



MIC5332 Evaluation Board

Micro-Power High Performance
Dual 300mA ULDO™

General Description

The MIC5332 is a tiny dual low quiescent current LDO. The MIC5332 provides two high performance 300mA LDOs, and a POR generator into a 2mm x 2mm Thin MLF® package.

The MIC5332 dual Ultra Low Dropout (ULDO™) linear regulator is easy to use. A minimum output capacitance of 1µF for each of the outputs is required.

An input capacitor is required when the power supply is more than 4-inches away from the device. The evaluation board includes an input capacitor of 1µF to allow for long inductive test leads.

Requirements

The MIC5332 evaluation board requires an input power source that is able to deliver greater than 600mA with an input voltage range of 2.3V to 5.5V. The output load can be either an active or passive load.

Precautions

The evaluation board does not have reverse polarity protection. Applying a negative voltage to the V_{IN} terminal may damage the device.

The MIC5332 evaluation board is tailored for a Li-Ion range input supply voltage. It should not exceed 5.5V on the input.

Getting Started

1. **Connect an external supply to V_{IN} .** Apply the desired input voltage to the V_{IN} (J1) and ground terminal (J2) of the evaluation board, paying careful attention to polarity and supply voltage ($2.3V \leq V_{IN} \leq 5.5V$). An ammeter may be placed between the input supply and the V_{IN} terminal to the evaluation board. Ensure that the supply

voltage is monitored at the V_{IN} terminal, as the ammeter and/or power lead resistance can reduce the voltage supplied to the input.

2. **Enable/Disable the MIC5332.** The evaluation board is provided with 10k pull up resistors on both of the enable pins (EN1 and EN2) to V_{IN} . To disable an output, simply jumper the EN terminal (J5 for LDO1, J4 for LDO2) to the GND terminal (J2). The enable pins must be either pulled high or low. Removing the pull up resistors and leaving the pins floating will cause the regulators to operate in an indeterminate state.
3. **Connect the loads to the V_{OUT} terminals (J6 for LDO1, J8 for LDO2) and ground terminal (J7).** The load can be either a passive (resistor) or active (electronic load). Be sure to monitor the output voltage at the V_{OUT} (J6 and J8) terminals.
4. **Monitoring Power on Reset.** Connect an oscilloscope to the POR2 terminal (J3) and ground terminal (J7). The evaluation board has a 0.1µF capacitor connected from the CSET2 pin-to-GND. This corresponds to a delay of 100ms on the POR2 output. The POR2 delay time can be modified by changing the value of C4 with a rate of 1s/µF, or removing C4 for zero delay.

Ordering Information

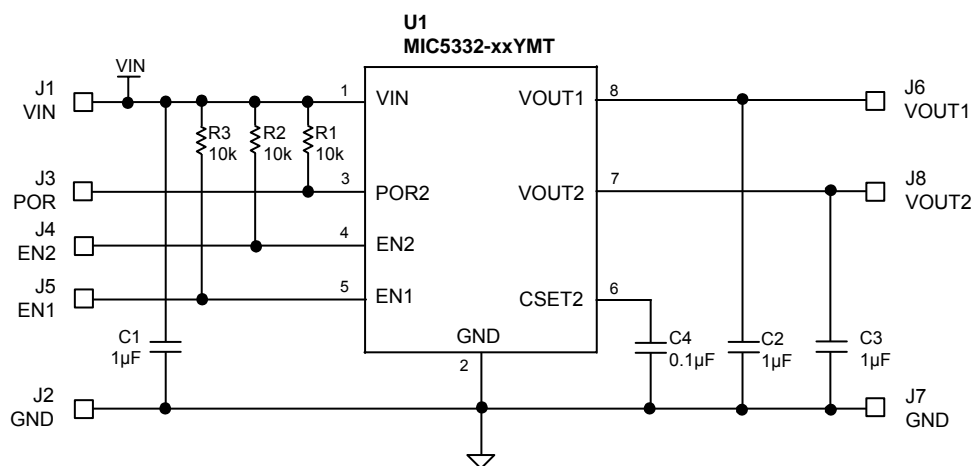
Part Number	Description
MIC5332-XXYMT EV	Evaluation board with the 300mA Dual ULDO™ device

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MLF and MicroLeadFrame are registered trademarks of Amkor Technology, Inc.

Micrel Inc. • 2180 Fortune Drive • San Jose, CA 95131 • USA • tel +1 (408) 944-0800 • fax + 1 (408) 474-1000 • <http://www.micrel.com>

Evaluation Board Schematic



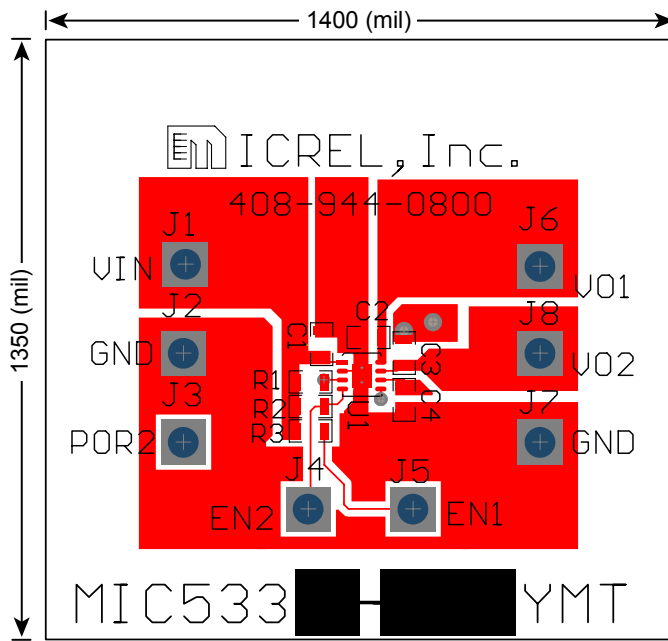
Bill of Materials

Item	Part Number	Manufacturer	Description	Qty
C1, C2, C3	C1608X5R0J105K	TDK ⁽¹⁾	Capacitor, 1µF Ceramic, 6.3V, X5R, Size 0603	3
C4	VJ0603Y104KXXAT	Vishay ⁽²⁾	Capacitor, 0.1µF Ceramic, 10V, X7R, Size 0603	1
R1, R2, R3	CRCW06031002FKEYE3	Vishay ⁽²⁾	Resistor, 10kΩ, 1%, 1/16W, Size 0603	3
U1	MIC5332-XXYMT	Micrel ⁽³⁾	UCAP LDO, Dual 300mA, Size 2mm x 2mm Thin MLF®	1

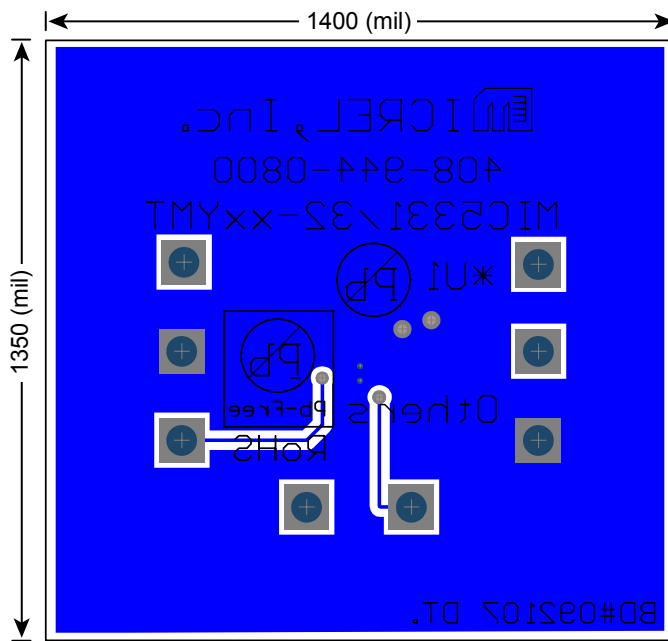
Notes:

1. TDK: www.tdk.com
2. Vishay: www.vishay.com
3. Micrel, Inc.: www.micrel.com

PCB Layout Recommendations



Top Layer



Bottom Layer

MICREL, INC. 2180 FORTUNE DRIVE SAN JOSE, CA 95131 USA
TEL +1 (408) 944-0800 FAX +1 (408) 474-1000 WEB <http://www.micrel.com>

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