



## MIC2605/6 Evaluation Board

1.2MHz / 2MHz PWM DC/DC  
Boost Switching Regulator

### General Description

The MIC2605/6 is a 1.2MHz/2MHz, PWM DC/DC boost switching regulator available in a 2mm x 2mm MLF<sup>®</sup> package. High power density is achieved with the MIC2605/6 internal 40V/0.5A switch and 1Ω schottky diode, allowing it to power large loads in a tiny footprint.

### Requirements

The MIC2605/6 evaluation board requires an input power source that is able to deliver greater than 500mA at 4.5V.

### Precautions

The evaluation board does not have reverse polarity protection. Applying a negative voltage to the  $V_{IN}$  (J1) terminal may damage the device.

The MIC2605/6 evaluation board is tailored for a 4.5V to 20V input voltage range. The input voltage range should not exceed 20VDC on the input.

### Getting Started

1. **Connect an external supply to the VIN.** Apply desired input voltage to the  $V_{IN}$  (J1) and ground (J2) terminals of the evaluation board, paying careful attention to polarity and supply voltage ( $4.5V \leq V_{IN} \leq 20.0V$ ). 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. The ammeter and/or power lead resistance can reduce the voltage supplied to the input.
2. **Connect the load to the VOUT (J4) and ground (J5) terminals.** The load can be either passive (resistor) or active (electronic load). An ammeter can be placed between the load and the  $V_{OUT}$  terminal. The default output voltage is set to 32V. This can be adjusted by changing the feedback resistors.

3. **Enabling the MIC2605/6.** The MIC2605/6 has an enable pin connected to J3 terminal. A logic high 1.5V or greater will turn on the switching boost regulator and a logic low 0.3V or lower will shut down the switching boost regulator reducing the quiescent current to less than 0.1μA.

### Output Voltage

The output voltage on the MIC2605/6 evaluation board is adjustable. The output voltage is controlled by the feedback resistors (R1 and R2) and can be calculated as follows:

$$V_{OUT} = 1.25V \cdot \left( \frac{R1}{R2} + 1 \right)$$

The evaluation board is initially adjusted to 32V, but can easily be modified by removing R1 and replacing it with the value that yields the desired output voltage.

$$R1 = R2 \cdot \left( \frac{V_{OUT}}{1.25V} - 1 \right)$$

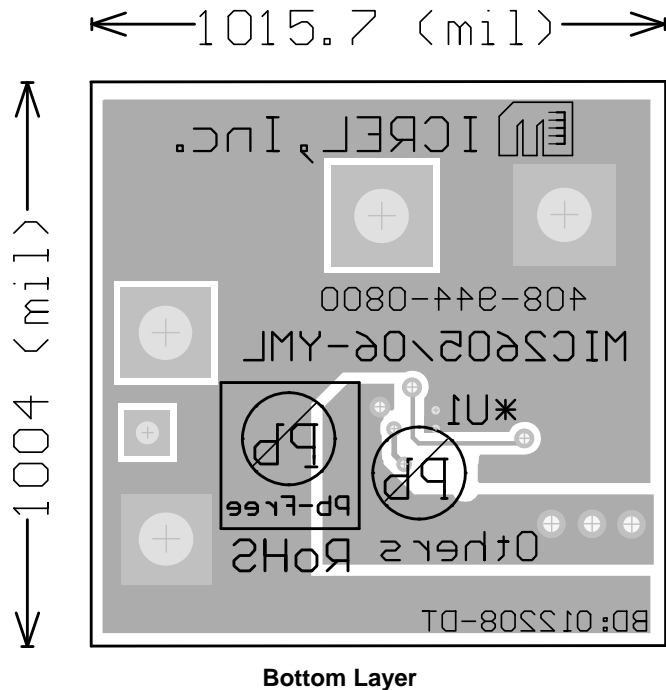
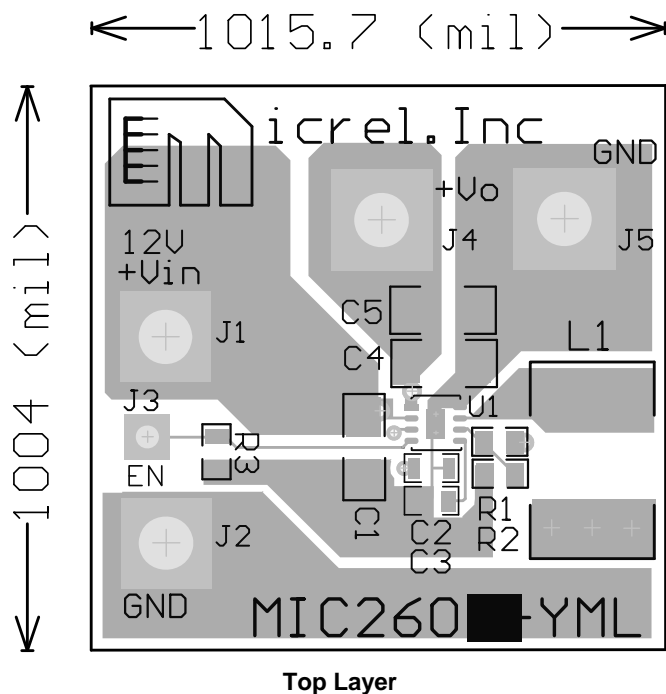
Ensure the output voltage selected does not exceed 40V rating of the output switch.

### Ordering Information

Part Number	Description
MIC2605YML EV	Evaluation board for the MIC2605YML device
MIC2606YML EV	Evaluation board for the MIC2606YML device



### PCB Layout Recommendations



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**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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