

Typical Products List

- ◆ High speed data rate:1Mbps
- ◆ Isolation voltage: 4000VDC
- ◆ Operating temperature range:-40℃~+85℃
- ◆ Integrated Isolated DC/DC converter
- ◆ Bus protection
- ◆ Connect up to 110 nodes on one bus



Test Condition: Unless otherwise specified, data in the datasheet should be tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.

Application Field

Single High Rate H Type CAN isolation transceiver RSCAN-3V3HSSV/RSCAN-05HSSV series are CAN bus transceiver module with integrated power isolation power, signal isolation chip and CAN transceiver chip. The main function is to convert logic level to CAN bus different level, to achieve signal isolation. The product is with constant-voltage source isolation power. It can achieve 4000VDC electrical isolation and high ESD protection function. Products can easily embedded in the user equipment, so that equipment can easily achieve CAN bus network connectivity.

Product List

Part No	Input Voltage Range(VDC)
RSCAN-3V3HSSV	3.15V-3.45V
RSCAN-05HSSV	4.75V-5.25V

Electrical Character

Standby Power Consumption	RSCAN-3V3HSSV	≤30mA
	RSCAN-05HSSV	≤40mA
Send Current	RSCAN-3V3HSSV	≤60mA
	RSCAN-05HSSV	≤70mA
Input Specification	Serial Interface	RSCAN-3V3HSSV Compatible with the CAN control port of +3.3V
		RSCAN-05HSSV Compatible with the CAN control port of +5V
	Pin Current	I _{TXD} ≤2mA; I _{RXD} ≤2mA
Output Specification	CAN Bus Interface	Meet ISO-11898 standard, twisted-pair output
	Bus Pin Maximum DC Voltage	-58V~+58V
	Bus Protection	Over-voltage bus protected, thermally protected and high voltage transient protected

Transmission Specifications

Transmission rate	1Mbps Max						
Number of Nodes	110 nodes (Mini.)						
	Pin	Logic Level	Symbol	Min.	Typ.	Max.	Unit
RSCAN-3V3HSSV	TXD	High-level	V _{IH}	0.7*Vcc	-	3.6	Vdc

	RXD	Low-level	V _{IL}	0	-	0.8	Vdc
		High-level	V _{OH}	V _{CC} -0.4	3.1	-	
		Low-level	V _{OL}	0	0.2	0.4	
	TXD	High-level	V _{IH}	0.7*V _{CC}	-	5.5	
Low-level		V _{IL}	0	-	0.8		
RSCAN-05HSSV	RXD	High-level	V _{OH}	V _{CC} -0.4	4.8	-	Vdc
		Low-level	V _{OL}	0	0.2	0.4	

General Specifications

Item	Operating Conditions	Value
Electric Isolation		Two-terminal isolation(input and output are mutually isolated)
Isolation Voltage	Leak current<0.5mA, humidity<95% Test for 60S	4000Vdc
Operating Humidity		-40℃ to +85℃
Transportation and Shortage Temperature		-55℃ to +105℃
Operating Humidity		10% - 90%
Max.Operating Temperature for Casing		25℃ (Typ)
Safety Class		EN60950
Safety Certification		EN60950
Safety Class		CLASS III
Application Environment		The presence of dust, fierce vibration, impulsion and corrosive gas may cause damage to product.

EMC Characteristics

Total Items	Sub Items	Test Standard	Class	
EMC	EMI	CE	CISPR22/EN55032 CLASS A (See recommended Photo ②)	
		RE	CISPR22/EN55032 CLASS A (See recommended Photo ②)	
	EMS	ESD	IEC/EN61000-4-2 Contact ±4KV Perf.Criteria B	
		RS	IEC/EN61000-4-3 10V/m Perf.Criteria A (See recommended Photo 2)	
		EFT	IEC/EN61000-4-4	Power supply port ±2KV Perf.Criteria B (See recommended Photo 1)
			IEC/EN61000-4-4	Signal supply port ±2KV Perf.Criteria B (See recommended Photo 1)
		Surge	IEC/EN61000-4-5	Power supply port ±2KV Perf.Criteria B (See recommended Photo 1)
			IEC/EN61000-4-5	Signal supply port ±2KV Perf.Criteria B (See recommended Photo 1)
		CS	IEC/EN61000-4-6 3Vr.m.s Perf.Criteria A (See recommended Photo 2)	

Design Reference

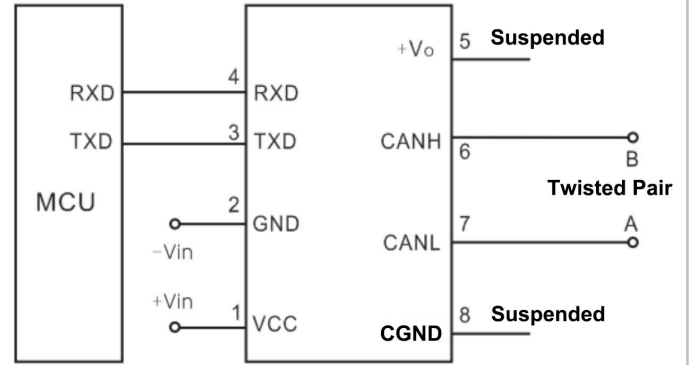
1. Typical Application:

Typical Application RSCAN isolated transceiver module is as shown in the photo;

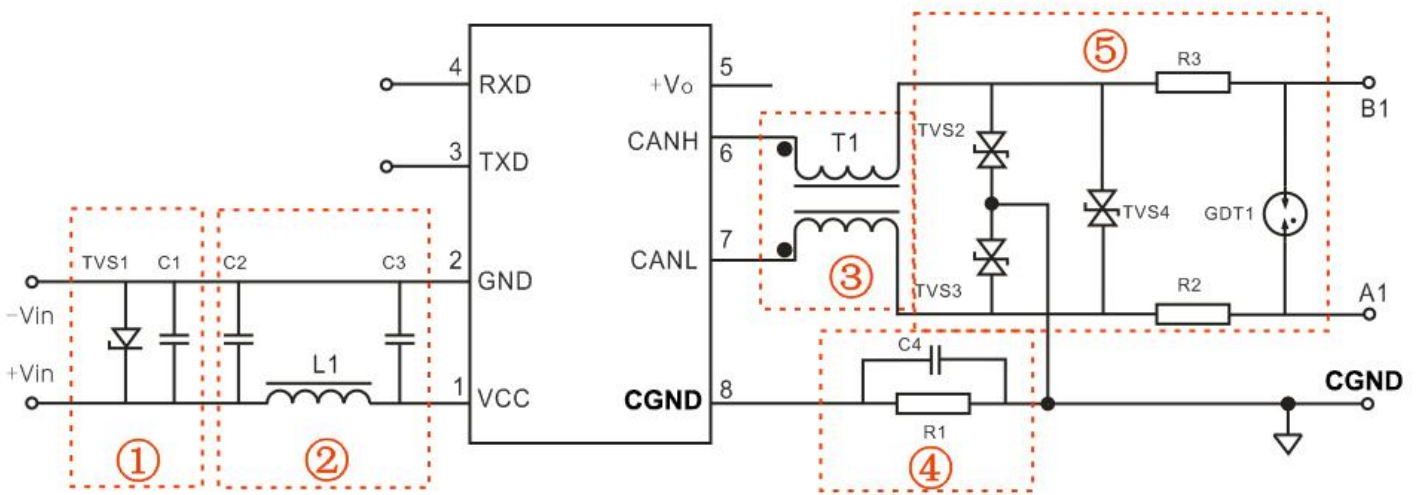
In general, the module is connected with a power supply, the port and the CAN controller and the CAN network bus, and can be directly used without an external device;

RSCAN-05HSSV module need to use the 5V power supply, the matching level is 5V, not be suitable for 3.3V system level;

RSCAN-3V3HSSV module need to use the 3.3V power supply, the matching level is 3.3V, not be suitable for 5V system level;



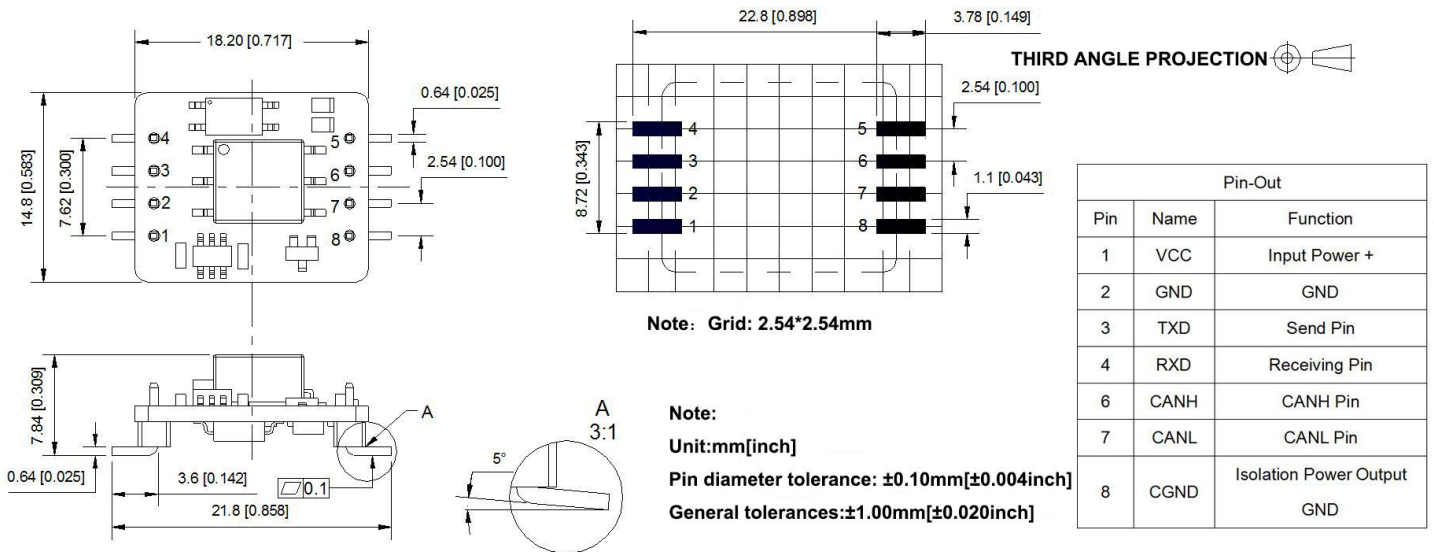
2. Recommended Circuit:



Parameter Recommended:

Component	RSCAN-3V3HSSV	RSCAN-05HSSV
C1	220uF/10V(Electrolytic Capacitor)	
TVS1	SMCJ5.0A	SMCJ6.5A
C2、C3	1uF/50V	
L1	10uH	
T1	B2793S0513N201	
C4	1nF/2kV	
R1	1MΩ	
TVS2、TVS3	SMBJ24CA	
TVS4	SMBJ6.5CA	
R2,R3	10Ω/2W(Wire Wound Resistance)	
GDT	B3D150L-C	

Dimension



Packing Code	L x W x H	
CAN	21.8X14.8X7.2mm	0.858X0.583X0.309inch

Design Reference

- The product should be used under the specification range, hot Hot-swap is not supported, otherwise it will cause permanent damage to it;
- Pin-5 is isolated power output, could support Max.80mA current, and when not in use, it should be suspended;
- RSCAN-05HSSV will not support 3.3V system levels, RSCAN-3V3HSSV will not support 5V level;
- If the product worked beyond the load range or below the minimum load, we cannot ensure that the performance of product is in accordance with all the indexes in this manual;
- Unless otherwise specified, data in this datasheet should be tested under conditions of $T_a=25^\circ\text{C}$, humidity<75% when inputting nominal voltage and outputting rated load(pure resistance load);
- All index testing methods in this datasheet are based on our Company's corporate standards;
- The performance indexes of the product models listed in this manual are as above, but some indexes of non-standard model products will exceed the above-mentioned requirements, and please directly contact our technician for specific information;
- We can provide customized product service;
- The product specification may be changed at any time without prior notice;

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