ANALOG PRODUCTS

MC33897 FACT SHEET

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COMMUNICATION
CAN PHYSICAL INTERFACE

33897 SINGLE-WIRE CAN TRANSCEIVER

The 33897 provides a physical layer for digital communications purposes using a Carrier Sense Multiple Access/Collision Resolution (CSMA/CR) data link operating over a single-wire medium. This is more commonly referred to as single-wire CAN.

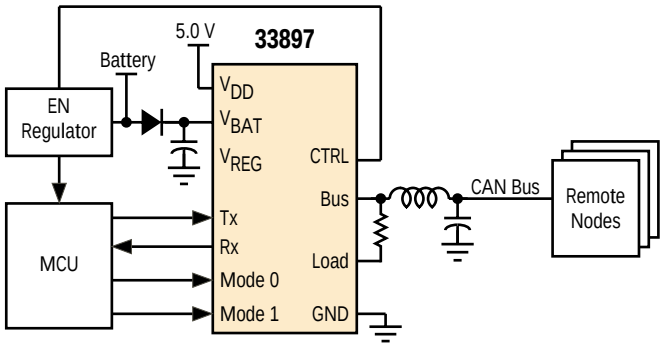
The 33897 operates directly from a vehicle's 12 V battery system or a broad range DC-power sources. It can operate at either low or high (33.33 kB/s and 83.33 kB/s) data rates. Many safety and performance features are incorporated. A high voltage wake-up feature allows the 33897 to control the regulator used in support of the MCU and other logic. It can enter a sleep mode by turning-OFF the regulator. The presents of a defined wakeup voltage level on the bus will re-activate the regulator and turn the system back "ON".

This device complies with the GM3089v2.0 General Motors Corporation specification.

APPLICATIONS

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

Simplified Application Diagram



CUSTOMER BENEFITS

- Lower system cost
- Smaller system (reduced parts count)
- Industry standard protocol
- Faster design cycle time (quick to market)

Performance	Typical Values
Bus Output	CAN
Data Rate	to 83.3 kB/s
Operating Voltage	7.0 – 16 V
Sleep/Standby Current	35 µA
ESD	± 2000 V
Operating Temp	-40°C ≤ T_A ≤ 125°C

FEATURES

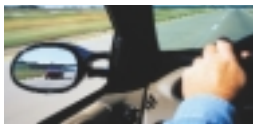
- Complies with GM3089v2.0
- Enhanced ground loss detection
- Covers both 33.33 kB/s and 83.33 kB/s rates
- Interfaces directly to standard 3.3 V and 5.0 V CMOS microcontrollers
- Thermal shutdown with hysteresis
- Controlled voltage and current waveshaping of bus drive (for radiated EMI reduction)
- High-voltage wake-up feature
- Additional devices available for comparison in Analog Selector Guide SG1002/D

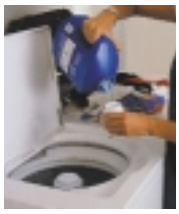
Protection	Detect	Limiting	Shut Down	Auto Retry
Under Voltage	•		•	•
Over Current/SC	•	•		
Over Temperature	•	•		•
Open GND	•	•		•

Ordering Information	Package	Ship Method	Motorola Part Number
	14 SOICN	Rail T/R	**33897D **33897DR2
Data Sheet Order Number			MC33897/D
Contact Sales for Evaluation Kit Availability			
**Prefix Index: PC = Eng Samples; XC = In Qual; MC = Production			

QUESTIONS

- What type of module communications protocol are you using?
- Do you need a physical layer part for single wire CAN?
- Do you need a robust single wire industry standard bus for microprocessor communication?





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