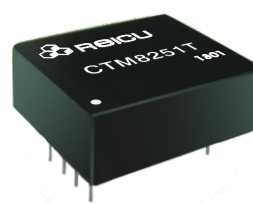


Features

- Operating voltage: 5.0V
- I/O-Isolation 2500 VDC
- Baud rate 1Mbps(MAX)
- Instantaneous bus over voltage protection
- Compatible with ISO11898(24V) standard
- No External Components Required
- Prevent battery short circuit occurred in the 24VDC power supply system
- High electromagnetic anti-interference
- Operating temperature -40 ~ +85



DESCRIPTION

CTM8251T 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 overvoltage capability(Note: CTM8251 is without this function). The maximum transmission data rate is up to 1Mbps, and with the isolation voltage up to 2500VD. 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 | Package |
|------------|---------------|------------|-----------------|-----------------------------|---------|
| | Vin(VDC) | Range(VDC) | | | |
| CTM8251 | 5 | 4.75-5.25 | 1024 | No | DIP8 |
| CTM8251T | | | 1024 | Yes | DIP8 |

Parameter

| Item | Specification | Min | Typ | Max | Units |
|---------------------------------|---------------|------|------|-------|-------|
| Input Voltage | | 4.75 | 5.0 | 5.25 | VDC |
| Operating Temperature | | -40 | | +85 | °C |
| Storage Temperature | | -55 | | +125 | °C |
| Isolation voltage | | | 2500 | | 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 |

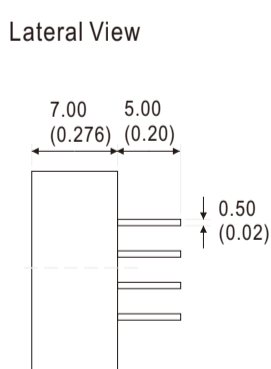
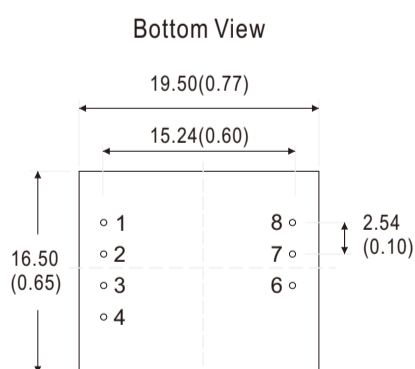
Driver Function

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

Application

| Application Area | Typical Circuit |
|--|-----------------|
| <ul style="list-style-type: none"> → Industrial automation system → Automatic control on electrical power system → Cartronics → Communication → Mining → Instrument and meter → Medical equipment | |

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 data |
| 4 | RXD | Receiver output data |
| 6 | CANH | High electrical level |
| 7 | CANL | Low electrical level |
| 8 | CAN-GND | CAN bus isolated ground |