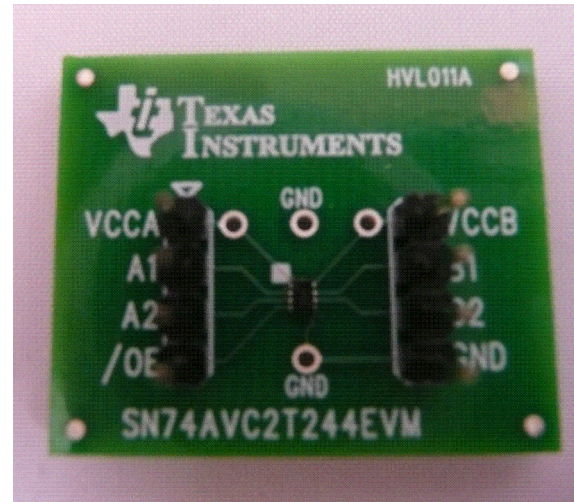


## SN74AVC2T244 Evaluation Module

### 1 Features

- 2-bit Unidirectional Voltage-level translator
- Breakout board style EVM for prototype and evaluation



### 2 EVM Description

The SN74AVC2T244 is a 2-bit voltage level translator. This translator is a single direction voltage translator, with  $\overline{OE}$ . When the output-enable ( $\overline{OE}$ ) input is high, all outputs are placed in the high-impedance state. The A port is designed to track VCCA. VCCA accepts any supply voltage from 0.9 V to 3.6 V. The B port is designed to track VCCB. VCCB accepts any supply voltage from 0.9 V to 3.6 V. This allows for low-voltage bidirectional translation between 1-V, 1.2-V, 1.5-V, 1.8-V, 2.5-V and 3.3-V voltage nodes.

The SN74AVC2T244 EVM was created to allow simplified evaluation and prototyping without the need for full board development. This EVM provides peripheral header style pads for probing and signal connection to each device pin. Headers are labeled with the corresponding pin name. The pin number assignments are given in the following table.

**Table 1. Pin Out**

	1	2
A	VCCA	VCCB
B	A1	B1
C	A2	B2
D	$\overline{OE}$	GND

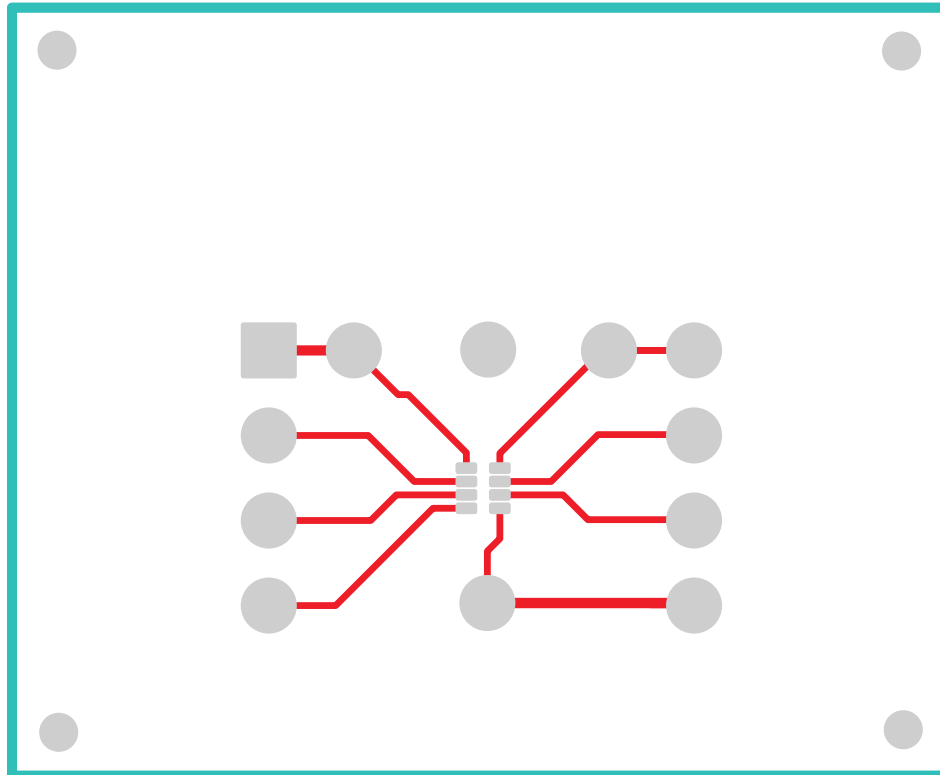
### 3 Setup Procedure

Ensure that VCCA, VCCB and GND are all connected and configured properly. Bypass capacitors on the VCCA and VCCB are recommended and will optimize device performance.

When connecting signals, minimize connection length and keep GND leads short when probing. This will ensure minimal capacitive, resistive and inductive loading caused by the connection and connector.

For more device information please see the SN74AVC2T244 device datasheet or visit the TI support forums: [e2e.ti.com](http://e2e.ti.com)

### 4 PCB Layout



**Figure 1. Top Layer**

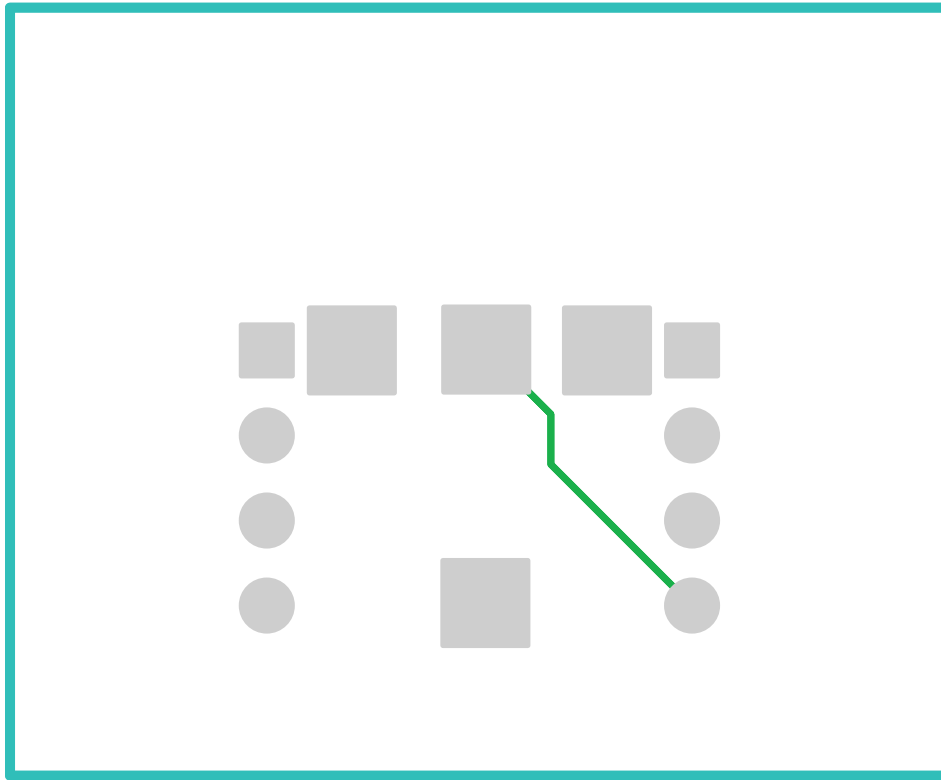


Figure 2. Bottom Layer

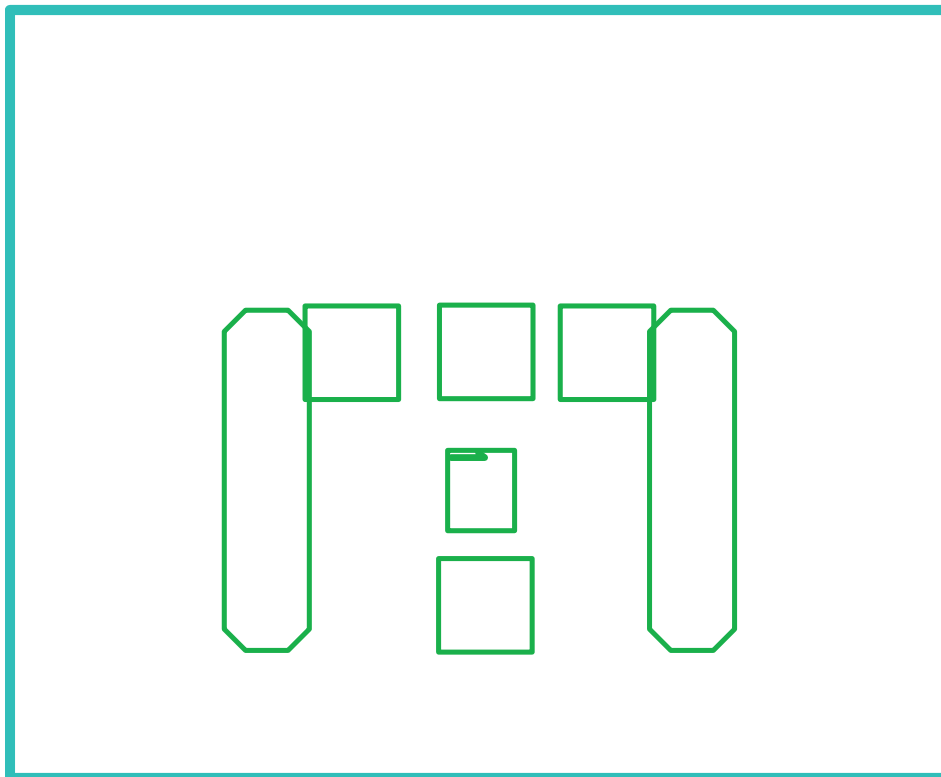


Figure 3. Assembly Top Layer



Figure 4. Assembly Bottom Layer

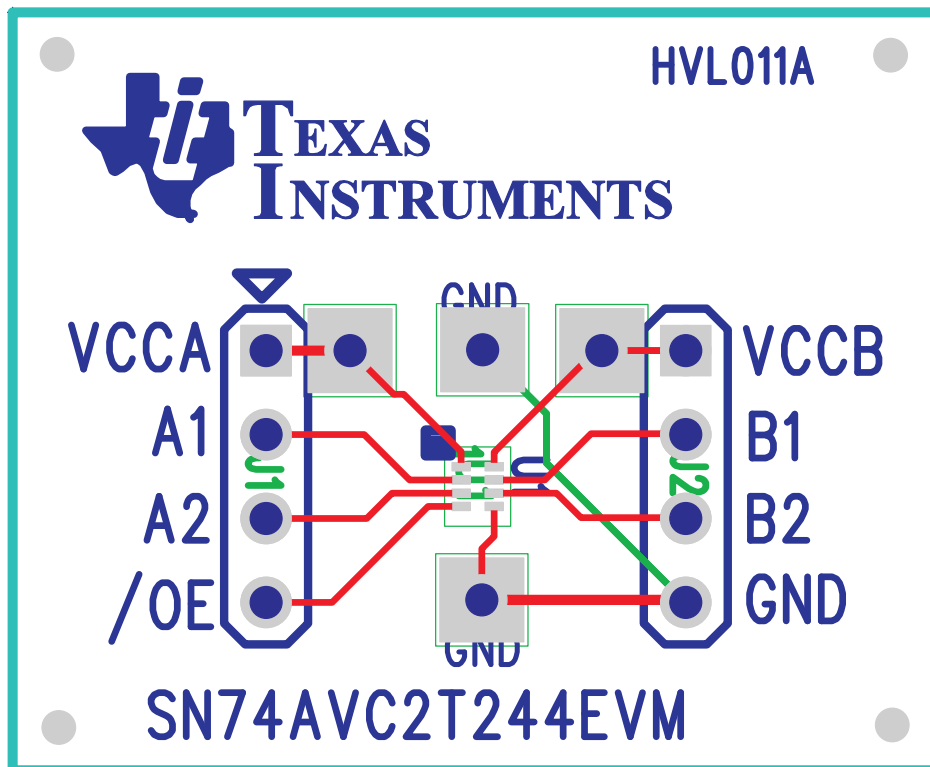
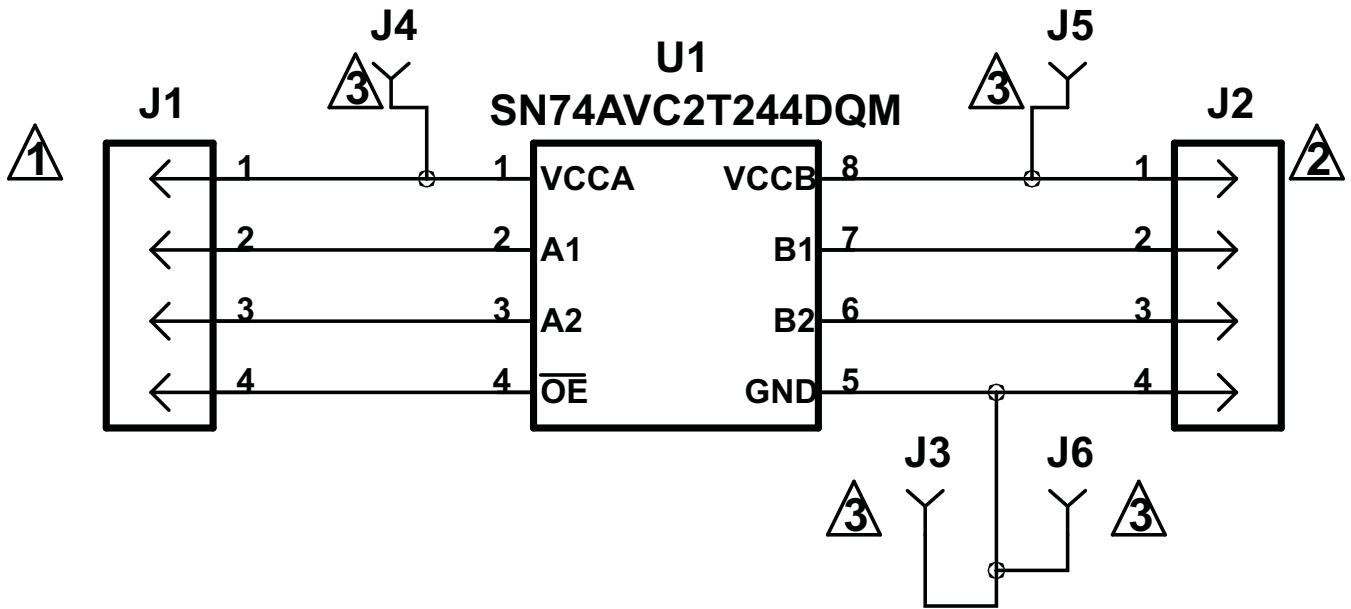


Figure 5. Composite

**5 SN74AVC2T244 EVM Schematic**



- 1** VCCA Range - 0.9V to 3.6V
- 2** VCCB Range - 0.9V to 3.6V
- 3** Do not instal J3, J4, J5, J6

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It is important to operate this EVM within the input voltage range of 0.9 V to 3.6 V and the output voltage range of 0.9 V to 3.6 V.

Exceeding the specified input range may cause unexpected operation and/or irreversible damage to the EVM. If there are questions concerning the input range, please contact a TI field representative prior to connecting the input power.

Applying loads outside of the specified output range may result in unintended operation and/or possible permanent damage to the EVM. Please consult the EVM User's Guide prior to connecting any load to the EVM output. If there is uncertainty as to the load specification, please contact a TI field representative.

During normal operation, some circuit components may have case temperatures greater than 75°C. The EVM is designed to operate properly with certain components above 75°C as long as the input and output ranges are maintained. These components include but are not limited to linear regulators, switching transistors, pass transistors, and current sense resistors. These types of devices can be identified using the EVM schematic located in the EVM User's Guide. When placing measurement probes near these devices during operation, please be aware that these devices may be very warm to the touch.

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