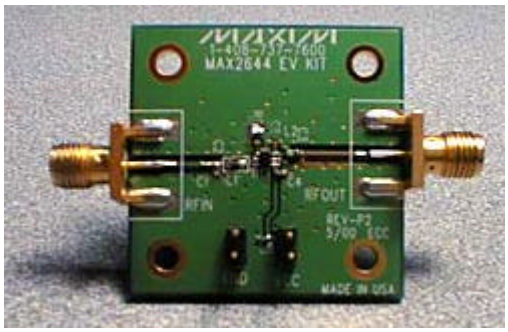
Application Note 314: Nov 01, 2000

LNA for 2.35GHz Mobile Data Receiver (REP004)

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.

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



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

MORE INFORMATION

MAX2644: QuickView -- Full (PDF) Data Sheet (176k) -- Free Sample