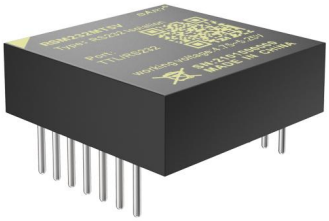
RSM232MT5V Product Specifications

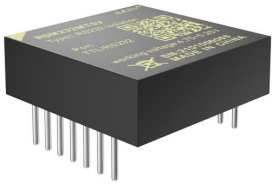
Single-channel high-speed RS232 isolated transceiver module



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Ⅰ Product description

1.1. Introduction



RSM232MT5V is a single-channel full-duplex high-speed RS232 isolation transceiver module, which integrates high-reliability isolation power supply and high-strength signal isolation chip, as well as a standard RS232 serial transceiver module integrating RS232 transceiver chip and serial port protection device.

The main function of the product is to convert TTL logic level to standard RS232 level, or convert RS232 level to TTL level.

The product comes with an isolated power supply with an output of 5V/50mA and a maximum power of 0.5W.

The electrical isolation of input and output is 3000VDC, and the ultra-thin plastic-encapsulated design product can be easily embedded in user equipment to realize the connection function of RS232 interface isolation.

The RS232 port module has a built-in TVS transient suppression device to protect its port from inrush currents caused by ESD, EFT and lightning.

1.2. Features

- Ultra-small size: 25.4*25.4*8mm;
- Communication rate: 1200~256000bps;
- Isolation voltage: 3000V;
- Isolation voltage output: 5V/50mA 0.5W;
- Isolated output voltage: 5V/100mA;
- Working temperature: -40 ~ +85℃;
- Isolated power supply: high-strength isolation DC-DC is integrated on-chip;
- Port protection: built-in TVS transient surge peak suppression;

Ⅱ Specifications

2.1. Limit parameters

Serial Num	Limit parameters	Minimum	Maximum	Remark

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ber				
1	Input voltage	4.5	5.5	Vdc (about 6V output when no load)
2	Output voltage	4.8	6	V
3	Maximum output current	0	50	mA (5V output maximum current must not exceed 50mA, otherwise it may be permanently damaged)
4	Operating temperature	-40	+85	ta=40℃, tc=85℃

2.2. Working parameters

Serial number	Main Parameters	Minimum	Typical value	Maximum	Remark
Input	Input voltage	4.75	5	5.25V	Vdc(It is not recommended to input more than 5.25V)
	Input ripple	-	-	<350	mV
	Input Current	150	-	-	It is recommended to be greater than 150mA
	Communication level	2.8	3.3	5.25	V
Output Transmission	Output voltage	5.2	5.3	5.4	VIN=5V (no load)
	DC-DC efficiency	-	75	-	% (at maximum load)
	Transmission rate	1200	-	256000	bps
	Communication level TTL	2.8	3.3	5.25	V
Isolation withstand voltage	Input/Output	2750	3000	-	VDC (time 1 minute, leakage current <5mA)
Environment	Operating temperature	-40	25	+85	ta=40℃,tc=85℃
	Working humidity	20	-	90	% no condensation
	Storage temperature	-40	+25	+85	℃ Dry storage at room temperature
	Storage humidity	20	-	90	% Dry storage at room temperature
Other	Product Size	25.4*25.4*8mm			
	Product weight	-	7.5	-	g

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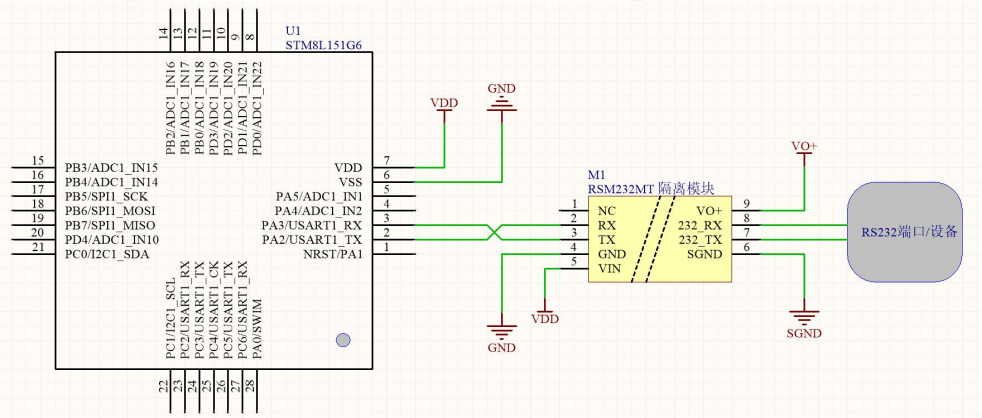
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Ⅲ Basic operation

3.1. Notes

- Before use, please read the technical manual carefully, if you have any questions, please contact the technical support of our company;
- The maximum input voltage must not exceed 5Vdc, otherwise the isolated power output of the module will exceed >5.5V, and you don't need to care if it is not used;
- If the user needs to use the module's own isolated 5V power output, please pay attention that the input voltage should not be higher than 5V, and don't need to care if it is not used;
- If the user needs to use the module's own isolated 5V power output, it is recommended to add a first-level voltage regulator, and no need to care if it is not used;
- During routine maintenance, the input power should be disconnected first;
- Please do not install the product in hazardous areas;
- The power supply of the product adopts DC power supply, and it is strictly forbidden to use AC power supply;
- It is strictly forbidden to disassemble the product without permission to prevent the equipment from failing or malfunctioning;
- The operation of this module requires certain professional skills, and rigorous non-professional life can operate it!
- This product has no power reverse connection protection, please pay attention to the positive and negative poles, the wrong connection will cause permanent damage to the module;
- The products have been strictly inspected and quality controlled before leaving the factory. If there is any abnormal work or suspected internal module failure, please contact the nearest agent or our company's technical support in time.

3.2. Typical application

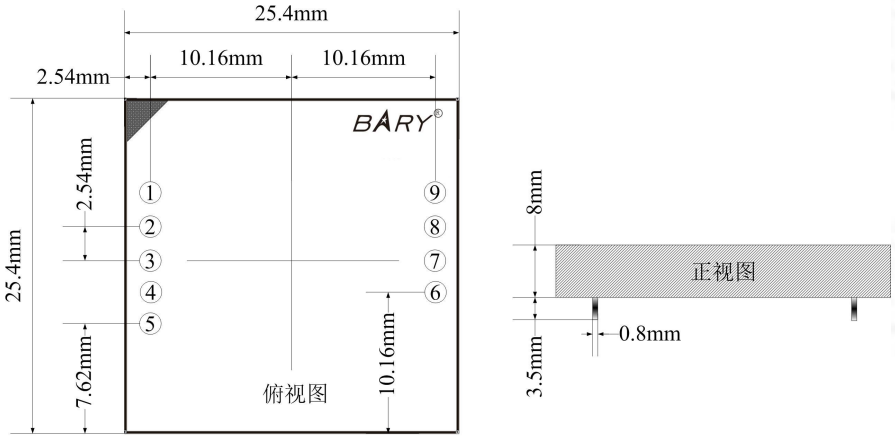


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Ⅳ Mechanical Characteristics and Pin Definition

4.1. Product Dimensions



4.2. Pin definition

Serial Number	Pin	Direction	Application
1	NC	None	Reserved, not linked to circuit
2	RXD	Input	Module TTL serial port data input
3	TXD	Output	Module TTL serial port data output
4	GND	Input	DC power input negative
5	VIN	Input	DC power input positive
6	SGND	Output	Isolation voltage output negative pole, RS232 serial port reference ground
7	RS232_TX	Output	Module RS232 serial port data output
8	RS232_RX	Input	Module RS232 serial port data input
9	VO+	Output	Isolated voltage output positive

Ⅴ Product selection

Product Model	Input Voltage	Output Voltage	Output current	Interface	Installation method
RSM232MT5V	4.75~5.25V	5.0V	50mA	RS232/UART_TTL	Plastic plug-in

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Revise History

Serial Number	Version	Revise Date	Revision Notes	Maintainer
1	V1.0	20211228	First edition, first published	LJ

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