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APPLICATION NOTE 440

REP004: LNA for 2.35GHz Mobile Data Receiver

Sep 30, 2002

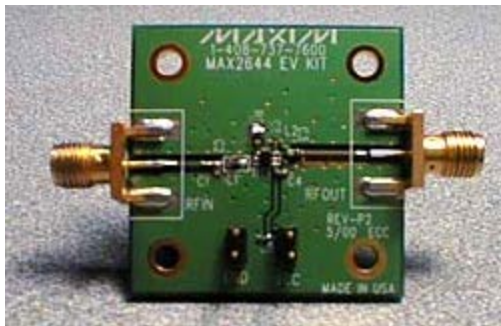
Rapid Engineering Prototypes are real circuits that Maxim application engineers have built and measured in our labs. They can provide a starting point for new RF designs. They are not available as Evaluation Kits.

Additional Information:

- [Wireless Product Line Page](#)
- [Applications Technical Support](#)



[Click here](#) for an overview of the wireless components used in a typical radio transceiver.



Objective: To develop a low-current low-cost high-performance LNA for a LEO satellite mobile receiver by custom tuning and matching.

For a wireless data application, the MAX2644 "super LNA" was tuned to the 2.35GHz band. The application design was tuned for optimal noise and gain. The MAX2644's continuously variable IIP3 adjustment was considered attractive to allow amplifier gain/noise optimization independent of linearity.

The MAX2644 is a 15dB gain LNA with variable IIP3 up to +4dBm and an NF of 1.8dB at 2.45GHz. It has on-chip output matching to 50 ohms and uses a simple input match topology for optimum noise figure. It can be applied for a variety of applications in the 2GHz to 2.5GHz band, including LEO satellite receivers, the WCDMA handset front end, and wireless LAN receivers. The MAX2644 comes in a tiny SC-70 package.

[Schematic of the MAX2644 Evaluation Kit \(PDF, 29K\)](#)
[Performance Results of the MAX2644](#)

Related Parts

[MAX2644](#)

2.4GHz SiGe, High IP3 Low-Noise Amplifier

[Free Samples](#)

More Information

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