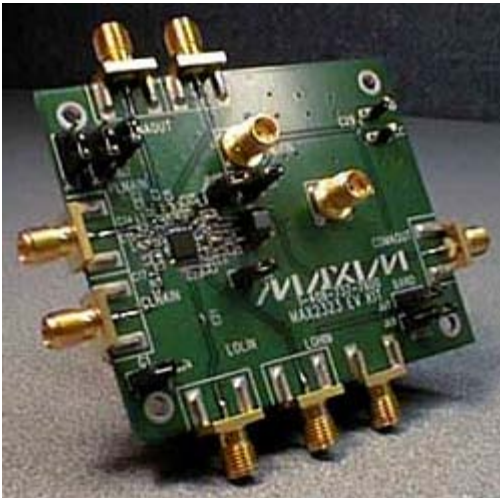
APPLICATION NOTE 463

REP019: Tuned Dual-Band Front-End CDMA IC with Single 110MHz IF

Abstract: This application note assesses a tuned, dual-band, front-end CDMA IC with single 110MHz IF. Focus is on the MAX2322, a low-noise amplifier (LNA) for dual-band CDMA cell-phone handsets. The MAX2323 can also be used in dual-band TDMA, GSM, EDGE, or WCDMA applications.

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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.



Objective: To develop a set of measurements to compare slight improvements in the revision of this CDMA dual-band triple-mode front-end IC.

Maxim continually improves certain IC performances for specific customer requests. The [MAX2323](#) is a newer version of the [MAX2320](#). The objective of this project was to prove the slight improvements in this revision in comparison with its predecessor, and to show the correct setup for evaluating LNAs and mixers. In summary, minor changes were noted, and the revision was determined to be at least as good as its forerunner.

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 \(PDF, 51kB\)](#)

[Bill of materials, part 1](#)

[Bill of materials, part 2](#)

[Cellular LNA/mixer IIP3 measurement test setup](#)

[Cellular LNA/mixer noise-figure measurement test setup](#)

[PCS LNA/mixer IIP3 measurement test setup](#)

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Related Parts

[MAX2323](#) Triple/Dual-Mode CDMA LNA/Mixers

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