My Maxim

Maxim > Products > Automotive > MAX2135A Maxim > Products > Wireless and RF > MAX2135A

MAX2135A

ISDB-T/DVB-T Diversity Tuner

Solutions

Industry's Only Diversity Tuner for Automotive TV Consumes Only 300mW

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

Design

Buy

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Products

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Data Sheet

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Description

The MAX2135A low-power, 6MHz ISDB-T and 6MHz/7MHz/8MHz DVB-T low-IF diversity tuner directly converts broadcast ISDB-T and DVB-T signals to a low-IF using a broadband I/Q downconverter. The operating frequency range covers the VHF and UHF broadcast TV bands from 90MHz to 862MHz.

The MAX2135A integrates LNAs, RF variable-gain amplifiers (VGAs), VHF and UHF tracking filters, I/Q downconverting mixers, baseband VGAs, and low-IF filters. The device also includes a fully monolithic VCO and tank circuit as well as a complete frequency synthesizer including an on-chip crystal oscillator and output

buffer/divider. The device incorporates a 2-wire (I2C) serial control interface with multiple read and write addresses. A low-power standby mode is available whereupon the signal path is shut down while leaving the serial control interface and

register circuits active. Additionally, the entire device can be shut down by an external pin. The MAX2135A is available in a 56-pin thin QFN package (7mm x 7mm) with an exposed paddle. Electrical

NOTE: This product uses the following: MAX2135A ÉVKIT Software

performance is guaranteed over the extended -40°C to +85°C temperature range.

Key Features

- · Multiple Frequency Ranges
 - o VHF-L: 90MHz to 108MHz o VHF-H: 170MHz to 230MHz
- o UHF: 470MHz to 862MHz · Complete Diversity Solution
- Low UHF Noise Figure: 3.7dB (typ)
- High Dynamic Range: -99dBm to +10dBm Integrated VHF/UHF Tracking Filter
- · Integrated VCO and Tank Circuits
- Low Phase Noise: -95dBc/Hz at 10kHz (typ) • Integrated Channel Filters (6MHz, 7MHz, and 8MHz) • Single +2.7V to +3.47V Supply Voltage Range
- Low Power: 396mW (typ) · Shutdown and Standby Modes
- I²C Serial Interface
- · Automotive TV Diversity Systems • Laptop/Desktop TV Receivers

Applications/Uses

- Portable LCD TVs Portable Navigation Devices

TV Tuners													
Part Number	Ref. Clock Freq. (MHz)	IF f _{OUT} (MHz)	Noise Figure (dB)	V _{SUPPLY} (V)	I _{SUPPLY} (mA)	Applications	f _{IN}	Features	Footprint (mm x mm)	Package/Pins	Smallest Available Pckg. (mm²) max w/pins	Industry Qualified	Budgetary Price
													See Notes
MAX2135A	16 to 18 32 to 36	4.5	UHF=3.7 VHF=4.8 to 5.5	2.7 to 3.47	70	DVB-T ISDB-T (13 segments)	93 to 105, 173 to 227, 473 to 859	95dBc/Hz phase noise @ 10kHz -99 to +10dBm dynamic range Diversity Receiver I2C command interface Integrated VHF/UHF tracking filters Shutdown and Standby Modes	7.0 x 7.0	TQFN/56	49.1	Automotive - AECQ100 Automotive - General	\$4.94 @1k

may differ due to local duties, taxes, fees, and exchange rates. For volume-specific prices and delivery, please see the price and availability page or contact an

Pricing Notes:

See All TV Tuners (16)

This pricing is BUDGETARY, for comparing similar parts. Prices are in U.S. dollars and subject to change. Quantity pricing may vary substantially and international prices

General Layout Guidelines for RF and Mixed-Signal PCBs

Product Guides

Application Notes

Wireless (PDF)

Tutorial 5100

Reliability Report: Show FIT data for:

Reliability Reports

MAX2135A.pdf

MAX2135A ▼ Go

Ordering Information

Software/Models MAX2135A EVKIT Software

Part Number	Free Sample	Buy	Status ②	Package: TYPE PINS FOOTPRINT	Temp	RoHS/Lead-Free? Materials Analysis	
	Gample			DRAWING CODE/VAR *		Materials Allalysis	
		Buy	Active: Data	WAFER UNSAWN;NA pin;WAFER;			
MAX2135AE/W		Day	sheet on	Land Pattern: Not Applicable	-40°C to +85°C	See data sheet	
			request only	Use pkgcode/variation: WDICE28*			
			Active: Data	WAFER UNSAWN;NA pin;WAFER;			
1AX2135AE/W+C76		Buy	sheet	•	-40°C to +85°C	See data sheet	
			on request	Land Pattern: Not Applicable Use pkgcode/variation: WDICE28+*			
			only Active:				
		-	Data	WAFER;			
MAX2135AE/W-T		Buy	sheet on	Land Pattern: Not Available	-40°C to +85°C	See data sheet	
			request only				
			Active:	TOENIEC win 40.4?			
MAX2135AETN+	Sample	Buy	Data sheet	TQFN;56 pin;49.1 mm² Outline Drawing:21-0144 (PDF)	-40°C to +85°C	RoHS/Lead-Free: Lead Free	
MARCISSAL III			on request	Land Pattern: 90-0043 (PDF) Use pkgcode/variation: T5677+2*		Materials Analysis	
			only				
		_	Active: Data	TQFN;56 pin;49.1 mm²			
MAX2135AETN+T		Buy	sheet on	Outline Drawing:21-0144 (PDF) Land Pattern: 90-0043 (PDF)	-40°C to +85°C	RoHS/Lead-Free: Lead Free Materials Analysis	
			request only	Use pkgcode/variation: T5677+2*			
			Active:				
MAY0195 A ETNIA / 1		Buy	Data sheet	TQFN;56 pin;49.1 mm² Outline Drawing:21-0144 (PDF)	-40°C to +85°C	RoHS/Lead-Free: Lead Fre	
MAX2135AETN/V+		_	on request	Land Pattern: 90-0043 (PDF) Use pkgcode/variation: T5677+2*	-40 C to +05 C	Materials Analysis	
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MAX2135AETN/V+CBN		Buy	sheet on	Outline Drawing:21-0144 (PDF) Land Pattern: 90-0043 (PDF)	-40°C to +85°C	RoHS/Lead-Free: Lead Free Materials Analysis	
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MAX2135AETN/V+TCBN		Buy	sheet on	Outline Drawing:21-0144 (PDF) Land Pattern: 90-0043 (PDF)	-40°C to +85°C	RoHS/Lead-Free: Lead Free Materials Analysis	
			request only	Use pkgcode/variation: T5677+2*			
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			only				

- 2. Didn't Find What You Need? Ask our applications engineers. Expert assistance in finding parts, usually within one business day. Part number suffixes: Tior 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.
- Similar Products by Function ISDB-T/DVB-T Low-IF Tuner

See All TV Tuners (21 Products) Similar Products by Application

Automotive: TV-Tuner Systems > Tuner Broadcast TV and Radio > Mobile TV

Flat-Panel TVs > Tuners

Products with Similar Part Numbers MAX2135 ISDB-T/DVB-T Diversity Tuner

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Overview Description

Applications/Uses Key Specifications Diagram Notes and Comments

Document Ref.: 19-5103 Rev 5; 2012-01-17 This page last modified: 2012-01-17

Key Features

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