## Features

- Operating voltage: 3.3V/5.0V
- I/O-Isolation 2500 VDC
- Baud rate  115.2Kbps
- Instantaneous bus over voltage protection
- Compatible with EIA/TIA-232-F standard
- No External Components Required
- Low EMI
- High electromagnetic anti-interference
- Operating temperature  -40   +85

## DESCRIPTION

RSM232 is the single transceiver which integrates with the power isolation and electrical isolation. It realizes with isolated RS-232 separation circuit, the isolation voltage is up to 2500VDC.It improves bus reliability and common mode noise immunity. It is built-in TVS tube, which increases the chip prohibit the bus from overvoltage capability, The minimum transmission rate of data transmission is 12.Kbps. The product design meets the standard of EIA/TIA-232-F, and with  ESD (in HBM mode) up to +15KV the protection ability. It is small and high integration, no need peripheral circuit, easy to use.

## Model Selection Guide

| Order Code | Input Voltage | | Baud rate(Kbps) | Speciality | Package |
| --- | --- | --- | --- | --- | --- |
| | Vin(VDC) | Range(VDC) | | | |
| RSM232 | 5 | 3.0-5.5 | 115.2 | Sing RS232 | DIP8 |

## Parameter

| Item | Specification | Min | Typ | Max | Units |
| --- | --- | --- | --- | --- | --- |
| Input Voltage | | 3.0 | 5.0 | 5.5 | VDC |
| Operating Temperature | | -40 | | +85 | |
| Storage Temperature | | -55 | | +125 | |
| Isolation voltage | | | 2500 | | VDC |
| Isolation capacitance | | | 40 | | pF |
| Humidity | No frosting | 10 | | 95 | % |
| Quiescent Current | | | | 33 | mA |
| Propagation delay time | | 350 | | 400 | $\mu$ S |
| TXD/RXD pin  current | | | | 3 | mA |
| Receiver input voltage | | -15 | | +15 | V |
| Transceiver output voltage range | | -5 | | +5 | V |
| Transceiver short-circuit current | | | | 70 | mA |
| ESD Protection | Contact model | | | $\pm$4000 | V |
| | Machine model | | | $\pm$200 | V |

## Application

### Application Area

- Industrial automation system
- Automatic control on electrical power system
- Cartronics
- Communication
- Access control system & Monitor
- PLC controller

### Typical Circuit

MCU    RSM232    DB9

+Vin  
-Vin  
Tin  
Rout

R-GND  
Tout  
Rin

TXD  
RXD

Isolation
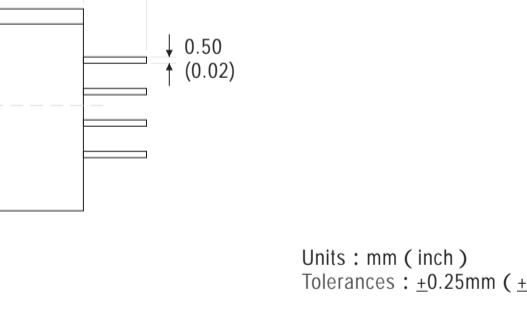
## Mechanical Dimension

**Bottom View**

19.50(0.77)  
15.24(0.60)  
16.50 (0.65)  
2.54 (0.10)

1   8  
2   7  
3   6  
4

**Lateral View**

7.00 (0.276)   5.00 (0.20)  
0.50 (0.02)
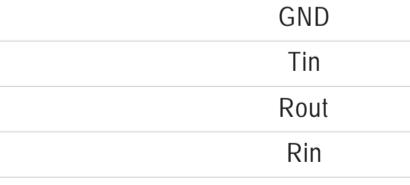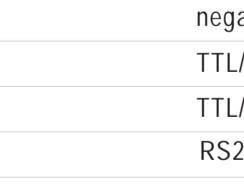
Units   mm   inch  
Tolerances  $\pm$0.25mm  $\pm$0.01inch

## Pin Connections

| Pin | Function | Description |
| --- | --- | --- |
| 1 | +Vin | positive pole |
| 2 | GND | negative pole |
| 3 | Tin | TTL/CMOS transmitter input |
| 4 | Rout | TTL/CMOS receiver output |
| 6 | Rin | RS232 receiver input |
| 7 | Tout | RS232  transmitter output |
| 8 | R-GND | RS232 power isolated ground |