FEATURES
RS-485 transceiver with electrical data isolation
500 kbps data rate
Slew rate-limited driver outputs
Suitable for 5 V or 3 V operation on VDD1
Suitable for 5 V operation on VDD2
VIDRM = 560 V peak
256 nodes on bus

ADM2483 APPLICATIONS
Low power RS-485/RS-422 networks
Isolated interfaces
Industrial field networks
Multipoint data transmission systems

GENERAL DESCRIPTION
The EVAL-ADM2483EBZ allows easy and quick evaluation of the isolated ADM2483 RS-485 transceiver. The evaluation board allows all of the input and output functions to be exercised without the need for external components.

The ADM2483 differential bus transceiver is an integrated, galvanically isolated component designed for bidirectional data communication on balanced, multipoint bus transmission lines. Using Analog Devices, Inc., iCoupler® technology, the ADM2483 combines a 3-channel isolator, a three-state differential line driver, and a differential input receiver into a single package. The logic side of the device is powered with either a 5 V or 3 V supply, and the bus side uses only a 5 V supply.
TABLE OF CONTENTS

Features ................................................................. 1
ADM2483 Applications ............................................. 1
Evaluation Kit Contents .......................................... 1
General Description ............................................... 1
Evaluation Board Digital Photograph .................... 1
Revision History ....................................................... 2

Evaluation Board Configurations ................................. 3
Setting Up the Evaluation Board ............................... 3
Evaluation Board Schematic and Artwork ................ 4
Ordering Information ............................................... 6
Bill of Materials ....................................................... 6
Related Links .......................................................... 6

REVISION HISTORY

6/11—Revision 0: Initial Version
EVALUATION BOARD CONFIGURATIONS

SETTING UP THE EVALUATION BOARD

The EVAL-ADM2483EBZ allows the isolated ADM2483 RS-485 transceivers to be easily and quickly evaluated. The evaluation board allows all of the input and output functions to be exercised without the need for external components.

A termination resistor, RT, of 120 Ω is fitted on the receiver input. This can be removed if the board is connected to a bus already terminated at both ends. The value of the termination resistor should be equal to the characteristic impedance of the cable used.

The logic side is suitable for 5 V or 3 V operation on VDD1. There is a 0.1 μF decoupling capacitor, C1, fitted between VDD1 and GND1. The bus side is suitable for 5 V operation on VDD2. There is a 0.1 μF decoupling capacitor, C2, fitted between VDD2 and GND2.

If fail-safe biasing is required for other parts on the bus that do not have the offset receiver threshold of the ADM2483, bus biasing resistors can be fitted on the receiver input by inserting R1 and R2.

EVALUATION BOARD SCHEMATIC AND ARTWORK

Figure 2. EVAL-ADM2483EBZ Evaluation Board Circuit Diagram

Figure 3. EVAL-ADM2483EBZ Evaluation Board Silkscreen

Figure 4. EVAL-ADM2483EBZ Evaluation Board Component Side
Figure 5. EVAL-ADM2483EBZ Evaluation Board Solder Side
## ORDERING INFORMATION

### BILL OF MATERIALS

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<th>Quantity</th>
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<td>CON\POWER4, 4-pin terminal block</td>
<td>Lumberg/KRM 04</td>
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<td>SO16WB</td>
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### RELATED LINKS

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<th>Resource</th>
<th>Description</th>
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<tr>
<td>ADM2483</td>
<td>Product Page, 2.5 kV Signal Isolated, 500 kbps, Half Duplex RS-485 Transceiver with Power Valid Input</td>
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<tr>
<td>AN-960</td>
<td>RS-485/RS-422 Circuit Implementation Guide</td>
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ESD Caution

ESD (electrostatic discharge) sensitive device. Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

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