Product Overview

NCV7420: System Basis Chip with LIN and LDO Regulator

For complete documentation, see the data sheet.

The NCV7420 is a fully featured local interconnect network (LIN) transceiver designed to interface between a LIN protocol controller and the physical bus. The transceiver is implemented in I3T technology enabling both high-voltage analog circuitry and digital functionality to co-exist on the same chip.The NCV7420 LIN device is a member of the in-vehicle networking (IVN) transceiver family of ON Semiconductor that integrates a LIN v2.0 physical transceiver and either a 3.3 V or a 5.0 V voltage regulator. The LIN bus is designed to communicate low rate data from control devices such as door locks, mirrors, car seats, and sunroofs at the lowest possible cost. The bus is designed to eliminate as much wiring as possible and is implemented using a single wire in each node. Each node has a slave MCU state machine that recognizes and translates the instructions specific to that function. The main attraction of the LIN bus is that all the functions are not time critical and usually relate to passenger comfort.

Features

- Output voltage 5.0 V / 50 mA or 3.3 V / 50 mA
- Integrated slope control
- LIN compliant to specification revision 2.0 (backward compatible to version 1.3) and J2602
- I3T high voltage technology
- Bus voltage ±45 V
- Transmission rate up to 20 kbps
- Thermal shutdown
- Indefinite shortcircuit protection on pins LIN and WAKE towards supply and ground
- Load dump protection (45 V)
- Bus pins protected against transients in an automotive environment

  For more features, see the data sheet

Benefits

- Integrated voltage regulator reduces PCB area
- Reduces EMI

Applications

- In-Vehicle Networking

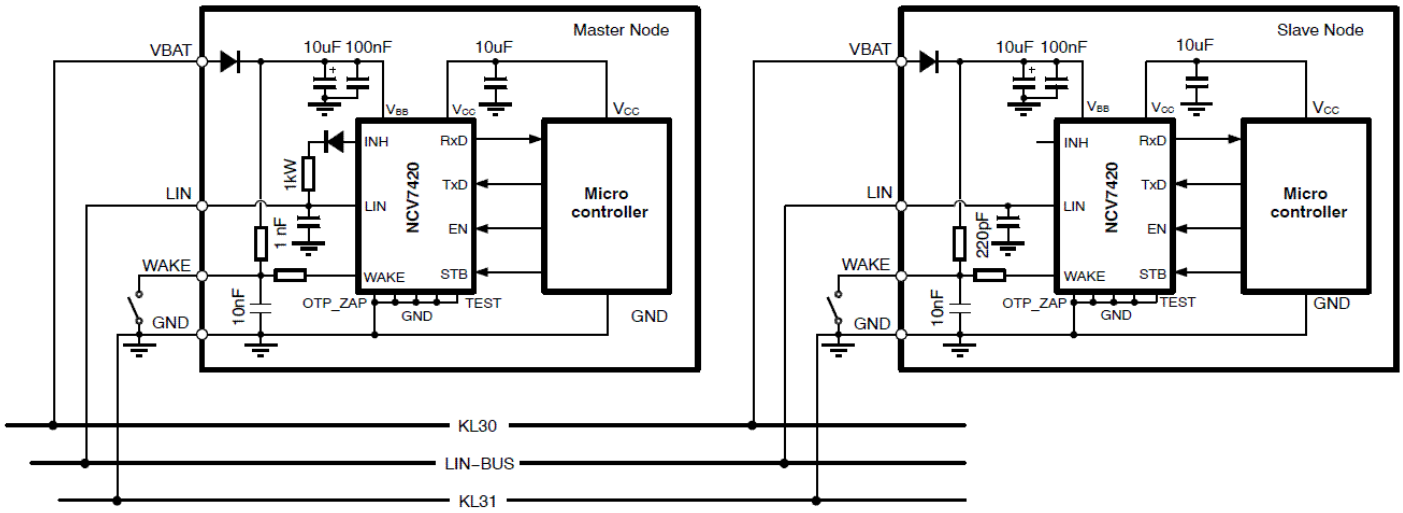
End Products

- Automobiles

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	Data Transmission Standard	Data Rate	Number of Drivers	Number of Receivers	V_{CC} Min (V)	V_{CC} Max (V)	t_{PLH} Max (µs)	I_O Max (µA)	I_{IH} Max (mA)	Package Type
NCV7420D21R2G		AEC Qualified PPAP Capable Pb-free Halide free	Active										SOIC-14
NCV7420D24R2G		AEC Qualified PPAP Capable Pb-free Halide free	Active	LIN	20 kbaud	1	1	5	26				SOIC-14
NCV7420D26R2G		AEC Qualified PPAP Capable Pb-free Halide free	Active	LIN	20 kbaud	1	1	5	26				SOIC-14

Application Diagram



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