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MAX2825, MAX2826, MAX2827

2.4GHz/5GHz, Single-Band and Dual-Band, 802.11g/a RF Transceiver ICs

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 MAX2825/MAX2826/MAX2827 single-chip, RF transceiver ICs are designed specifically for 802.11 WLAN applications. The MAX2825 is designed for single-band 2.4GHz 802.11g (OFDM and CCK) and the MAX2826 for single-band 5GHz 802.11a (OFDM). The MAX2827 is designed for dual-band 802.11a+g applications. The ICs include all circuitry required to implement the RF transceiver function, providing a fully integrated receive path, transmit path, VCO, frequency synthesizer, and baseband/control interface. Only the PA, RF switches, RF bandpass filters (BPF), RF baluns, and a small number of passive components are needed to form the complete RF front-end solution.

Each IC completely eliminates the need for external SAW filters by implementing on-chip monolithic filters for both the receiver and transmitter. The baseband filtering and the Rx/Tx signal paths are optimized to meet the 802.11a and 802.11g IEEE® standards. Each device is suitable for the full range of the corresponding 802.11a/g OFDM data rates (6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, and 54Mbps) and 802.11g QPSK data rates (1Mbps, 2Mbps, 5.5Mbps, and 11Mbps), at the required sensitivity levels. The MAX2825/MAX2826/MAX2827 transceivers are available in the small 56-pin, exposed paddle thin QFN package.

Key Features

- Single- and Dual-Band Operation
  - MAX2825: 2.4GHz to 2.5GHz
  - MAX2826: 5.15GHz to 5.35GHz
  - MAX2827: 2.4GHz to 2.5GHz and 5.15GHz to 5.35GHz
- Two Operating Modes (MAX2827)
  - 802.11g (54Mbps 64-QAM OFDM and 11Mbps CCK)
  - 802.11a (54Mbps 64-QAM OFDM)
- Complete RF Transceiver
  - -75dBm Receiver Sensitivity at 54Mbps (802.11g)
  - 40dB Rx Sideband Suppression
  - -36dB Transmitter EVM
  - -98dBc/Hz at 100kHz LO Phase Noise
  - Programmable Baseband Lowpass Filters
  - Integrated PLL with 3-Wire Serial Interface
  - 94dB Receive Gain-Control Range
  - 200ns Rx I/Q DC Settling
  - 60dB Dynamic Range Receive RSSI
  - 30dB Transmit Power-Control Range
  - Tx and Rx I/Q Error Detection
  - Digital Tx/Rx Mode and Gain Control
- Single +2.7V to +3.6V Supply
- 10µA Low-Power Shutdown Mode
- Small 56-Pin TQFN Package (8mm x 8mm)

Applications/Uses

- 2.4GHz 802.11b/g Single-Band Radio
- 2.4GHz/5GHz 802.11a/b/g Dual-Band Radio
- 5GHz 802.11a Single-Band Radio

Technical Documents

Product Guide 5158 [Wireless](#)

Tutorial 3630 [Power Supply and Ground Design for a WiFi Transceiver](#)

Product Guides

[Wireless](#) (PDF)

Reliability Reports

Request Reliability Report for: MAX2825 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
MAX2825ETN-D		N/A	No Longer Available	MAX2830 1	QFN;56 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2825ETN-TD		N/A	No Longer Available	MAX2830 1	QFN; Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2826ETN-D		N/A	No Longer Available	MAX2828	QFN;56 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2826ETN-TD		N/A	No Longer Available	MAX2828	QFN; Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2827ETN+D		N/A	No Longer Available	MAX2829	QFN; Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2827ETN+TD		N/A	No Longer Available	MAX2829	TQFN;56 pin;65.6 mm² Outline Drawing:21-0135 (PDF) Land Pattern: 90-0046 (PDF) Use pkgcode/variation: T5688+2*	-40°C to +85°C	RoHS/Lead-Free: <a href="#">Lead Free Materials Analysis</a>
MAX2827ETN-D		N/A	No Longer Available	MAX2829	QFN;56 pin Land Pattern: Not Available	-40°C to +85°C	See data sheet
MAX2827ETN-TD		N/A	No Longer Available	MAX2829	QFN; 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

MAX2247 2.4GHz SiGe Linear Power Amplifier  
MAX2830 2.4GHz to 2.5GHz 802.11g/b RF Transceiver with PA and Rx/Tx/Diversity Switch  
MAX2831 , MAX2832 2.4GHz to 2.5GHz, 802.11g RF Transceivers with Integrated PA

More Information

New Product Press Release[ [2004-03-18](#) ]

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[Applications Help](#)

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