

Evaluating the ADM3251E

FEATURES

- 2.5 kV fully isolated (power and data) RS-232 transceiver**
- Convenient connections for power and signal through screw terminal blocks**
- 5 V operation**
- Easily configurable through jumper connections**
- Test points for measuring all signals**
- All external components required for correct operation**
- Patchwork area supports through hole devices**

EVALUATION KIT CONTENTS

- ADM3251E evaluation board (Rev. 0)
- 2 ADM3251E samples

GENERAL DESCRIPTION

The simple, 2-layer [ADM3251E](#) evaluation board can be used for easy evaluation of the ADM3251E RS-232 transceiver with isolated power and signal. Screw terminal blocks provide convenient connections for the power and signal connections. Test points are included on the power and signal lines on both sides of the isolation barrier.

DIGITAL PICTURE OF THE EVALUATION BOARD



Figure 1. ADM3251E Evaluation Board

TABLE OF CONTENTS

Features	1	Printed Circuit Board Layout	4
Evaluation Kit Contents.....	1	Evaluation Board Hardware.....	5
General Description	1	Connector, Test Point, and Jumper Functions	5
Digital Picture of the Evaluation Board.....	1	Ordering Information.....	6
Revision History	2	Bill of Materials.....	6
Evaluation Board Schematic	3	ESD Caution.....	8

REVISION HISTORY

3/10—Revision 0: Initial Version

EVALUATION BOARD SCHEMATIC

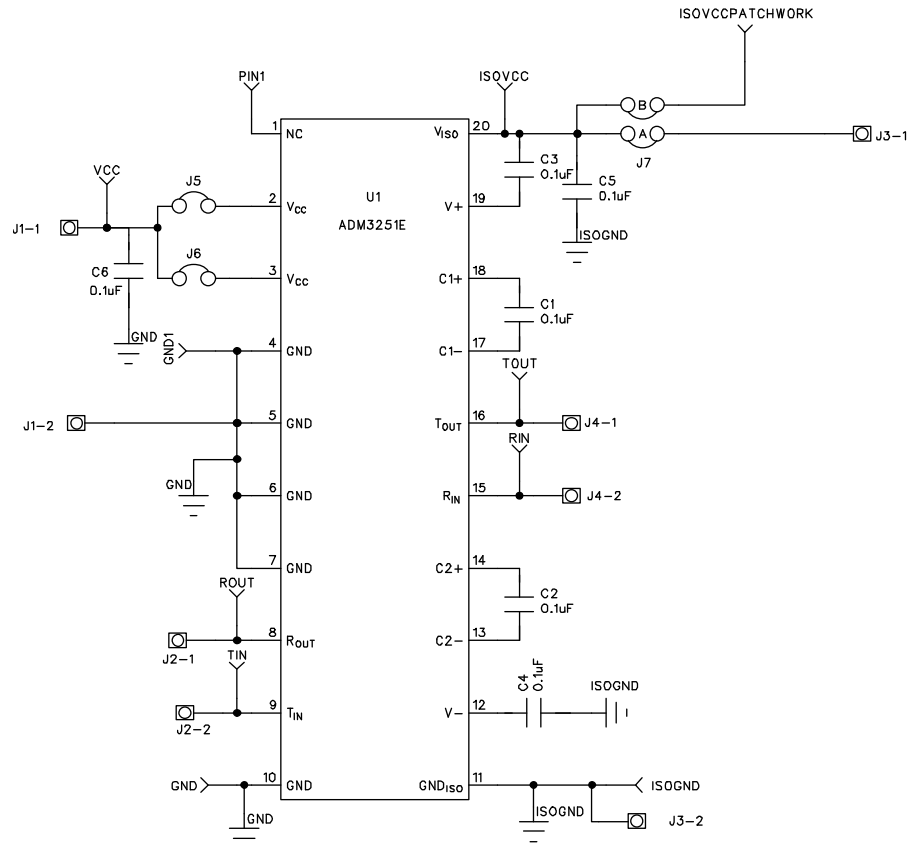


Figure 2. Schematic of the ADM3251E Evaluation Board

06981-002

PRINTED CIRCUIT BOARD LAYOUT

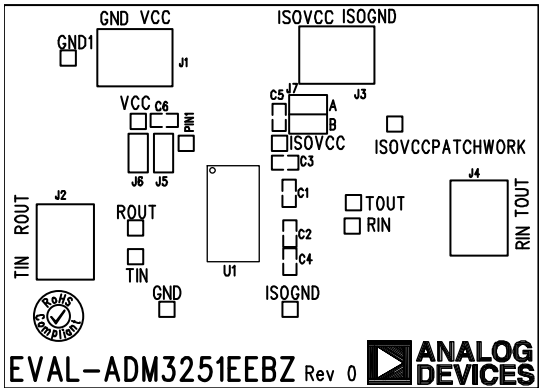


Figure 3. EVAL-ADM3251EEBZ Silkscreen

EVALUATION BOARD HARDWARE

CONNECTOR, TEST POINT, AND JUMPER FUNCTIONS

Table 1. Connector Functions

Connector	Name	Function
J1	Power connector	J1-1: Connects positive output of bench supply to the V_{CC} pin of the ADM3251E . J1-2: Connects ground terminal of bench supply to the GND pins of the ADM3251E.
J2	Terminal block	J2-1: Connects to R_{OUT} pin of the ADM3251E. J2-2: Connects to T_{IN} pin of the ADM3251E.
J3	Power connector	J3-1: Connects positive supply of isolated bench supply to Jumper J7-A, which, when inserted, connects to the V_{ISO} pin of the ADM3251E. J3-2: Connects ground terminal of bench supply to the GND_{ISO} pin of the ADM3251E.
J4	Terminal block	J4-1: Connects to T_{OUT} pin of the ADM3251E. J4-2: Connects to R_{IN} pin of the ADM3251E.

Table 2. Test Point Functions

Test Point	Function
GND, GND1	Connected to GND pin of the ADM3251E.
ISOGND	Connected to GND_{ISO} pin of the ADM3251E.
ISOVCC	Connected to V_{ISO} pin of the ADM3251E.
ISOVCCPATCHWORK	Connected to Jumper J7-B.
PIN1	Connected to Pin 1 of the ADM3251E.
RIN	Connected to R_{IN} pin of the ADM3251E.
ROUT	Connected to R_{OUT} pin of the ADM3251E.
TIN	Connected to T_{IN} pin of the ADM3251E.
TOUT	Connected to T_{OUT} pin of the ADM3251E.
VCC	Connected to V_{CC} pin of the ADM3251E.

Table 3. Jumper Functions¹

Jumper	Function
J5	Connects Pin 2 (V_{CC}) to J1-1.
J6	Connects Pin 3 (V_{CC}) to J1-1.
J7	J7-B: Connects Pin 20 (V_{ISO}) to ISOVCCPATCHWORK. J7-A: Connects Pin 20 (V_{ISO}) to J3-1.

¹ By default, Jumper 5, Jumper 6, and Jumper 7 are inserted.

ORDERING INFORMATION

BILL OF MATERIALS

Table 4.

Qty	Reference Designator	Description	Part Decal	Part No.
6	C1 to C6	Capacitor, 0.1 μ F	0603	FEC 1414610
3	GND, GND1, ISOGND	Black test point	Testpoint	FEC 8731128
3	VCC, ISOVCC, ISOVCCPATCHWORK	Red test point	Testpoint	FEC 8731144
4	J1 to J4	Terminal block	CON\POWER	FEC 1177875
2	J5, J6	Jumper	SIP-2P	FEC 1022247 and 150411
1	J7	Jumper	Jumper_2	FEC 1022244 and 150410
1	U1	RS-232 transceiver	SO20WB	ADM3251EARWZ

NOTES

NOTES

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.

Evaluation boards are only intended for device evaluation and not for production purposes. Evaluation boards are supplied "as is" and without warranties of any kind, express, implied, or statutory including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. No license is granted by implication or otherwise under any patents or other intellectual property by application or use of evaluation boards. Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Analog Devices reserves the right to change devices or specifications at any time without notice. Trademarks and registered trademarks are the property of their respective owners. Evaluation boards are not authorized to be used in life support devices or systems.

