MAX2822

2.4GHz 802.11b Zero-IF Transceiver with Integrated PA and Tx/Rx Switch

Overview | Technical Documents | Ordering Info | Related Products | User Comments (0) | All

Status

All versions are No Longer Available. See Ordering Information for recommended replacements.

Data Sheet

No Longer Available

Description

The MAX2822 single-chip transceiver is designed for 802.11b (11Mbps) applications operating in the 2.4GHz to 2.5GHz ISM band. The transceiver includes all the circuitry required to implement an 802.11b RF-to-baseband transceiver solution, including the power amplifier, transmit/receive switch, and 50Ω matching. The fully integrated receive path, transmit path, VCO, frequency synthesis, and baseband/control interface provide all the required active RF circuitry. Only a small number of passive components are needed to form the complete radio front-end solution.

The IC eliminates the need for external IF SAW and RF image-reject filters by utilizing a direct-conversion radio architecture and monolithic baseband filters for both receiver and transmitter. It is specifically optimized for 802.11b (11Mbps CCK) and 22Mbps PBCC™ applications. The baseband filtering and Rx and Tx signal paths support the CCK modulation scheme for BER = 10^{-5} at the required sensitivity levels.

The transceiver is suitable for the full range of 802.11b data rates (1Mbps, 2Mbps, 5.5Mbps, and 11Mbps) as well as the higher-rate 22Mbps PBCC standard. The MAX2822 is available in the very small 7mm x 7mm 48-lead QFN or thin QFN packages. The small solution size makes it ideal for small form-factor 802.11b applications such as PDAs, SmartPhones, and embedded modules.

An evaluation kit is available: MAX2822EVKIT

Key Features

- 2.4GHz to 2.5GHz ISM Band Operation
- 802.11b (11Mbps CCK and 22Mbps PBCC) PHY Compatible
- Integrated +17dBm PA
- Integrated PA Power Detector
- Integrated Transmit/Receive Switch
- Complete RF-to-Baseband Transceiver
  - Direct Up/Down Conversion
  - Monolithic Low-Phase-Noise VCO
  - Integrated Baseband Lowpass Filters
  - Integrated PLL with 3-Wire Serial Interface
  - Digital Bias Control for PA
  - Transmit Power Control
  - Receive Baseband AGC
  - Complete Baseband Interface
  - Digital Tx/Rx Mode Control
- -95dBm Rx Sensitivity at 1Mbps
- -85dBm Rx Sensitivity at 11Mbps
- Single +2.7V to +3.0V Supply
- 2µA Shutdown Mode
- Very Small 48-Pin QFN Package

Applications/Uses

- 802.11b Embedded Modules
- 802.11b PC Cards, Mini-PCI Cards
- 802.11b PDAs and Smartphones

Technical Documents

Product Guide 5158 Wireless

Product Guides

Wireless (PDF)

Reliability Reports

Reliability Report: MAX2822.pdf
Show FIT data for: MAX2822 Go

Software/Models

none

Ordering Information

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

Part Number	Free Sample	Buy	Status	Recommended Replacement	Package: TYPE PINS FOOTPRINT DRAWING CODE/VAR *	Temp	RoHS/Lead-Free? Materials Analysis
MAX2822EGM-D		N/A	No Longer Available	MAX2830 1	QFN;48 pin;50.4 mm² Outline Drawing:21-0092 (PDF) Land Pattern: 90-0224 (PDF) Use pkgcode/variation: G4877-1*	-40°C to +85°C	RoHS/Lead-Free: No Materials Analysis
MAX2822EGM-TD		N/A	No Longer Available	MAX2830 1	QFN;48 pin;50.4 mm² Outline Drawing:21-0092 (PDF) Land Pattern: 90-0224 (PDF) Use pkgcode/variation: G4877-1*	-40°C to +85°C	RoHS/Lead-Free: No Materials Analysis
MAX2822ETM+		N/A	No Longer Available	MAX2831ETM+	TQFN;48 pin;50.4 mm² Outline Drawing:21-0144 (PDF) Land Pattern: 90-0133 (PDF) Use pkgcode/variation: T4877+7*	-40°C to +85°C	RoHS/Lead-Free: Lead Free Materials Analysis
MAX2822ETM+T		N/A	No Longer Available	MAX2831ETM+	QFN;48 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet

Notes:
1. Other options and links for purchasing parts are listed at: http://www.maxim-ic.com/sales.
2. Didn't Find What You Need? Ask our applications engineers. Expert assistance in finding parts, usually within one business day.
3. 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.
4. * 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.

Similar Products by Function

MAX2820, MAX2820A, MAX2821, ...	2.4GHz 802.11b Zero-IF Transceivers
MAX2242	2.4GHz to 2.5GHz Linear Power Amplifier
MAX2247	2.4GHz SiGe Linear Power Amplifier
MAX2831, MAX2832	2.4GHz to 2.5GHz, 802.11g RF Transceivers with Integrated PA
MAX2830	2.4GHz to 2.5GHz 802.11g/b RF Transceiver with PA and Rx/Tx/Diversity Switch

Evaluation Kits

MAX2822EVKIT	Evaluation Kit for the MAX2822

Didn't Find What You Need?

Next Day Product Selection Assistance from Applications Engineers
Parametric Search
Applications Help

Information Index

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