

■ Features

- Input and output isolation
- Integrated high efficiency isolated DC/DC converter
- Isolation voltage 3000VDC
- Operating temperature from -40°C to 105°C
- High speed data rate 200Kbps
- Set isolation and ESD bus protection all in one
- Meet EN60950 safety

Application:

1. FPGA application
2. Process control
3. Smart meters

Selection Guide

Part Number	Input voltage	Data rate (bps)	Static current	Max. operating current	No. of nodes
CT31D485C	3.15-3.45	200K	40mA	130mA	256
CT51D485C	4.75-5.25	200K	80mA	130mA	256

CT 3 1D485C

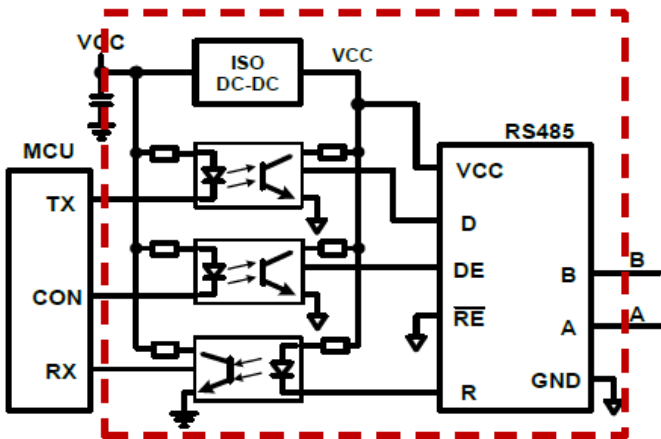
Input voltage

Specifications

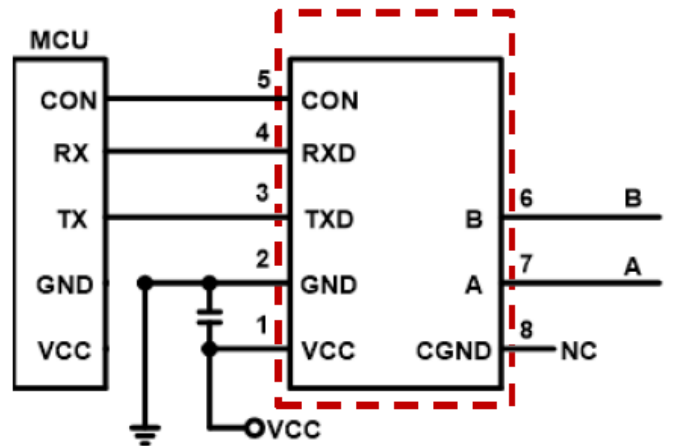
Parameter	Conditions	Min.	Typ.	Max.	Unit
Input power supply					
Input surge voltage (1sec. max.)	CT31D485			5	Vdc
	CT51D485			6	Vdc
CT31D485C					
Input voltage	VCC	3.15	3.3	3.45	Vdc
TXD logic level	High level (V _{IH})	2		3.45	Vdc
	Low level (V _{IL})	0		0.8	Vdc
RXD logic level	High level (V _{CH})	V _{CC} -0.4	3.1		Vdc
	Low level (V _{CL})		0.15	0.4	Vdc
Input current	I _T			10	uA
CON driver current	I _{CON}			10	uA
RXD output current	I _R			8	mA
Serial interface	Compatible with +3.3V interface only				
CT51D485C					
Input voltage	VCC	4.75	5	5.25	Vdc
TXD logic level	High level (V _{IH})	2		5.25	Vdc
	Low level (V _{IL})	0		0.8	Vdc
RXD logic level	High level (V _{CH})	4	4.8	-	Vdc
	Low level (V _{CL})		0.15	0.4	Vdc
TXD drive current	I _T			10	uA
CON drive current	I _{CON}			10	uA
RXD output current	I _R			8	mA
Serial interface	Compatible with +5V interface only				
Transmission					
Data delay	TXD transmit delay t _T		0.7	1.3	us
	RXD receive delay t _R		90	125	ns
General					
Electric isolation	Input to output isolated				
Isolated voltage	1 min.	3			KVDC
Operating temperature		-40		105	°C
Transportation and storage temperature		-55		125	°C
Operating humidity		10		90	%
Physical					
Casing material	UL94V-0 black plastic				
Dimensions	19.4(L) x 13.2(W) x 7.9 (H) mm				
Weight					g
Cooling method	Natural cooling				
EMC					
Conducted disturbance	CISPR22/EN55032				Class A/B
Radiated emission	CISPR22/EN55032				Class A/B
Electrostatic discharge	IEC/EN61000-4-2, Contact±4KV				Perf. Criteria B
EFT (IEC/EN61000-4-4)	Power supply port±2KV				Perf. Criteria B
	Signal port±1KV				Perf. Criteria B
Surge (IEC/EN61000-4-5)	Power supply port±1KV				Perf. Criteria B
	Signal port±0.25KV/±0.5KV				Perf. Criteria B
	Signal port±0.5KV/±1KV				Perf. Criteria B
	Signal port±1KV/±2KV				Perf. Criteria B
	Signal port±2KV/±4KV				Perf. Criteria B
	Signal port±4KV/±6KV				Perf. Criteria B

1. Please read the technical manual carefully before use; contact our technical support if you have any problem.
2. The product information and specifications are subject to change without prior notice.

■ Application circuit



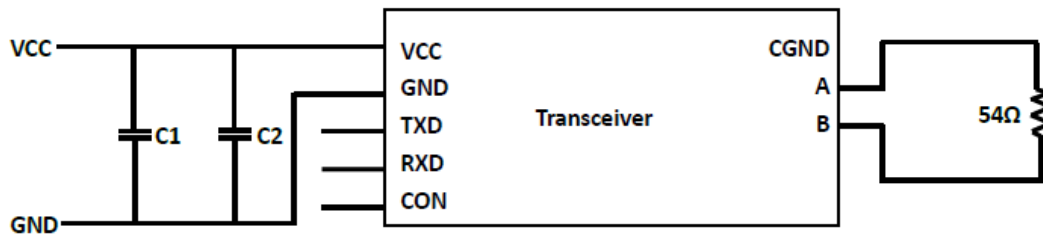
Old design



New solution

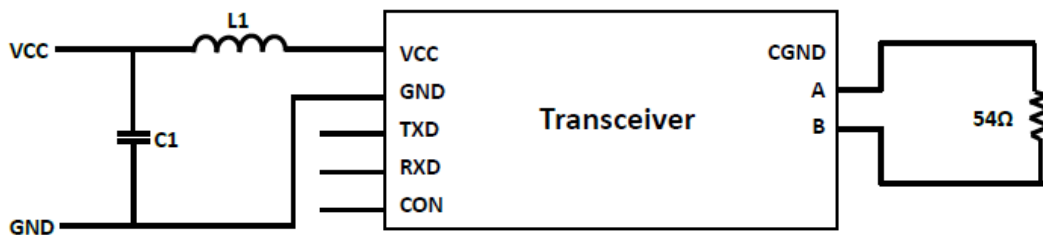
■ EMI filtering-suggestion for Class A/B

Class A



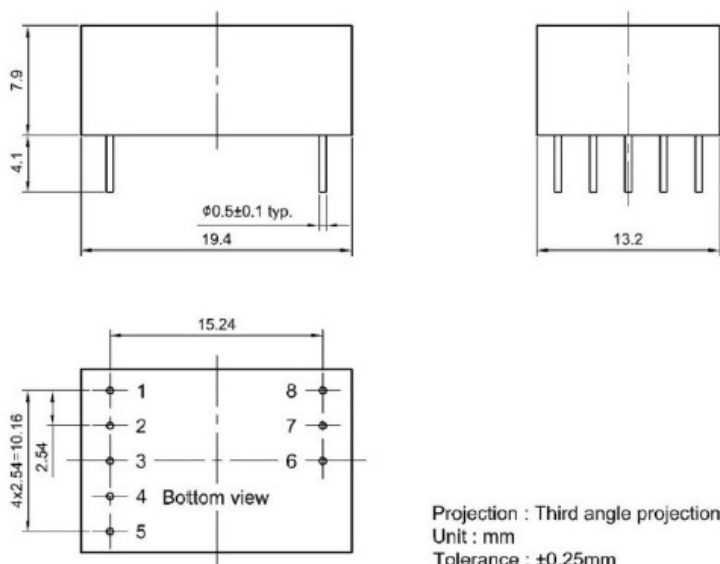
C1	C2
10uF	2.2uF

Class B



C1	L1
10uF	6.8uH

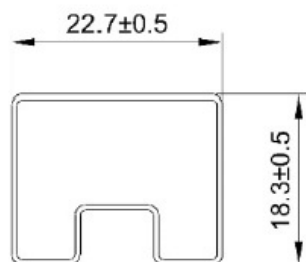
Mechanical Dimension & Pinning



Pin	Designation	Note
1	VCC	Input power (+)
2	GND	GND
3	TXD	Connet to controller's TX pin
4	RXD	Connet to controller's RX pin
5	CON	Send & Resiver control pin
6	B	B Pin
7	A	A Pin
8	CGND	Isolation power output CGND

Projection : Third angle projection
Unit : mm
Tolerance : ± 0.25 mm

Package



UNIT:mm
1 Tube = 37 pcs
Length:520 \pm 2mm