AMIS-42670

High-Speed CAN Transceiver for Long Networks

Description

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Table 1. TECHNICAL CHARACTERISTICS

Symbol	Parameter	Condition	Max	Max	Unit
V_{CANH}	DC Voltage at Pin CANH	0 < V_{CC} < 5.25 V; no time limit	−45	+45	V
V_{CANL}	DC Voltage at Pin CANL	0 < V_{CC} < 5.25 V; no time limit	−45	+45	V
$V_{o(dif)(bus_dom)}$	Differential Bus Output Voltage in Dominant State	42.5 Ω < R_{LT} < 60 Ω	1.5	3	V
$t_{pd(rec-dom)}$	Propagation Delay TxD to RxD	See Figure 6	70	245	ns
$t_{pd(dom-rec)}$	Propagation Delay TxD to RxD	See Figure 6	100	245	ns
$C_{M-range}$	Input Common−Mode Range for Comparator	Guaranteed Differential Receiver Threshold and Leakage Current	−35	+35	V
$V_{CM-peak}$	Common−Mode Peak	See Figures 7 and 8 (Note 1)	−500	500	mV
$V_{CM-step}$	Common−Mode Step	See Figures 7 and 8 (Note 1)	−150	150	mV

1. The parameters $V_{CM-peak}$ and $V_{CM-step}$ guarantee low electromagnetic emission.

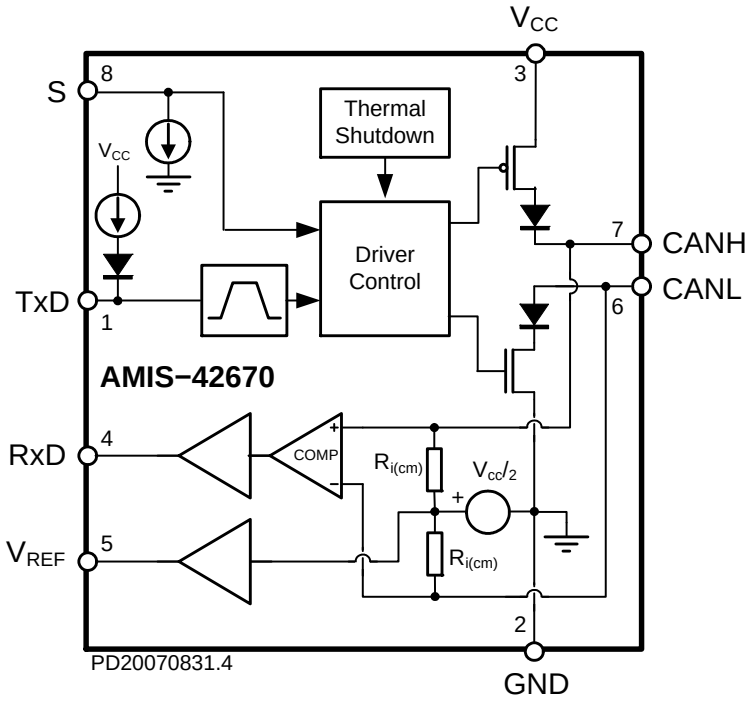


Figure 1. Block Diagram

Table 2. PIN DESCRIPTION

Pin	Name	Description
1	TxD	Transmit Data Input; Low Input → Dominant Driver; Internal Pullup Current
2	GND	Ground
3	V_{CC}	Supply Voltage
4	RxD	Receive Data Output; Dominant Transmitter → Low Output
5	V_{REF}	Reference Voltage Output
6	CANL	Low−Level CAN Bus Line (Low in Dominant Mode)
7	CANH	High−Level CAN Bus Line (High in Dominant Mode)
8	S	Silent Mode Control Input; Internal Pulldown Current

Table 3. ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Min.	Max.	Unit
V_{CC}	Supply Voltage		−0.3	+7	V
V_{CANH}	DC Voltage at Pin CANH	$0 < V_{CC} < 5.25$ V; no time limit	−45	+45	V
V_{CANL}	DC Voltage at Pin CANL	$0 < V_{CC} < 5.25$ V; no time limit	−45	+45	V
V_{TxD}	DC Voltage at Pin TxD		−0.3	V_{CC} + 0.3	V
V_{RxD}	DC Voltage at Pin RxD		−0.3	V_{CC} + 0.3	V

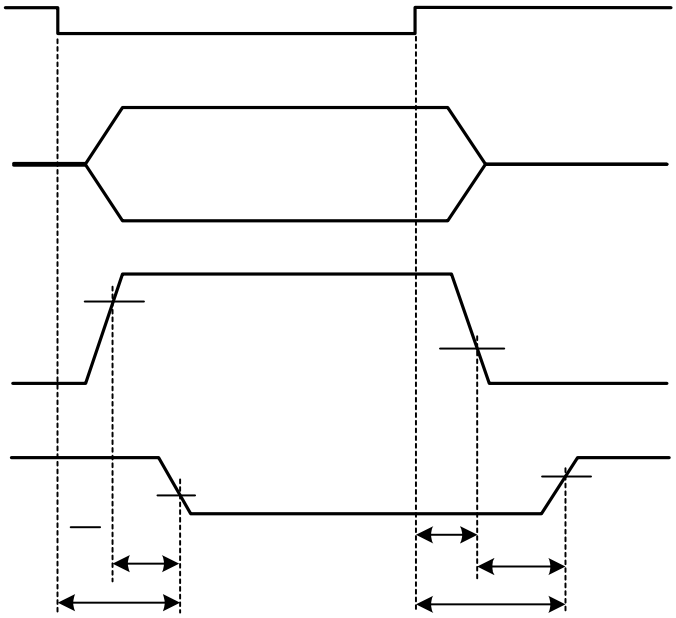
RxD 0.3

FUNCTIONAL DESCRIPTION

Operating Modes

ELECTRICAL CHARACTERISTICS

Definitions



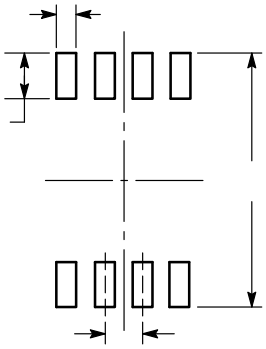
DEVICE ORDERING INFORMATION

Part Number

SCALE 1:1

SOIC 8

RECOMMENDED
SOLDERING FOOTPRINT*



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