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DEMO MANUAL DC417B

Multi-Footprint Single Op Amp Prototyping Boards

DESCRIPTION

The DC417B demo board set gives maximum flexibility for prototyping single op amp circuits. This demo manual lists which components to use for common op amp circuits and an example is given for a standard pinout single op amp circuit.

Design files for this circuit board are available at http://www.linear.com/demo

OPERATING PRINCIPLES

The DC417B demo board comes as a two board set; one board for DIP8, S8, DFN8, and MS8 packages and the other board for SOT23-5 and SOT23-6 packages. Each board is laid out such that most of the general op amp circuits can be easily built. Both boards have decoupling cap positions included.

Component positions are included for common circuit configurations. Take your schematic and identify component positions on the board which correspond to the components in the schematic. Air-wire other components as needed, taking advantage of the exposed ground planes as desired. Terminal posts at the sides of both boards give easy access to power, ground, inputs, and outputs. Access is provided to all IC pins. Pins 1, 5, and 8 are brought out to terminals for easy access on the DIP8, S8, DFN8, and MS8 board. Pin 5 is brought out to a terminal on the SOT23-5 and SOT23-6 board. These pins are typically used for offset adjustment, trimming VOS , or shutdown. The layout includes positions for BNC connectors for both inputs and outputs. Although component pads are marked as C for capacitors and R for resistors, any component that fits any footprint can be placed on the board.

CIRCUIT EXAMPLE

To build a noninverting amp using the DIP8/S8/MS8/DFN8 board use the R3 component position for the feedback resistor and R11 for the gain set resistor. C6 and C2 are the decoupling caps located close to the IC package and C3 and C5 the bulk decoupling caps located next to the power input terminals at the edge of the board. Jumper wires or 0Ω resistors would be used for the R8 component position on the input path to use the BNC connector J3, or R8 and R13 to use input terminal TP11 and at R7 on the output path to use BNC J2 or output terminal TP9 for connection input and output signals.

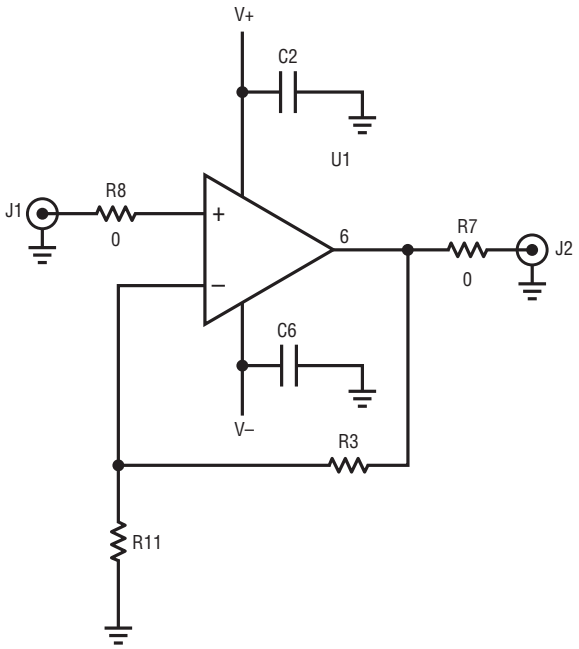
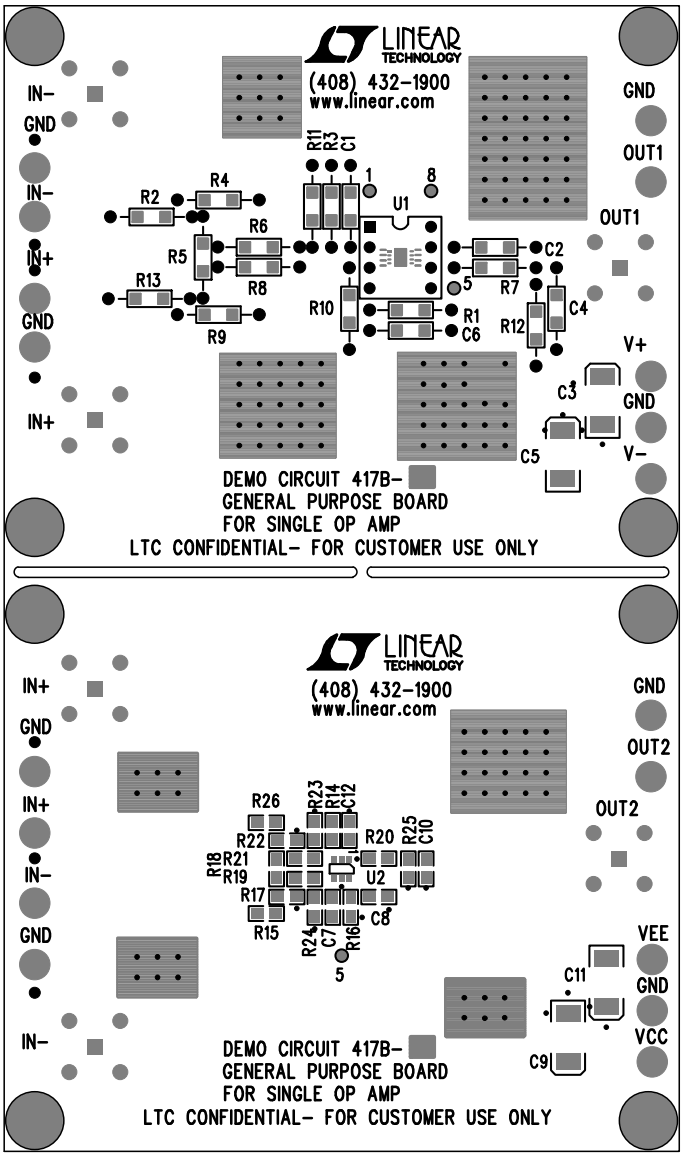
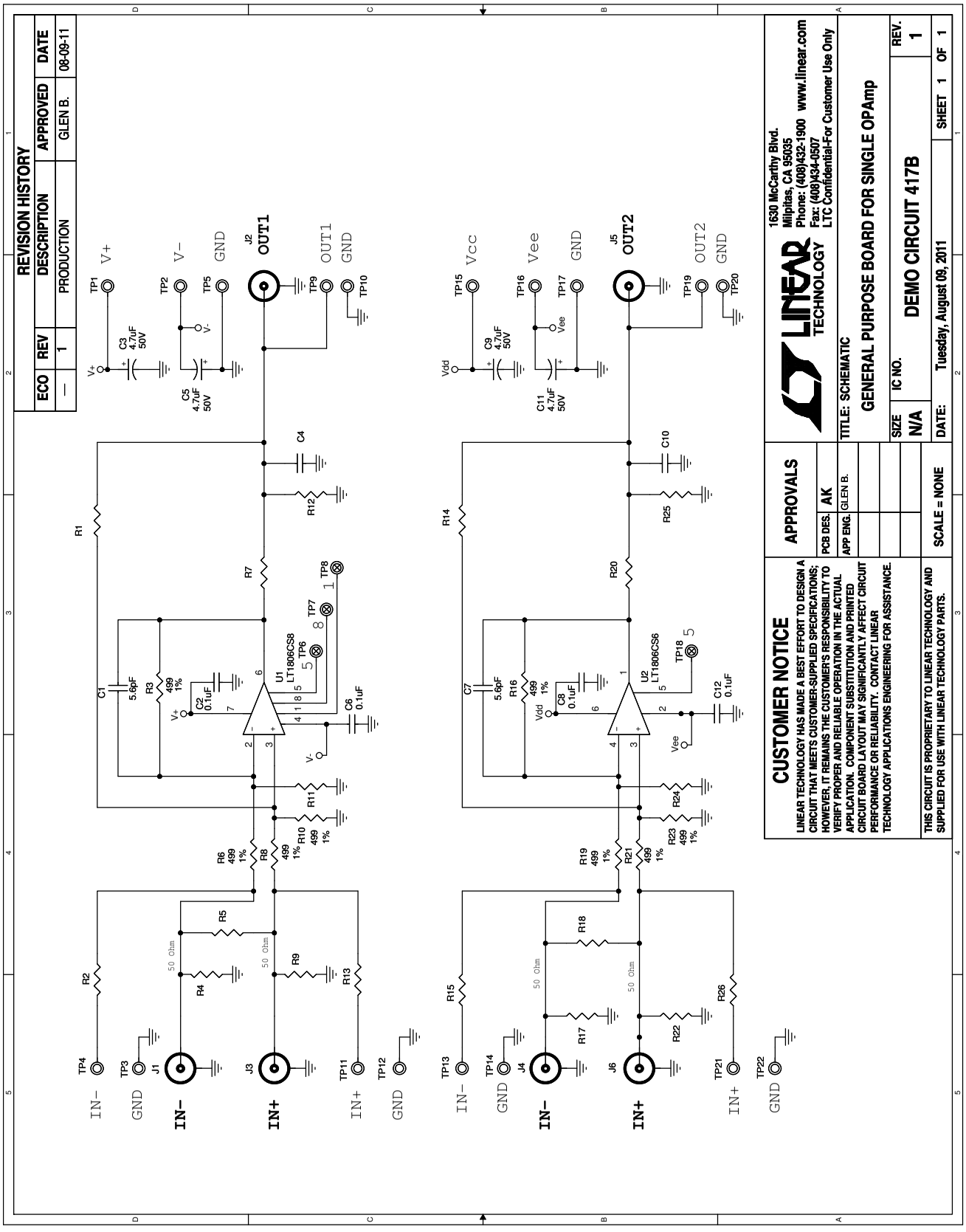


Figure 1. Example Circuit



SCHEMATIC DIAGRAM



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This notice contains important safety information about temperatures and voltages. For further safety concerns, please contact a LTC application engineer.

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