

Maxim > Products > Wireless and RF > MAX2500, MAX2502, MAX2503, ...

MAX2500, MAX2502, MAX2503, MAX2504, MAX2504A, MAX2506, MAX2507

## Complete Cellular Baseband-to-RF Transmitters with PA

Highly Integrated Transmitters Ideal Solution for CDMA-Market Phones

Overview Technical Documents Ordering Info User Comments (0) All

### Status

Part Number	Status
MAX2500	This product is Not Recommended for New Designs.
MAX2502	This product is Not Recommended for New Designs.
MAX2503	This product is Not Recommended for New Designs.
MAX2504	This product is Not Recommended for New Designs.
MAX2504A	This product is Not Recommended for New Designs.
MAX2506	This product is Not Recommended for New Designs.
MAX2507	This product is No Longer Available.

### Description

The MAX250\_ series of complete transmitters are designed for low-cost cellular applications. The miniature 7mm x 7mm transmitter includes a quadrature modulator, upconverters, drivers, power amplifiers (PAs), a peak detector, a monolithic voltage-controlled oscillator (VCO), and a PLL. Each transmitter is tailored for specific frequency bands according to the Selector Guide. The MAX2500/MAX2502/MAX2503/MAX2504/MAX2504A/MAX2506/MAX2507 are compatible with voltage-mode baseband interfaces.

The devices are based on quasi-direct I/Q modulation. The devices accept differential I/Q baseband inputs, which are upconverted to IF. The IF signal is then upconverted to the RF frequency. Each signal is then fed into separate on-chip PAs through external RF filters. PA matching is integrated onto the chip to further reduce external component count. These chips feature an on-chip VCO and synthesizer to generate LO signals for both the IF and RF sections.

The MAX250\_ devices are programmed with an SPI™/MICROWIRE™-compatible 3-wire serial bus. These devices feature multiple modes of operation, including shutdown, idle, high power, and low power, for flexible power management. To further reduce the current consumption, the PA supply voltage can be reduced to as low as 0.5V at lower output powers. The devices operate from single 2.7V to 3.3V regulated supplies and are packaged in a small 7mm x 7mm, 48-lead LGA package.

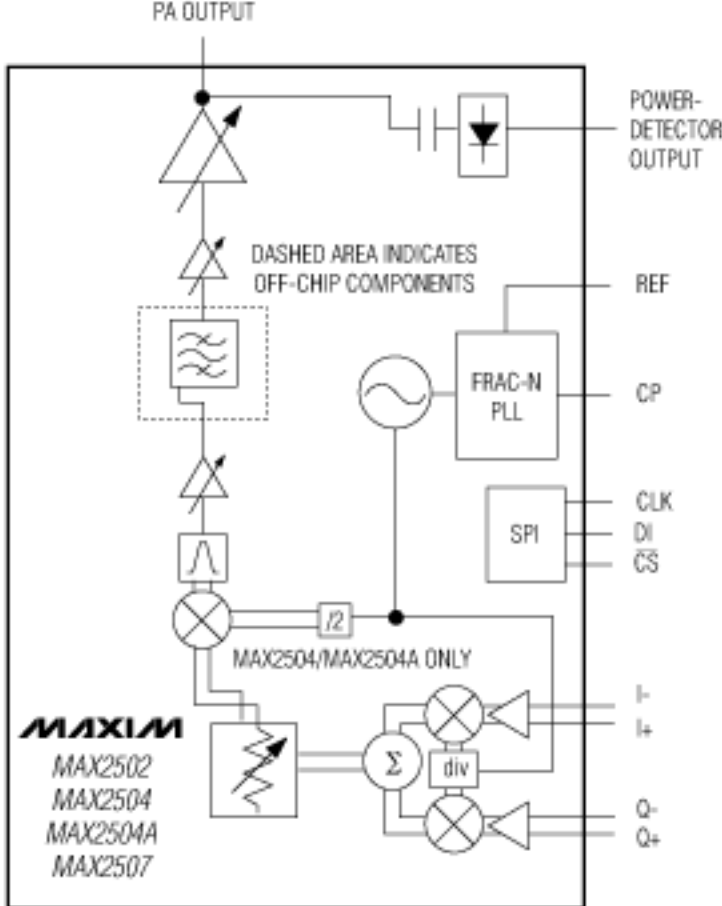
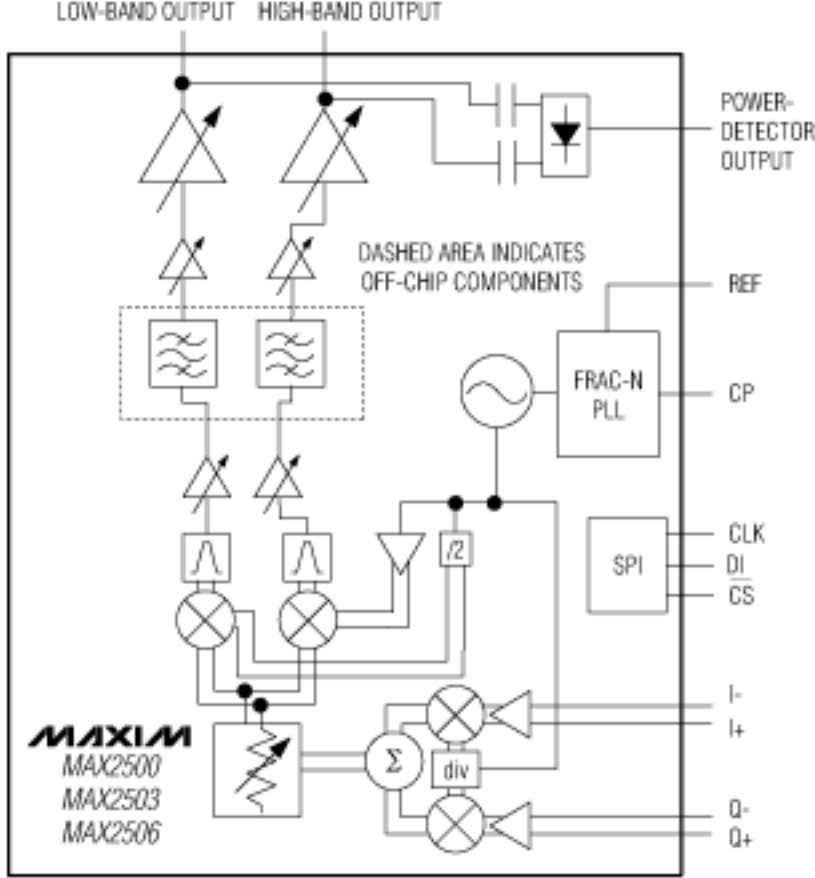
### Key Features

- Complete Baseband-to-Duplexer System Solution
- Low Transmit Current
- 2.7V to 3.3V Single-Supply Operation (Excluding the PA Section)
- On-Chip RF PLL, with Fully Monolithic VCO
- Integrated Peak Power Detector with 20dB Range
- 78dB Gain-Control Range
- 3-Wire SPI/MICROWIRE Compatible
- Low Rx Band Noise
- Internal PA Matching
- 7mm x 7mm, 48-Lead LGA Package

### Applications/Uses

- cdmaOne™/cdma2000®/EV-DO Single-Band, Dual-Band, and Tri-Mode Cellular Phones
- F-OFDM Terminals
- Multiband Applications
- TD-SCDMA Cellular Phones

### Diagram



Functional Diagrams

### Technical Documents

Product Guide 5158 Wireless

App Note 3036 MAX2392 Meets TD-SCDMA UE Phase Noise Requirements

App Note 3961 TD-SCDMA RD V2.1 Design Meets Rx-Blocking Mask and Sensitivity Requirements

### Product Guides

Wireless (PDF)

### Reliability Reports

Reliability Report:

[MAX2507.pdf](#)

Request Reliability Report for:

MAX2500

Go

### Software/Models

none

### Ordering Information

Filters: Part Number: Package: Any Temperature: Any Tape and Reel Sample Go

Part Number	Free Sample	Buy	Status	Package: TYPE PINS FOOTPRINT DRAWING CODE/VAR *	Temp	RoHS/Lead-Free? Materials Analysis
MAX2500ELM-D		Buy	NRND	LGA;48 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2500ELM-TD		Buy	NRND	LGA;48 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2502ELM-D		Buy	NRND	FCLGA;48 pin;50.4 mm² Land Pattern: Not Available Use pkgcode/variation: L4877A-2*	-40°C to +85°C	RoHS/Lead-Free: RoHS Qualified Materials Analysis
MAX2502ELM-TD		Buy	NRND	LGA;48 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2504AELM-D		Buy	NRND	LGA;48 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2504AELM-TD		Buy	NRND	LGA;48 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2504ELM-D		Buy	NRND	LGA;48 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2504ELM-TD		Buy	NRND	LGA;48 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2507ELM#DG42	N/A	No Longer Available	No Longer Available	FCLGA;48 pin;50.4 mm² Land Pattern: Not Available Use pkgcode/variation: L4877F-2*	-40°C to +85°C	RoHS/Lead-Free: No Materials Analysis
MAX2507ELM#TDG42	N/A	No Longer Available	No Longer Available	FCLGA;48 pin;50.4 mm² Land Pattern: Not Available Use pkgcode/variation: L4877F-2*	-40°C to +85°C	RoHS/Lead-Free: No Materials Analysis
MAX2507ELM-D		N/A	No Longer Available	FCLGA;48 pin;50.4 mm² Outline Drawing:21-0157 (PDF) Land Pattern: 90-0302 (PDF) Use pkgcode/variation: L4877A-3*	-40°C to +85°C	RoHS/Lead-Free: RoHS Qualified Materials Analysis
MAX2507ELM-TD		N/A	No Longer Available	FCLGA;48 pin;50.4 mm² Outline Drawing:21-0157 (PDF) Land Pattern: 90-0302 (PDF) Use pkgcode/variation: L4877A-3*	-40°C to +85°C	RoHS/Lead-Free: RoHS Qualified Materials Analysis

Notes:

- Other options and links for purchasing parts are listed at: <http://www.maxim-ic.com/sales>.
- Didn't Find What You Need? Ask our applications engineers. Expert assistance in finding parts, usually within one business day.
- Part number suffixes: T or T&R = tape and reel; + = RoHS/lead-free; # = RoHS/lead-exempt; -D = drypack; -U/+U on DS parts = cut tape. More: See Full Data Sheet or Maxim Product Naming Conventions.
- \* Some packages have variations, listed on the drawing. "PkgCode/Variation" tells which variation the product uses. Note that "+", "#", "-" in the part number suffix describes RoHS status. Package drawings may show a different suffix character.

#### Your Comments

Login or register to post a comment.

### Didn't Find What You Need?

Next Day Product Selection Assistance from Applications Engineers

Parametric Search

Applications Help

### Information Index

#### Overview

Description

Key Features

Applications/Uses

Key Specifications

Diagram

Notes and Comments

#### Technical Documents

Data Sheet

Technical Documents

Evaluation Kits

Reliability Reports

Software/Models

#### Ordering Info

Price and Availability

Samples

Buy Online

Package Information

Lead-Free Information

#### Related Products

Similar Products by Function

Similar Products by Application

Evaluation Kits

Products with Similar Part Numbers

Products Used With This