

TDA525x Series

ASK/FSK Transceiver Family



Wireless Control – The TDA525x series is a family of low power single chip FSK/ASK transceivers for half duplex low data rate communication in the 315 MHz, 434 MHz, 868 MHz and 915 MHz bands. The IC offers a very high level of integration and needs only a few external components. It contains a highly efficient power amplifier, a low noise amplifier (LNA) with AGC, a double balanced mixer, a complex direct conversion stage, I/Q limiters with RSSI generation, an FSK demodulator, a fully integrated VCO and PLL synthesizer, a tuneable crystal oscillator, an onboard data filter, a data comparator (slicer), positive and negative peak detectors, a data rate detection circuit and a 2/3- wire bus interface. Additionally, there is a power down feature to save battery power.

Applications

- Low bitrate communication systems
- Remote Keyless Entry (RKE) systems
- Remote control systems
- Alarm systems
- Telemetry systems
- Home automation systems

Ordering Information

Type	Ordering Code	Package
TDA5250	SP000012956	PG-TSSOP-38
TDA5251	SP000014554	PG-TSSOP-38
TDA5252	SP000057332	PG-TSSOP-38
TDA5255	SP000014555	PG-TSSOP-38

Evaluation Kits

Type	Description	Package	
TDA5250-TDA5250	ASK/FSK	868 MHz	Q671000-H2058
TDA5251-TDA5251	ASK/FSK	315 MHz	Q67244-H112
TDA5252-TDA5252	ASK/FSK	915 MHz	SP000086721
TDA5255-TDA5255	ASK/FSK	434 MHz	Q67244-H61

Features

- Frequency ranges 315 MHz, 434 MHz, 868 MHz and 915 MHz
- FSK and ASK operation
- Fully integrated VCO and PLL synthesizer and loop filter on-chip with on chip crystal oscillator tuning
- I²C μController Interface
- On-chip low pass channel select filter and data filter with tunable bandwidth
- Data slicer with self-adjusting threshold and 2 peak detectors
- FSK sensitivity < -109 dBm, ASK sensitivity < -109 dBm
- Transmit power up to +13 dBm
- Data rates up to 64 kbit/s Manchester Encoded
- Self-polling logic with ultra fast data rate detection
- Power down mode with very low supply current consumption
- Low supply current
- Supply voltage range 2.1 – 5.5 V
- Temperature range -40°C ... +85°C

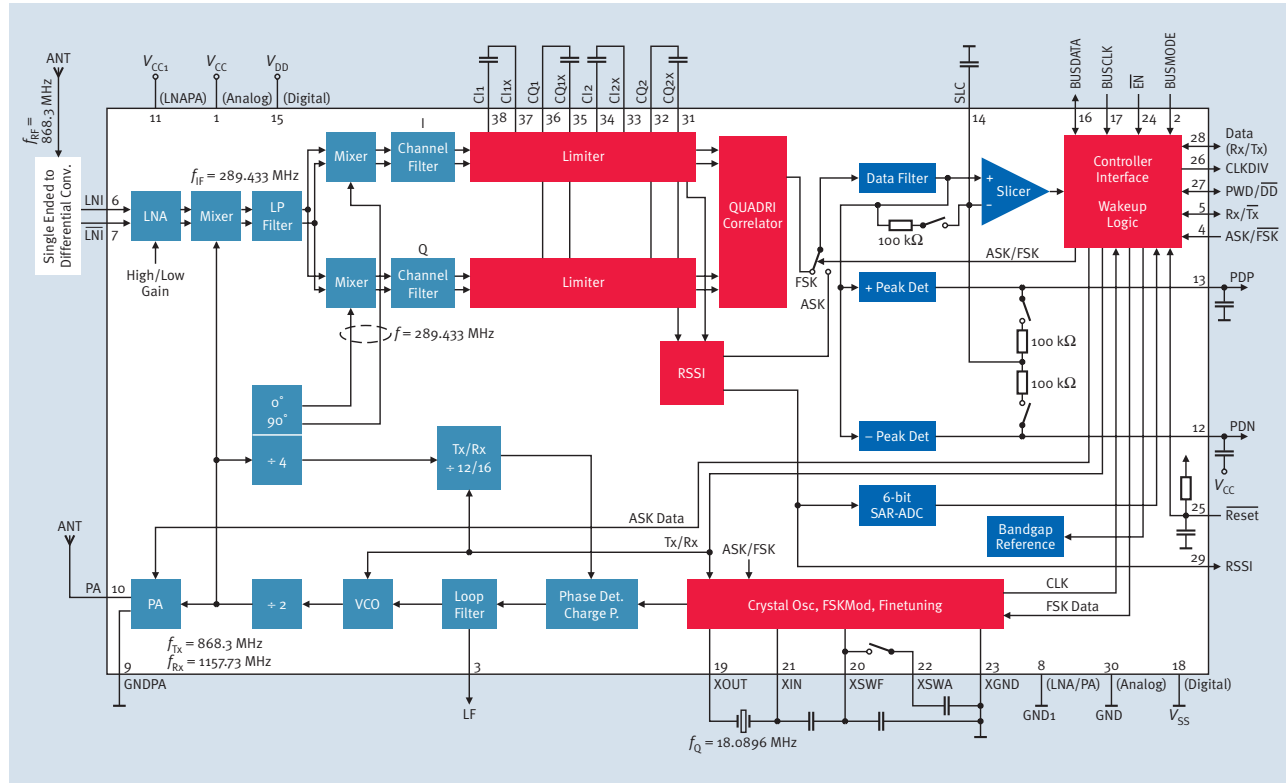
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Wireless Control



Never stop thinking

Block Diagram TDA5250



Type	TDA5250	TDA5251	TDA5252	TDA5255
Frequency Range	868 – 870 MHz	312 – 325 MHz	910 – 920 MHz	433 – 435 MHz
Supply Voltage	2.1 – 5.5 V	2.1 – 5.5 V	2.1 – 5.5 V	2.1 – 5.5 V
Rx				
Supply Current typ. @ 3 V	8.6 mA (ASK) 9.0 mA (FSK)	8.8 mA (ASK) 9.3 mA (FSK)	8.6 mA (ASK) 9.0 mA (FSK)	8.6 mA (ASK) 9.0 mA (FSK)
Sensitivity @ 4 kbit/s Manchester	-109 dBm (ASK/FSK)	-109 dBm (ASK/FSK)	-109 dBm (ASK/FSK)	-109 dBm (ASK/FSK)
Tx				
Supply Current typ. @ 3 V	11.9 mA	14.1 mA	12.5 mA	13.3 mA
RF Transmit Power typ.	9 dBm	9 dBm	9 dBm	9 dBm
Package	PG-TSSOP-38	PG-TSSOP-38	PG-TSSOP-38	PG-TSSOP-38
Temperature Range	-40°C ... +85°C	-40°C ... +85°C	-40°C ... +85°C	-40°C ... +85°C

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Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

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