Features：

- Operating voltage: 5.0V
- I/O-Isolation 3000 VDC
- Baud rate：1Mbps(MAX)
- Instantaneous bus over voltage protection
- Compatible with ISO11898(24V) standard
- No External Components Required
- Prevent bettery short circuit occurred in the 24VDC power supply system
- High electromagnetic anti-interference
- Input reverse connect protection
- Operating temperature：-40℃ ～+85℃

DESCRIPTION

RCM8251T is the transceiver integrated chips which integrates with the power and electrical isolation. It is for the establishment of a complete isolation of the receiving interface chip in the receiving and sending circuit, and improves bus reliability and common mode noise immunity. The canbus outlet end for this product is with TVS tube, which increases the chip prohibit the bus from ove rvoltage capability(Note: RCM8251 is without this function). The maximum transmission data rate is up to 1Mbps, and with the isolation voltage up to 3000VD. The chip design meets the standard of ISO11898-24V, It is small and high integration, no need peripheral circuit, easy to use.

Model Selection Guide

Order Code	Input Voltage		Baud rate(Kbps)	Bus Over Voltage Protection	Input reverse connect protection
	Vin(VDC)	Range(VDC)			
RCM8251	5	4.75-5.25	1024	No	Yes
RCM8251T			1024	Yes	Yes

Parameter

Item	Specification	Min	Typ	Max	Units
Input Voltage		4.75	5.0	5.25	VDC
Operating Temperature		-40		+85	℃
Storage Temperature		-55		+125	℃
Isolation voltage			3000		VDC
Isolation capacitance			40		pF
Humidity	No frosting	10		95	%
Quiescent Current		17		35	mA
Device Amounts		110			Point
Propagation delay time		50		150	μS
TXD/RXD pin current				3	mA
Bus voltage		-36		+36	V
Instantaneous bus voltage range		-200		+200	V
ESD Protection	Contact model			±4000	V
	Machine model			±200	V

Receiver Function

$V_{CANH-CANL}$(VDC)	Bus state	Output(RXD)
≥0.9	Dominant	0
≤0.5	Recessive	1

Driver Function

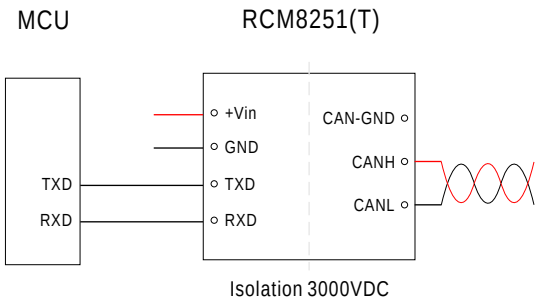
Input(TXD)	Bus state	CANH	CANL
0	Dominant	1	0
1	Recessive	0.5Vin	0.5Vin

Application

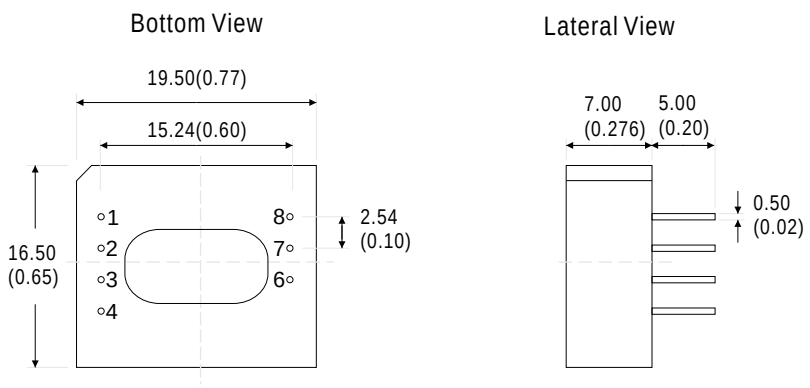
Application Area

- Industrial automation system
- Automatic control on electrical power system
- Cartronics
- Communication
- Mining
- Instrument and meter
- Medical equipment

Typical Circuit



Mechanical Dimension



Units：mm（inch）
Tolerances：±0.25mm（±0.01inch）

Pin Connections

Pin	Function	Description
1	+Vin	positive pole
2	GND	negative pole
3	TXD	Driver input date
4	RXD	Receiver output data
6	CANH	High electrical level
7	CANL	Low electrical level
8	CAN-GND	CAN bus isolated ground