Features
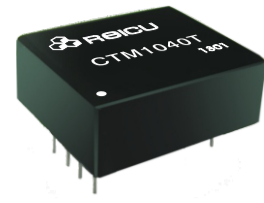
→ Operating voltage: 5.0V

→ I/O-Isolation 2500 VDC

→ Baud rate 1Mbps(MAX)

→ Instantaneous bus over voltage protection

→ Compatible with ISO11898 standard

→ No External Components Required

→ ESD Protection Contact model $\pm$4KV

→ No power on, bus without electricity

→ Prevent bettery short circuit occurred in the 24VDC power supply system

→ Operating temperature -40 ˇ ˇ +85 ˇ

DESCRIPTION

CTM1040T is the differential level high speed transceiver which integrates with DC and DC 2500 isolation, which makes the controller output high low logic level programming of CAN bus, meeting the standard of ISO11898. Using CTM1040T transceiver in Can-bus system, which builds the completely isolated interface between the Can-bus controller and the physical layer bus, and to improve the ability of anti common mode interference. The Can-bus outlet end for this product is with TVS tube, which increases the chip prohibit the bus from overvoltage capability(Note: CTM1040 is without this function).

Model Selection Guide

Order Code	Input Voltage		Baud rate(Kbps)	Bus Over Voltage Protection	Package
	Vin(VDC)	Range(VDC)			
CTM1040	5	4.75-5.25	1024	No	DIP8
CTM1040T			1024	Yes	DIP8

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			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		-26		+40	V
Instantaneous bus voltage range		-200		+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

MCU   CTM1040(T)

Isolation 2500VDC

Mechanical Dimension

Bottom View

19.50(0.77)

15.24(0.60)

16.50 (0.65)

2.54 (0.10)

Lateral View

7.00 (0.276)   5.00 (0.20)

0.50 (0.02)
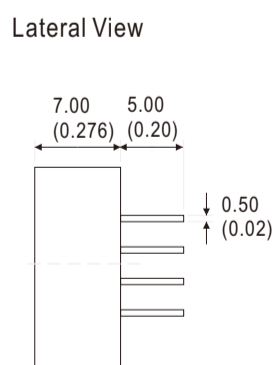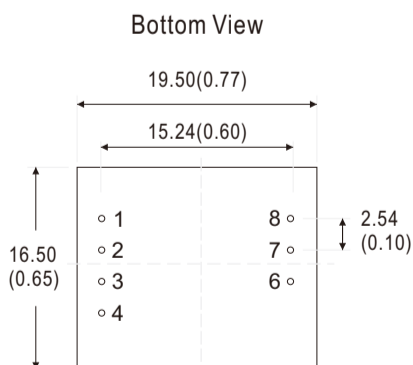
Units mm inch
Tolerances $\pm$0.25mm $\pm$0.01inch

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