

MC33290

ISO K Line Serial Link Interface

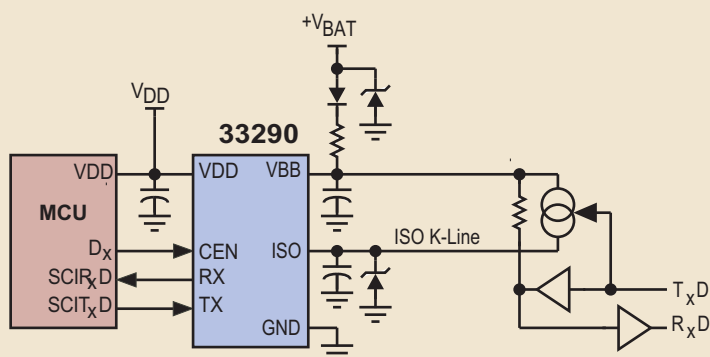
CAN Physical Interface

DESCRIPTION

The 33290 is a serial link bus interface device designed to provide bi-directional half-duplex communication interfacing in vehicle diagnostic applications. It is also suited for applications in farm equipment, industrial equipment, marine equipment, robotic systems, and other applications requiring module-to-module communications.

The 33290 is designed to interface a vehicle's on-board microcontroller with other system modules via the ISO K-line. It is designed to meet Diagnostic Systems ISO-9141 specification. The device's K-line bus driver output is fully protected against bus shorts and over temperature conditions.

33290 SIMPLIFIED APPLICATION DIAGRAM



APPLICATIONS

- Farm Equipment
- Industrial Equipment
- Robotic Systems
- Automotive Systems
- Applications where Module-to-Module Communication is Required
- Marine and Aircraft Networks

PERFORMANCE

TYPICAL VALUES

Bus Outputs	ISO-9141
Data Rate	to 50 kB/s
Operating Voltage	8.0 V — 18 V
Sleep/Stdby Current	50 μ A
ESD (HBM)	± 2000 V
Operating Temperature	$-40^{\circ}\text{C} \leq T_A \leq 125^{\circ}\text{C}$

FEATURES

- Interfaces directly to standard CMOS microprocessors
- ISO K-line pin capable of high currents
- 8.0 kV ESD protection attainable with few additional components
- Standby mode: no V_{BAT} current drain with V_{DD} at 5.0 V
- Low current drain during operation with V_{DD} at 5.0 V
- Devices available for comparison are in the Analog Product Selector Guide - SG1002 and Automotive Product Selector Guide - SG187

PROTECTION	DETECT	LIMITING	SHUT DOWN	STATUS REPORTING
Overcurrent/SC	●	●		
Overtemperature	●		●	●

CUSTOMER BENEFITS

- Lower system cost with reduced part count with simple hookup
- Industry-standard communication protocol
- Faster design cycle time

QUESTIONS

- What type of module-to-module communication protocol are you using?
- Do you need a robust half-duplex bi-directional communication between two modules?
- Do you need a communication system that operates at rates up to 50 kB/s?
- Do you need a communication system that is compliant with On-Board Diagnostic (OBD) requirements as set forth by the California Air Resources Board (CARB)?

ORDERING INFORMATION

Device	Temperature Range (T_A)	Package
MC33290D/R2	-40°C to 125°C	8 SOICN
MCZ33290EF/R2		8 SOICN (Pb-free)

Data Sheet Order Number MC33290

Contact Sales for Evaluation Kit Availability



8 SOICN
1.27 mm Pitch
4.9 mm x 3.9 mm Body