Evaluation Board User Guide

EVAL-LTC7065-AZ

100V Half-Bridge Driver with Adaptive Shoot-Through Protection

General Description

The EVAL-LTC7065-AZ evaluation circuit features LTC7065 driving two N-channel MOSFETs in a half-bridge configuration. The PWM input control is 5V logic compatible and controls both gate outputs, with one output being a complement of the other. The evaluation board has several unpopulated PCB pads to help facilitate the user in customizing the board for their application.

The LTC7065 driver has powerful 1.2Ω pull-down and 1.6Ω pull-up MOSFET drivers driving two 100V N-channel MOSFETs.

Design files for this circuit board are available at *www.analog.com*.

Performance Summary (T_A = 25°C)

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Logic Input Supply (VIN-LOGIC)		6		14	V
Power Input Supply (VIN-POWER)				100	V
Maximum Output Current				10	A
PWM Control Frequency				2,000+	kHz
Maximum PWM Control Voltage				5.5	V

Quick Start Procedure

The EVAL-LTC7065-AZ can be evaluated without connecting any additional components or a load. However, the user may find adding two load resistors, as shown in *Figure 1*, provides a better means for evaluating. Alternatively, the user can configure their own application circuit. Test with a resistor divider as a load.

1. Connect two 100Ω power resistors to the SW node, as shown in *Figure 1*.
2. Apply VIN-POWER supply.
3. Apply VIN-LOGIC supply.
4. Apply a square-wave signal at the desired frequency to the PWM pin, as shown in *Figure 1*.
5. Ensure the JP1 jumper is set to “ENABLED”.
6. Monitor the BG and TG pins with a scope.
7. See *Figure 2* for expected results with:
   a. VIN-POWER = 40V
   b. VIN-LOGIC = 10V
   c. PWM input set at 5V peak at 1kHz.

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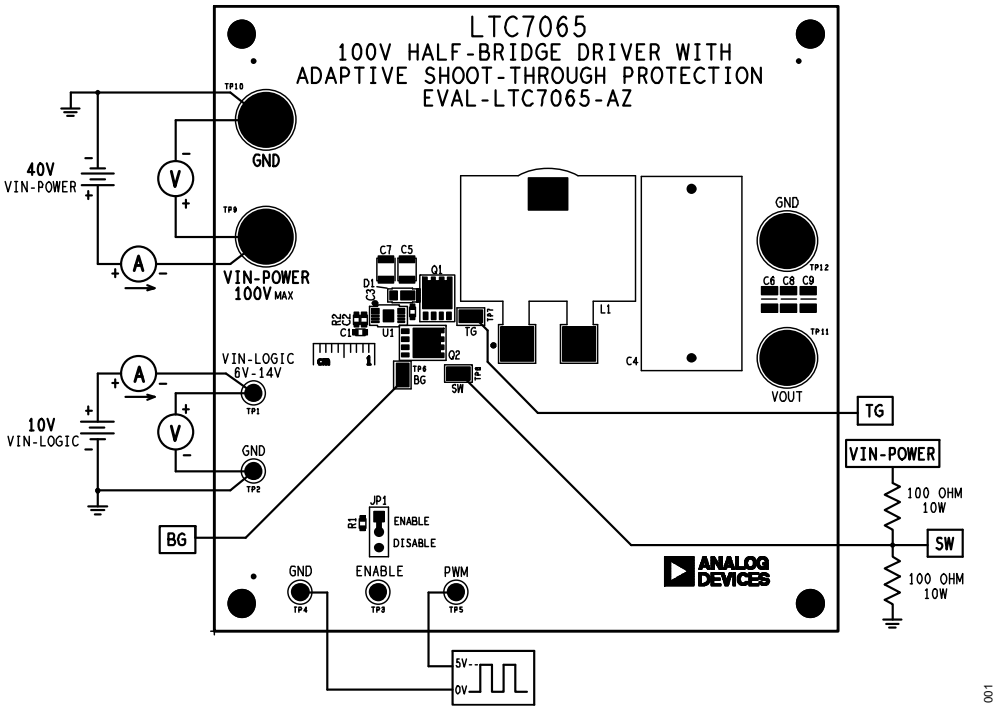

Figure 1. EVAL-LTC7065-AZ Test Setup

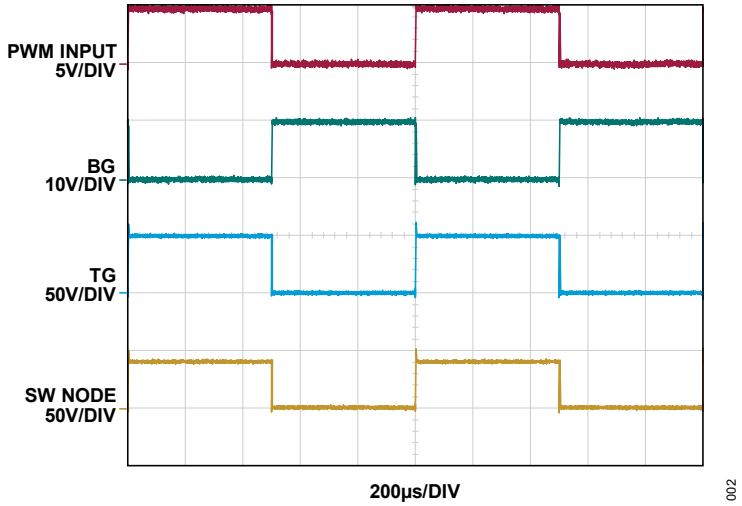

Figure 2. Test Results

Schematic

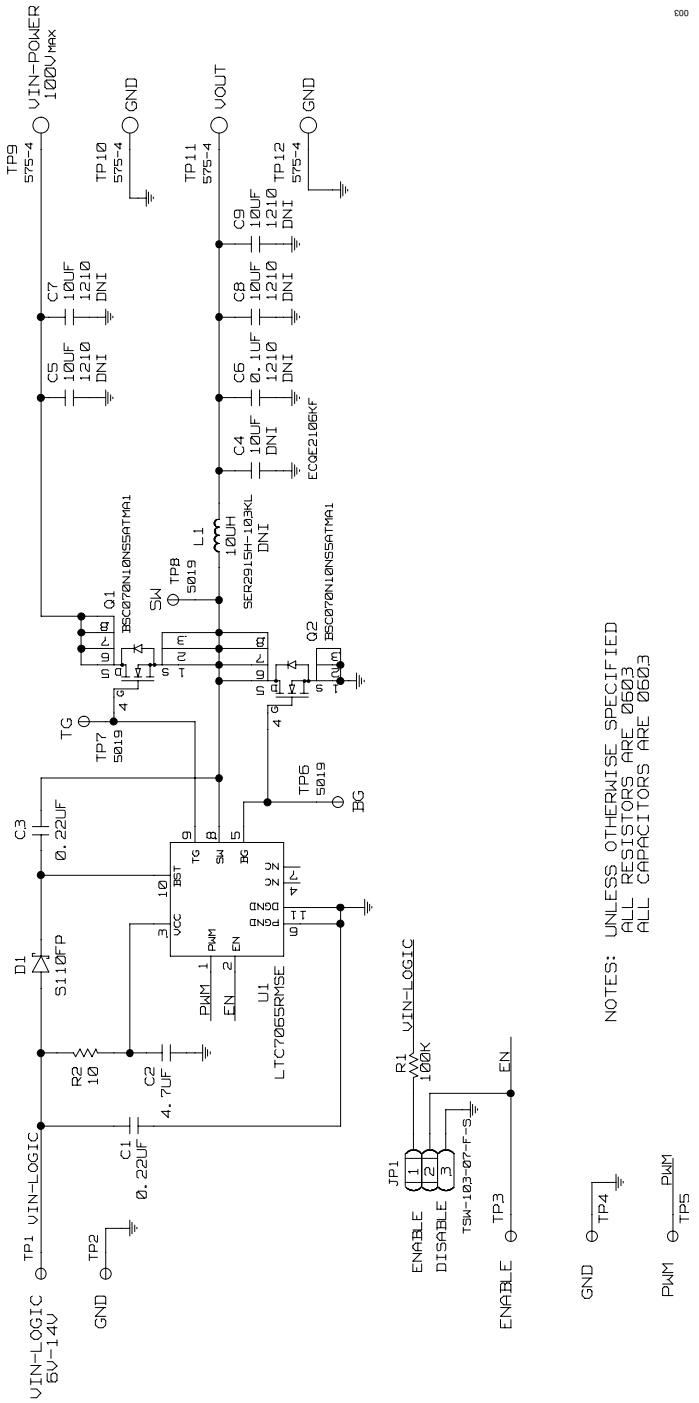

Figure 3. EVAL-LTC7065-AZ Schematic

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	01/24	Initial release	—

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