**iCoupler ADuM3221EBZ, 4 A Output-Isolated Gate Driver Evaluation Board**

**FEATURES**
- Isolated dual-channel gate driver with ADuM3220/ADuM3221
- 4 A peak output current
- High frequency operation: 1 MHz maximum
- CMOS input logic levels
- 2.5 kV rms isolation
- Supports TO-263 or TO-252 IGBT/MOSFETs

**GENERAL DESCRIPTION**
The EVAL-ADuM3221EBZ supports the ADuM3220/ADuM3221 isolated gate drivers. It is compatible with IGBT/MOSFETs in TO-263 or TO-252 packages. The evaluation board is ideal for evaluating the ADuM322x family with different power devices. It comes with an ADuM3221A installed.

**SUPPORTED iCoupler® MODELS**
- ADuM3220
- ADuM3221

![EVAL-ADuM3221EBZ Evaluation Board](image-url)
PAD LAYOUT FOR THE DUT

Figure 4 and Figure 5 show the top and bottom layer artwork of the EVAL-ADuM3221EBZ evaluation board, respectively. Q1 and Q2 can be populated with TO-263 or TO-252 MOSFETs or IGBTs with the footprint shown in Figure 2. C4 and C5 are 2.2 nF and represent a typical gate capacitance. If MOSFETs/IGBTs are soldered to Q1 and Q2, remove these capacitors. R5 and R6 add resistance in series with the gates to control the edges of the gate driver. If the outputs have a lighter load than 2 nF, the resistance of R5 and R6 may need to increased.

INPUT POWER CONNECTIONS

Connect the input side supply, VDD1 (3 V to 5.5 V) to J2 and its return to J3 (GND1).

OUTPUT POWER CONNECTIONS

Connect the output supply voltage, VDD2 (4.5 V to 18 V) of the ADuM3220/ADuM3221 to J4 and its return to J5 (GND2).

I/O CONNECTIONS

Connect Logic Input A/VIA and Logic Input B/VIB to an external logic signal via J1 or TP1/TP2. The two logic inputs have 50 Ω terminations. The collector/drain outputs of the two IGBTs/MOSFETs, Q1 and Q2, have labeled wire pads.
Figure 4. Top Layer of the EVAL-ADuM3221EBZ Evaluation Board

Figure 5. Bottom Layer of the EVAL-ADuM3221EBZ Evaluation Board
### ORDERING INFORMATION

#### BILL OF MATERIALS

Table 1.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Reference Designator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>U1</td>
<td>ADuM3221A</td>
</tr>
<tr>
<td>4</td>
<td>R1 to R4</td>
<td>100 Ω, 1/4 W, 1%, 0805</td>
</tr>
<tr>
<td>2</td>
<td>R5, R6</td>
<td>0 Ω, 1/10 W, 0603</td>
</tr>
<tr>
<td>2</td>
<td>C1, C2</td>
<td>0.1 μF, 25 V, 10%, 0603</td>
</tr>
<tr>
<td>1</td>
<td>C3</td>
<td>10 μF, 25 V, 10%, 1206</td>
</tr>
<tr>
<td>2</td>
<td>C4, C5</td>
<td>2200 pF, 50 V, 5%, 0603</td>
</tr>
<tr>
<td>2</td>
<td>J3, J5</td>
<td>TP-104 series test point, black</td>
</tr>
<tr>
<td>2</td>
<td>J2, J4</td>
<td>TP-104 series test point, red</td>
</tr>
<tr>
<td>4</td>
<td>TP1 to TP4</td>
<td>TP-104 series test point, white</td>
</tr>
<tr>
<td>Not applicable</td>
<td>J1, Q1, Q2</td>
<td>Do not install</td>
</tr>
</tbody>
</table>
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.