



The TDA18250A is a silicon tuner designed specifically for worldwide cable and terrestrial digital Set Top Boxes (STB).

- The TDA18250A ensures a low system cost by saving external components such as:
 - Low-Noise Amplifiers
 - Surface Acoustic Wave (SAW) filters
 - RF splitter

Moreover, thanks to its 8 kV ESD capability, EIA/JESD22-A114 (HBM), on the RF input pin and the loop-through pin, the application level ESD protection can be reduced.

- The TDA18250A silicon tuner meets current and future digital cable and terrestrial TV reception with:
 - Low-power consumption
 - High linearity
 - Very low noise figure (3.6 dB typical)
 - High immunity to wireless interferers (WLAN, LTE and GSM)
- The TDA18250A ensures ease of use with:
 - Easy on-board integration
 - Efficient and effective PCB design
 - Reduced external components
 - Integrated Zero Power Loop-Through (ZPLT)

Features and benefits

- Single 3.3 V supply voltage
- RF frequency coverage up to 1 GHz
- Flexible low IF output from 3 MHz to 7.5 MHz to ease the matching with various demodulators
- RoHS compliant
- I²C-bus interface compatible with 3.3 V microcontrollers
- Strong Immunity to wireless interferers (WLAN, GSM, LTE)
- Multi-reference clock frequency compliant: 16 MHz, 24 MHz, 25 MHz, 27 MHz, 30 MHz
- Crystal oscillator output buffer to drive demodulator, SoC or slave tuner
- Slave Tuner Output (STO), integrated splitter for dual tuner applications
- Fully integrated oscillators
- LT output, both in active and Zero Power Loop-Through mode (ZPLT)
- Fully integrated IF and RF selectivity; eliminating the need for external SAW filters
- Single-ended RF input (no need for external balun)
- Enhanced ESD protection (8 kV) on RF_IN and ZPLT pins
- Alignment free
- Excellent return loss compatible with cable requirements
- Integrated RSSI function, readable through I²C-bus
- Integrated temperature sensor
- Integrated gain control

Applications

- Digital cable STB applications:
 - DVB-C
 - J83.B
 - J83.C
- Digital terrestrial STB applications:
 - DTMB
 - DVB-T/T2
 - ISDB-T
- PVR
- DOCSIS 2.0 cable modem

▶ [Parametric search](#) all Cable and terrestrial silicon tuners

All information on this product information page is subject to the subsequent disclaimers:

- General product disclaimer
- Quality and reliability disclaimer

Parametrics of this product

Type number	Package	Package name	Supply voltage (V)	CSO / CTB [Typ] (dB/dB)	Noise figure [Typ] (dB)	Return loss [Typ] (input) (dB)	Cable type	Terrestrial type	Total power consumption [Typ](mW)	DVB-T	DVB-T2	DVB-C	DVB-C2	DVB-H	ISDB-T / DTMB	Frequency range (MHz)	Phase noise @ 10KHz [Typ] (dBc/Hz)	RSSI Accuracy Abs. [Typ](dB)	RSSI Accuracy Rel. [Typ](dB)	Number of channels in application	Zero Power Loop-Through (ZPLT)	Loop-Through (LT)
TDA18250AHN	SOT617-3 (HVQFN32)	HVQFN32	3,3	-60/-60	4.5	-8	Y	Y	750	Y	Y	Y	Y	Y	Y	42 - 1002	-85	3	0.5	2	Y	Y

Similar products

- Parametric search all Cable and terrestrial silicon tuners
- Parametrics series

Package

Type number	Orderable part number	Ordering code (12NC)	Product status	Package	Packing	Marking
TDA18250AHN/C1	TDA18250AHN/C1,557	9352 968 17557	Volume production	SOT617-3 (HVQFN32)	Tray Dry Pack, Bakeable, Multiple	Standard Marking
TDA18250AHN/C1	TDA18250AHN/C1,518	9352 968 17518	Volume production	SOT617-3 (HVQFN32)	Reel Dry Pack, SMD, 13"	Standard Marking
TDA18250AHN/C1	TDA18250AHN/C1,551	9352 968 17551	Volume production	SOT617-3 (HVQFN32)	Tray Dry Pack, Bakeable, Single	Standard Marking

Outline drawing

Package Version	Package Name	Package Description	Reference Codes	Issue Date
SOT617-3	HVQFN32	plastic thermal enhanced very thin quad flat package; no leads; 32 terminals; body 5 x 5 x 0.85 mm	MO-220 (JEDEC);	2002-10-22

Related documents

Brochure

- NXP solutions for consumer and computer interfaces (pdf) (2012-04-25)

Reflow soldering

- sot617-3_fr (pdf) (2009-10-08)

Quality, reliability & chemical content

Type number	Orderable part number	Chemical content	RoHS	Leadfree conversion date	RHF	IFR (FIT)	MTBF (hours)	MSL	MSL LF
TDA18250AHN/C1	TDA18250AHN/C1,557	TDA18250AHN/C1		Always Pb-free				3	3
TDA18250AHN/C1	TDA18250AHN/C1,518	TDA18250AHN/C1		Always Pb-free				3	3
TDA18250AHN/C1	TDA18250AHN/C1,551	TDA18250AHN/C1		Always Pb-free				3	3

Quality and reliability disclaimer

Documentation for this product

File name	Title	Type	Format	Date
75017085	Application guide: Flat-panel TV sets	Line card	pdf	2012-03-13

Ordering & availability

Type number	Ordering code (12NC)	Orderable part number	Region	Distributor	In stock	Order quantity	Inventory date	Buy online	Samples
TDA18250AHN/C1	9352 968 17557	TDA18250AHN/C1,557							not available
TDA18250AHN/C1	9352 968 17518	TDA18250AHN/C1,518							not available
TDA18250AHN/C1	9352 968 17551	TDA18250AHN/C1,551							not available

Sample

Sample orders normally take 2-4 days for delivery.

If you do not have a direct account with NXP our network of global and regional distributors is available and equipped to support you with NXP samples. As a NXP customer you also have the option to order samples via our sales organisation.

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