

Silicon Germanium Dual Band Tri-Mode LNA/Mixer



RF Micro Devices introduced the RF2489 LNA/mixer — a complete dual band, tri-mode receiver front end for the CDMA handset market. The RF2489 contains two LNAs, three mixers, local oscillator (LO) divider circuitry and LO buffer outputs. The device performs all of the front end receive signal processing required for dual band, tri-mode applications. The design of the RF2489 permits the bias currents to be set using off-chip current reference resistors for both the LNA and mixer blocks. The device's design flexibility allows the conversion of received CDMA, AMPS or GPS radio frequency signals to intermediate frequency in dual band, tri-mode (Cellular CDMA, Cellular AMPS, PCS CDMA), dual mode (Cellular CDMA, Cellular AMPS) or PCS platforms. The RF2489 features 30 dB of stepped LNA/mixer gain control as well as adjustable LNA IIP3 versus bias current. The Cellular LNA features 15 dB gain, 1.1 dB noise figure, and 12.0 dBm IIP3. The PCS LNA has 16 dB gain, 1.3 dB noise figure, and 10 dBm IIP3. And the GPS LNA features 18 dB gain, 1.2 dB noise figure, and – 4 dBm IIP3. The RF2489 is manufactured using a SiGe HBT process technology and is offered in a 5 × 5 mm, leadless plastic package.

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