K-Bus transceiver 910.05

Features

- Supply voltage range VS 6.9V to 19V
- Supply voltage range VDD 4.5V to 5.5V
- Bus - line input voltage range from -24V to +30V (+40V for t 0.5s)
- Internal monitoring of prohibited conditions
- Output slewrate control to reduce EMI
- Very low standby current (30µA typical)
- Useable as diagnostic interface to ISO 9141
- -40°C to 125°C operating temperature
- SO14 package

Applications

- Bus interface

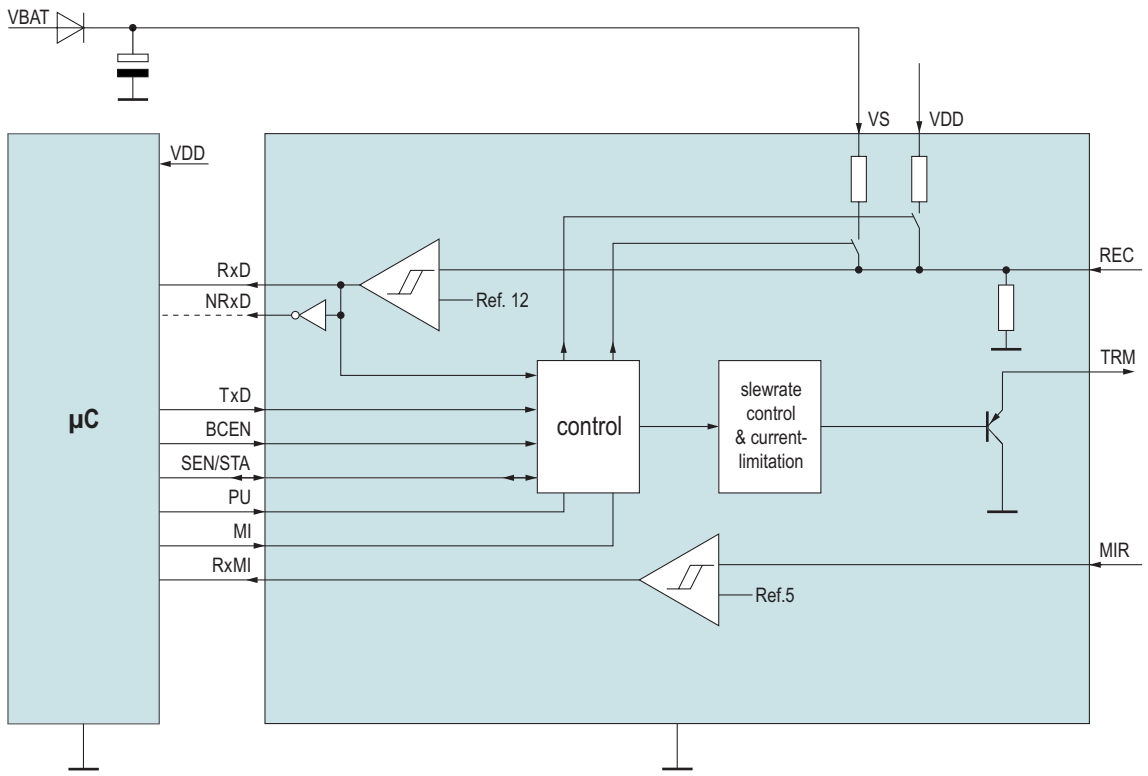
Description

The IC bus interface is designed for communication via bidirectional serial data channels. In addition to the level conversion of transmit and receive signals from the micro processor's voltage level to the 12V bus level, the device includes plausibility checks in order to guarantee undisturbed bus communication in case of corrupted data from the micro controller.

Undefined states are avoided during low voltage conditions by means of a Power - on - Reset which blocks the outputs. The inputs feature internal pull - up and pull - down current sources to maintain defined levels.

The bus pins TRM and REC feature a wide input voltage range from -24V to 40V independent of VS and VDD. This ensures that in case of missing ground or power supply connection the operation of other devices using the bus is not affected.

Block diagram



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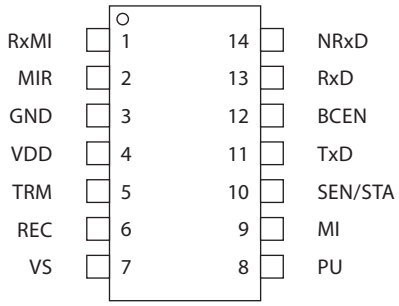
Package

SO 14-pin



Pinning

Pin	Name	Description
1	RxMI	Receive data from MI Bus
2	MIR	MI - Bus input
3	GND	Ground
4	VDD	+5V supply
5	TRM	Transmitter output
6	REC	K - Bus input
7	VS	+12V supply
8	PU	Switching pull - up between VDD and VS
9	MI	MI - mode, disables slewrate control on TRM
10	SEN/STA	Status of transmit path
11	TxD	Transmit data to TRM
12	BCEN	Enable bit compare function
13	RxD	Receive data from K - Bus
14	NRxD	Inverted RxD

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