## DESCRIPTION

The Texas Instruments DEM−SOT223LDO demonstration module (DEM) helps designers evaluate the operation and performance of Texas Instrument's low-dropout regulators (LDOs). This module is compatible with most positive output LDOs offered in the SOT223 (DCQ) package.

## CIRCUIT

The schematic in Figure 1 illustrates all the possible connections available to evaluate LDOs in the SOT223 (DCQ) package. Depending on the LDO being evaluated, different components can be omitted. Each model may only use some of the components. The schematics in Figure 2 illustrate the connections required to evaluate the two common LDO pinouts in the SOT223 package.

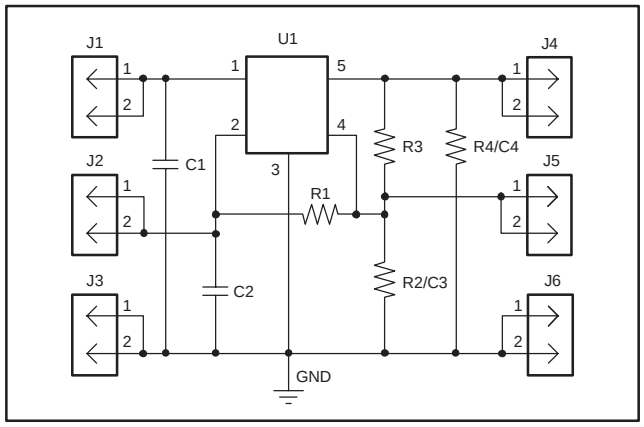


**Figure 1. Circuit Schematic**

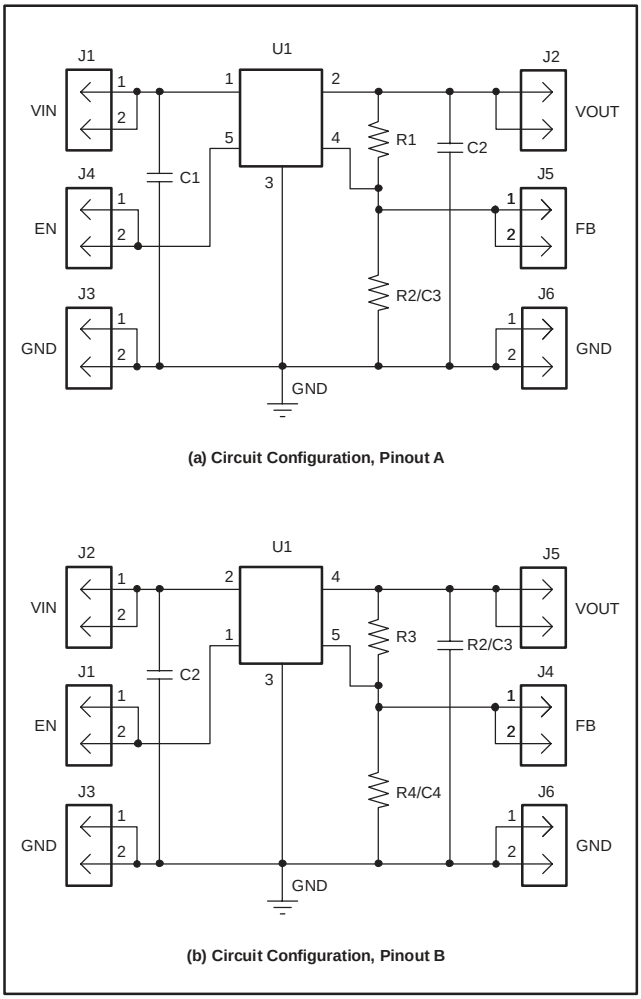


**Figure 2. Example Board Configurations for Evaluating SOT223 LDOs**

## COMPONENTS

This DEM is specifically designed to be assembled using surface-mount devices with footprints ranging from 0603 to 1210. Additional holes have been provided to accommodate leaded components. When selecting components, refer to the product datasheet for specific guidelines.

## BOARD LAYOUT

This DEM is a two-layer printed circuit board (PCB). The LDO is grounded through pin 3 to the top ground plane. The bottom layer of the PCB also provides extra pads where additional surface-mount components can be added in parallel to the top-side components. Figure 3 shows the top assembly layer for the PCB.

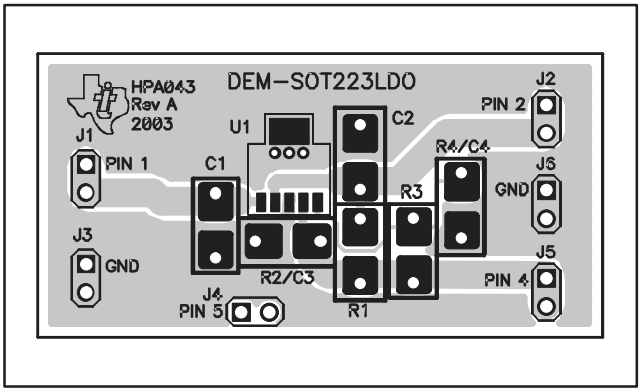


**Figure 3. PCB Layout − Top Assembly**

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