

REP011: Front-End Japanese CDMA IC Uses 110MHz 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 MAX2320/MAX2321/MAX2322/MAX2324/MAX2326/MAX2327](#)
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Objective: To develop a suitable pair of 110MHz IF matching circuits for this chip on-board application of the cellular-band dual-mode CDMA front-end IC.

This project's requirement was to modify the analog AMPS' and digital mixers' matching circuits both to 110MHz IF, while meeting a specified gain, NF, and linearity spec. Here, we included the package dimensions of the bare die, because the application was for direct chip on board in an RF module application.

The MAX2324 low-noise amplifier (LNA) plus mixer is designed for cellular-band CDMA cell-phone handsets, but it can also be used in TDMA, GSM, or EDGE applications. It offers two LNA gain states to meet the required CDMA dynamic range, with switchover hysteresis margin. There are two mixers: one for the analog IF output and the other for the digital modulation IF output. The MAX2324 has buffered VCO inputs and outputs, eliminating the need for extra transmit upconverter VCO buffers.

[Schematic of the MAX2324 Evaluation Kit \(PDF, 57K\)](#)

[Outline of Bare Die](#)

[Bill of Materials, Part 1](#)

[Bill of Materials, Part 2](#)

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MORE INFORMATION

MAX2324: [QuickView](#) -- [Full \(PDF\) Data Sheet \(536k\)](#)

-- [Free Sample](#)