

REP014: CDMA PA Provides -45dBc ACPR at +28.5dBm

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 MAX2264/MAX2265](#)
[Applications Technical Support](#)



Objective: For this low-cost CDMA cellular PA, to develop an application circuit that offers good linearity with good power-added efficiency (PAE).

The project requirement was to tune the MAX2265 RF power amplifier in a cellular-band CDMA handset to meet 28.5dBm power output with -45dBc ACPR1 and 34% PAE. The EV board was used initially for the tuning and the tests.

The MAX2265 linear RF power amplifier is designed for U.S. cellular-band IS-95-based CDMA, PDC, and IS-136-based TDMA modulation formats. To improve its PAE, the MAX2265 offers a continuous-bias-current throttle-back arrangement. In this way, the amplifier linearity (that is, the adjacent-channel power ratio, or ACPR) is held relatively constant, whereas both the output power and the current drain are reduced. Thus, the desired linearity can be maintained, while improving low-output PAE, over a continuously variable output control range.

[Schematic of the MAX2265 Evaluation Kit](#) (PDF, 39K)

[Performance Results of the MAX2265](#)

[Bill of Materials, Part 1](#)

[Bill of Materials, Part 2](#)

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MORE INFORMATION

MAX2264: [QuickView](#) -- [Full \(PDF\) Data Sheet \(232k\)](#)

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