

ADVANCE INFORMATION

All information in this data sheet is preliminary and subject to change.

7/94

MAXIM

1 μ A Supply Current, 1.8V to 4.25V-Powered RS-232 Transceiver with AutoShutdown

General Description

The MAX3218 RS-232 transceiver is intended for battery-powered EIA/TIA-232E and V.28/V.24 communications interfaces that need two drivers and two receivers with minimum power consumption from a single low-voltage supply. It provides a wide +1.8V to +4.25V operating voltage range while maintaining true RS-232 and EIA/TIA-562 voltage levels. The MAX3218 runs from 2 Alkaline, NiCd, or NiMH cells without any form of voltage regulator. A guaranteed 230kbps data rate provides compatibility with popular software for communicating with personal computers.

Supply current is reduced to 1 μ A with Maxim's new AutoShutdown feature. When the MAX3218 does not sense a valid signal level on the receiver inputs, the on-board power-supply and drivers shut down. This occurs if the RS-232 cable is disconnected or if the transmitters of the connected peripheral are turned off. The system turns on again when a valid level is applied to either RS-232 receiver input. As a result, the system saves power without changes to the existing software. Additionally, the MAX3218 can be forced to shutdown, or forced out of shutdown, under logic control.

While shut down, all receivers can remain active or can be disabled under logic control, permitting a system incorporating the CMOS MAX3218 to monitor external devices while in low-power shutdown. Three-state drivers are provided on both receiver outputs so that multiple receivers, generally of different interface standards, can be wire-ORed at the UART. The MAX3218 is available in 20-pin DIP, SO, and SSOP packages.

Applications

Battery-Powered Equipment
Subnotebook Computers
PDAs
Hand-Held Equipment
Peripherals

Typical Operating Circuit on next page.

* Patent Pending

Features

BETTER THAN BIPOLAR!

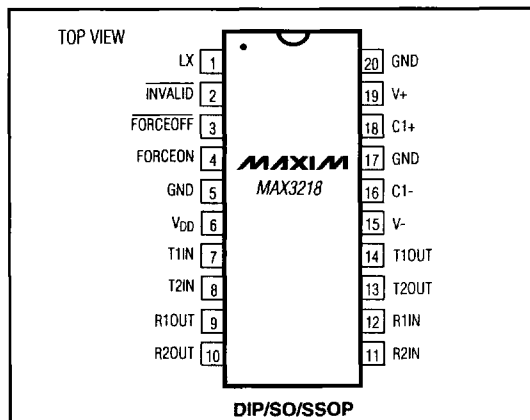
- ◆ 1 μ A Supply Current
- ◆ Operates Directly From Two Alkaline, NiCd or NiMH Cells
- ◆ +1.8V to +4.25V Single-Supply Voltage Range
- ◆ 230kbps Data Rate Guaranteed
- ◆ Low-Cost Surface-Mount Components
- ◆ Meets EIA/TIA-232E Specifications
- ◆ Three-State Receiver Outputs
- ◆ Flow-Through Pinout
- ◆ On-Board DC-DC Converters
- ◆ 20-Pin SSOP, Wide SO or DIP Packages

Ordering Information

PART	TEMP. RANGE	PIN-PACKAGE
MAX3218CPP	0°C to +70°C	20 Plastic DIP
MAX3218CWP	0°C to +70°C	20 SO
MAX3218CAP	0°C to +70°C	20 SSOP
MAX3218C/D	0°C to +70°C	Dice†
MAX3218EPP	-40°C to +85°C	20 Plastic DIP
MAX3218EWP	-40°C to +85°C	20 SO
MAX3218EAP	-40°C to +85°C	20 SSOP

† Contact factory for dice specifications.

Pin Configuration



MAX3218*

2

MAXIM

Maxim Integrated Products 2-139

Call toll free 1-800-998-8800 for free samples or literature.

1 μ A Supply Current, 1.8V to 4.25V-Powered RS-232 Transceiver with AutoShutdown

MAX3218

Typical Operating Circuit

