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Jameco Part Number 2045042

DS36C279

Low Power EIA-RS-485 Transceiver with Sleep Mode

General Description

The DS36C279 is a low power differential bus/line transceiver designed to meet the requirements of RS-485 Standard for multipoint data transmission. In addition it is compatible with TIA/EIA-422-B.

The sleep mode feature automatically puts the device in a power saving mode when both the driver and receiver are disabled.^{††} The device is ideal for use in power conscious applications where the device may be disabled for extended periods of time.

The driver and receiver outputs feature TRI-STATE[®] capability. The driver outputs operate over the entire common mode range of -7V to +12V. Bus contention or fault situations that cause excessive power dissipation within the device are handled by a thermal shutdown circuit, which forces the driver outputs into a high impedance state.

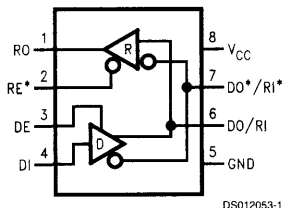
The receiver incorporates a fail safe circuit which guarantees a high output state when the inputs are left open.[†]

The DS36C279T is fully specified over the industrial temperature range (-40°C to +85°C).

Features

- 100% RS-485 compliant
 - Guaranteed RS-485 device interoperation
- Low power CMOS design: I_{CC} 500 μ A max
- Automatic sensing sleep mode
 - Reduces I_{CC} to 10 μ A maximum
- Built-in power up/down glitch-free circuitry
 - Permits live transceiver intersection/displacement
- SOIC packages
- Industrial temperature range: -40°C to +85°C
- On-board thermal shutdown circuitry
 - Prevents damage to the device in the event of excessive power dissipation
- Wide common mode range: -7V to +12V
- Receive open input fail-safe (Note 1)
- 1/4 unit load (DS36C279): ≥ 128 nodes
- 1/2 unit load (DS36C279T): ≥ 64 nodes
- ESD (Human Body Model): ≥ 2 kV
- Drop-in replacement for:
 - LTC485 MAX485 DS75176 DS3695

Connection and Logic Diagram



DS012053-1

Order Number **DS36C279M, DS36C279TM**
See NS Package Number **M08A**

DRIVER SECTION				
RE*	DE	DI	DO*/RI	DO*/RI*
X	H	H	H	L
X	H	L	L	H
X	L	X	Z	Z
RECEIVER SECTION				
RE*	DE	RI-RI*		RO
L	L	$\geq +0.2V$		H
L	L	$\leq -0.2V$		L
H	L	X		Z (Note 2)
L	L	OPEN (Note 1)		H

Note 1: Non-terminated, open input only

Note 2: Device enters sleep mode if enable conditions are held 600 ns