

**Test Data  
For PMP7962  
7/10/2013**



## Test SPECIFICATIONS

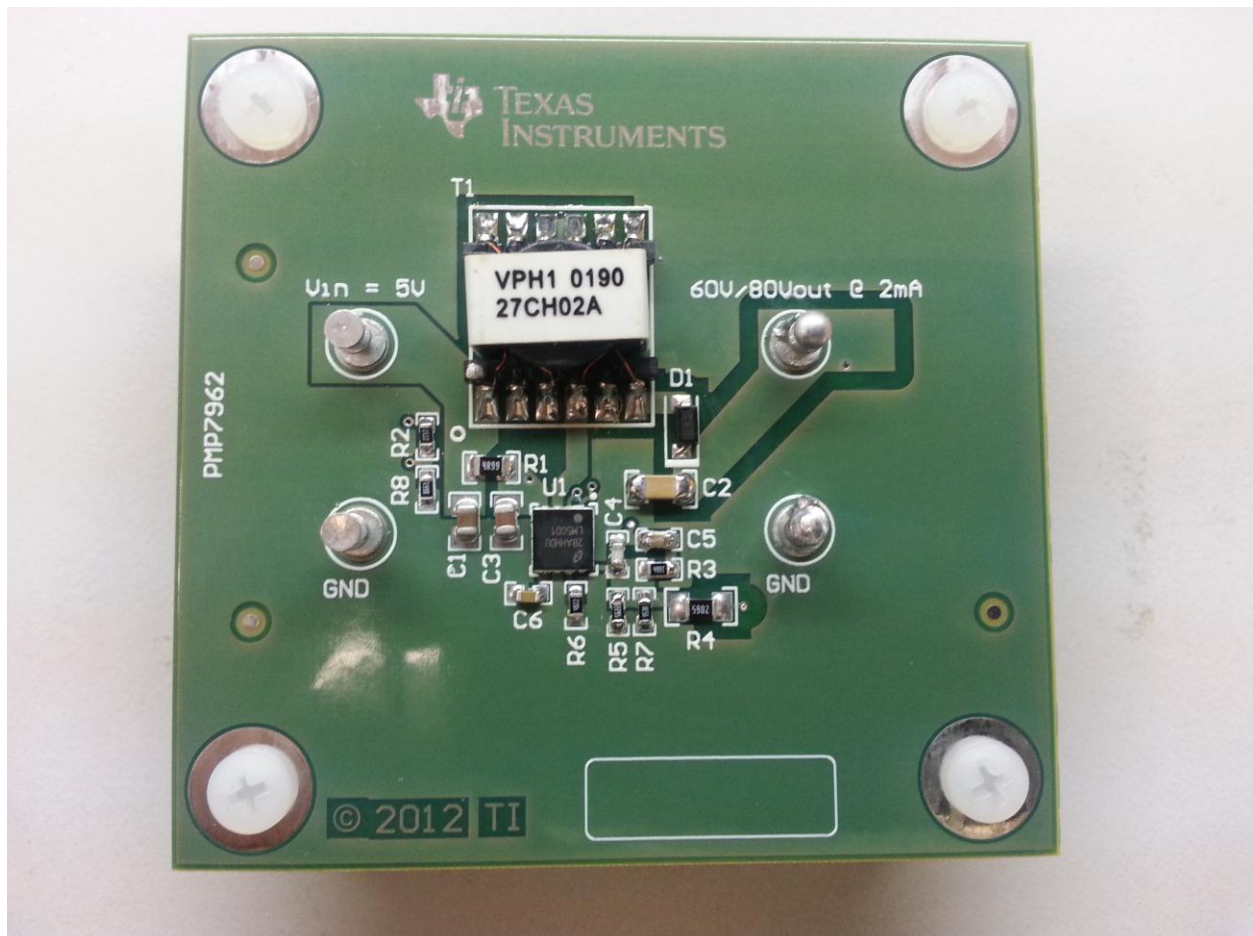
<b>Vin Min.</b>	<b>4.5V DC</b>
<b>Vin Nominal</b>	<b>5V DC</b>
<b>Vin Max.</b>	<b>5.5V DC</b>
<b>Vout</b>	<b>80V DC</b>
<b>Iout</b>	<b>2mA</b>
<b>Target Switching Frequency</b>	<b>300KHz</b>

### Circuit Description

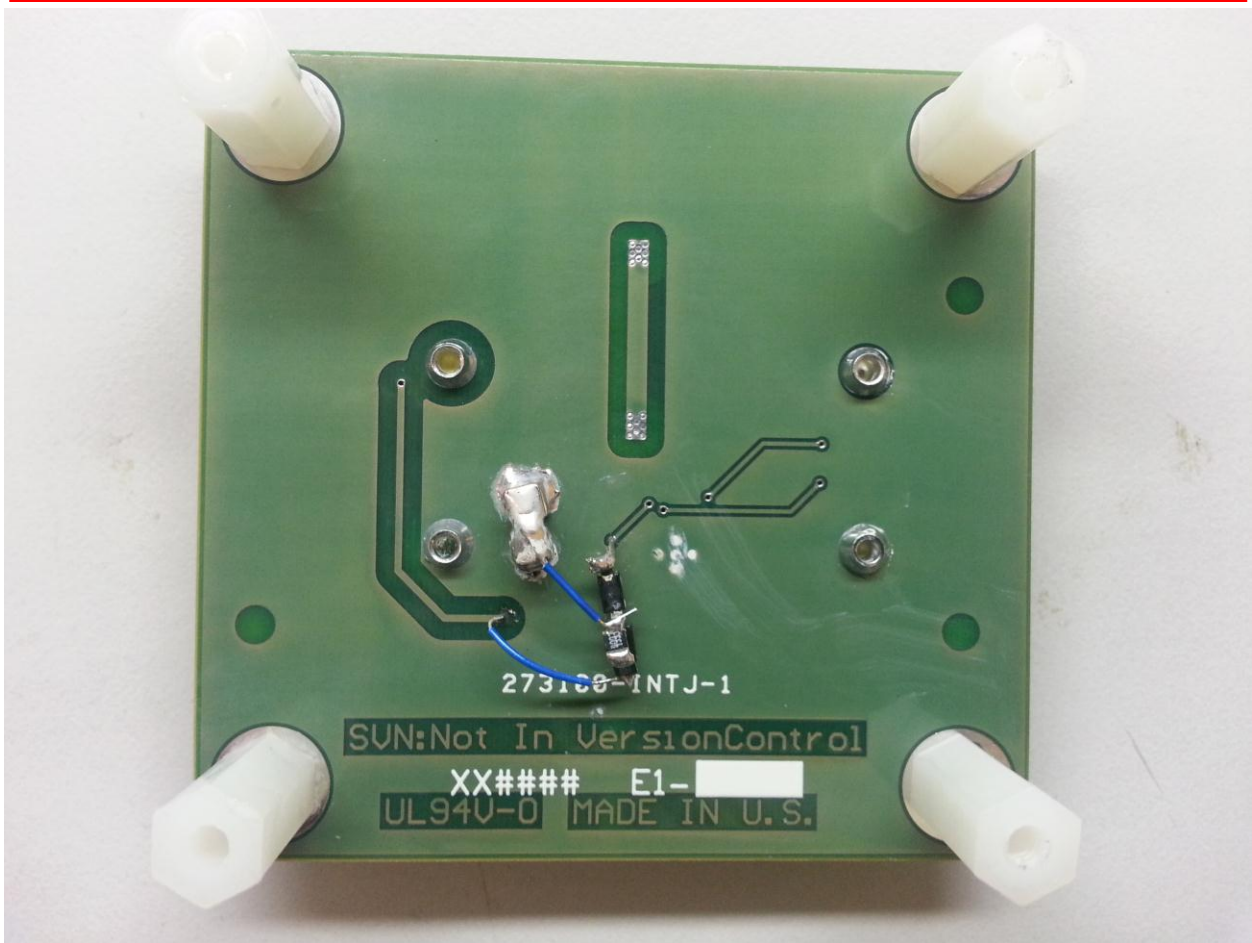
PMP7962 is a Coupled-Inductor Boost Converter which provides a high output-to-input voltage boosting ratio. The output is set to 80VDC and can supply a maximum of 2mA of current to the load.

### FABRICATION

Board Dimensions: 2.3" x 2.2"

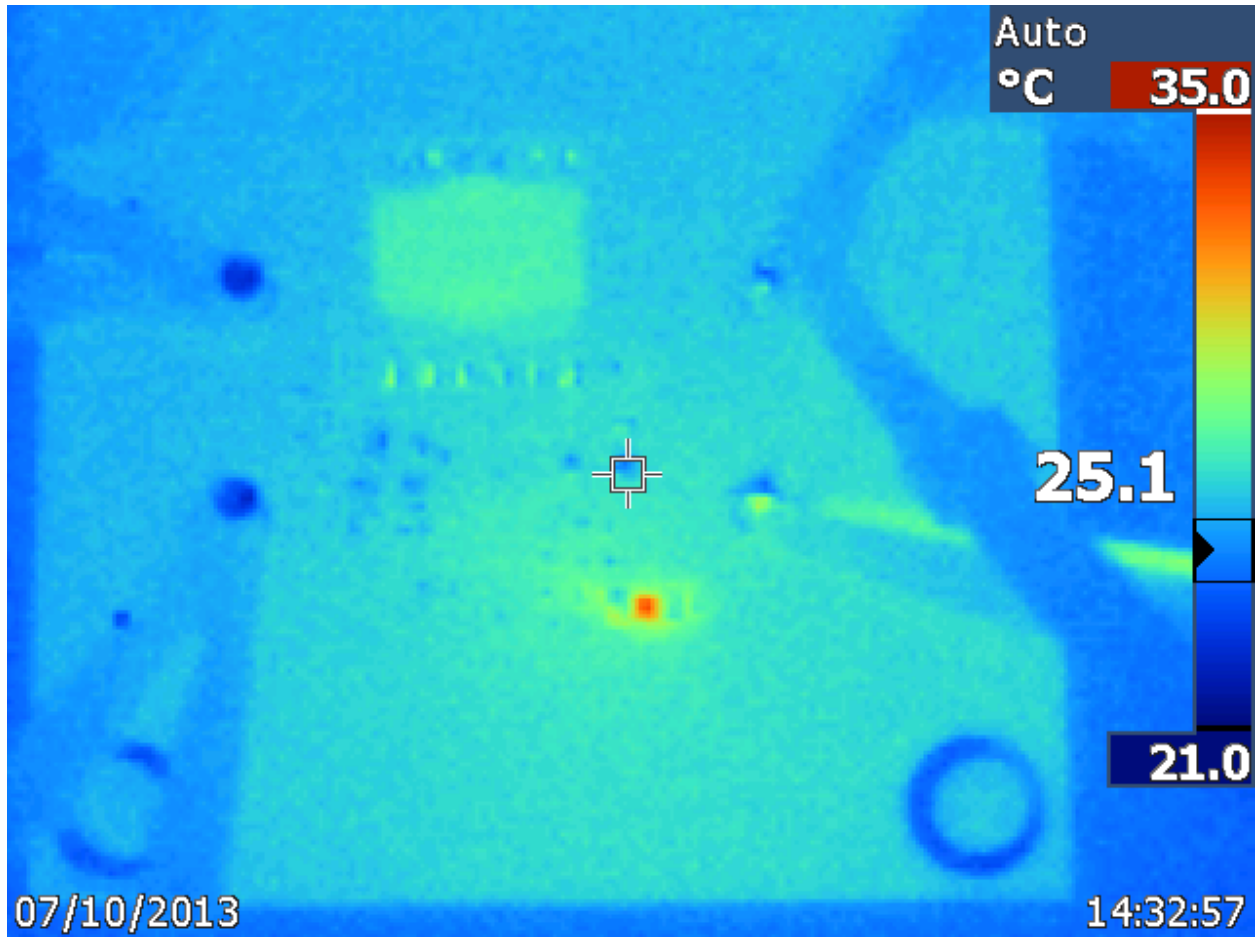


Board Photo (Top)



**Board Photo (Bottom)**

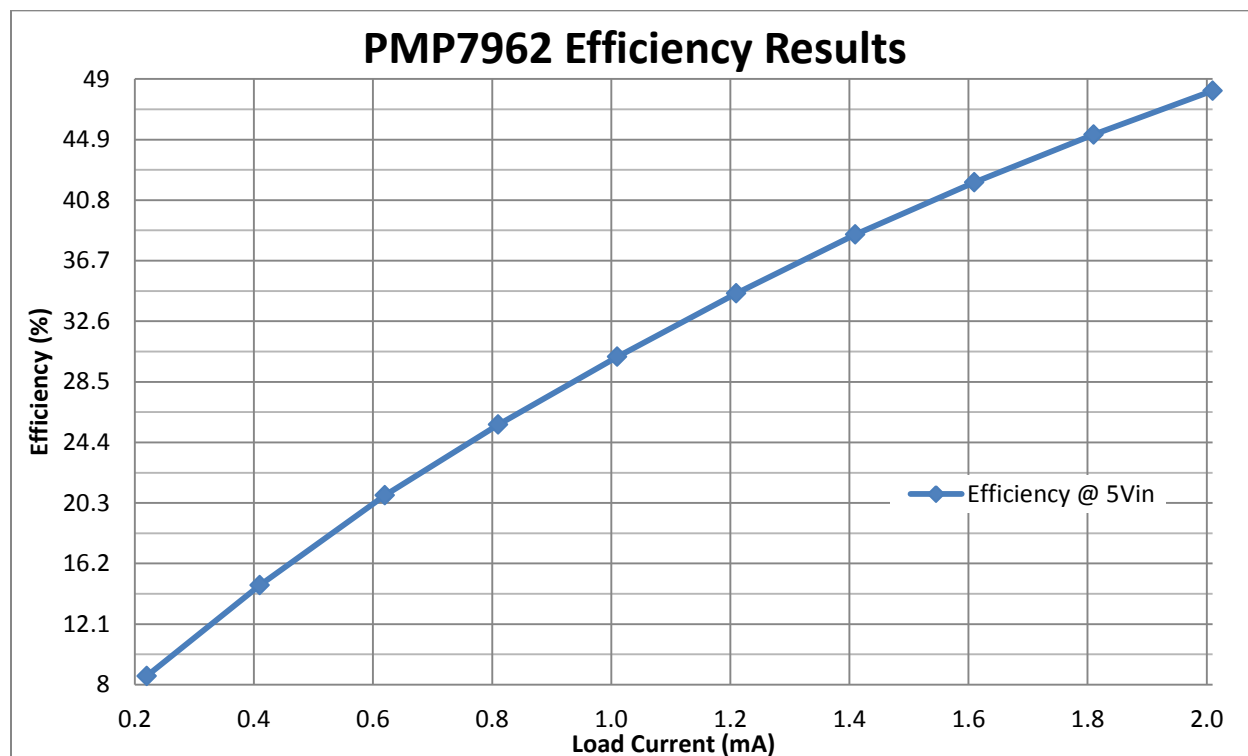
Thermal Data



IR thermal image taken at steady state at 2mA load and  $V_{in} = 5V$  with no airflow

## TYPICAL PERFORMANCE

### EFFICIENCY

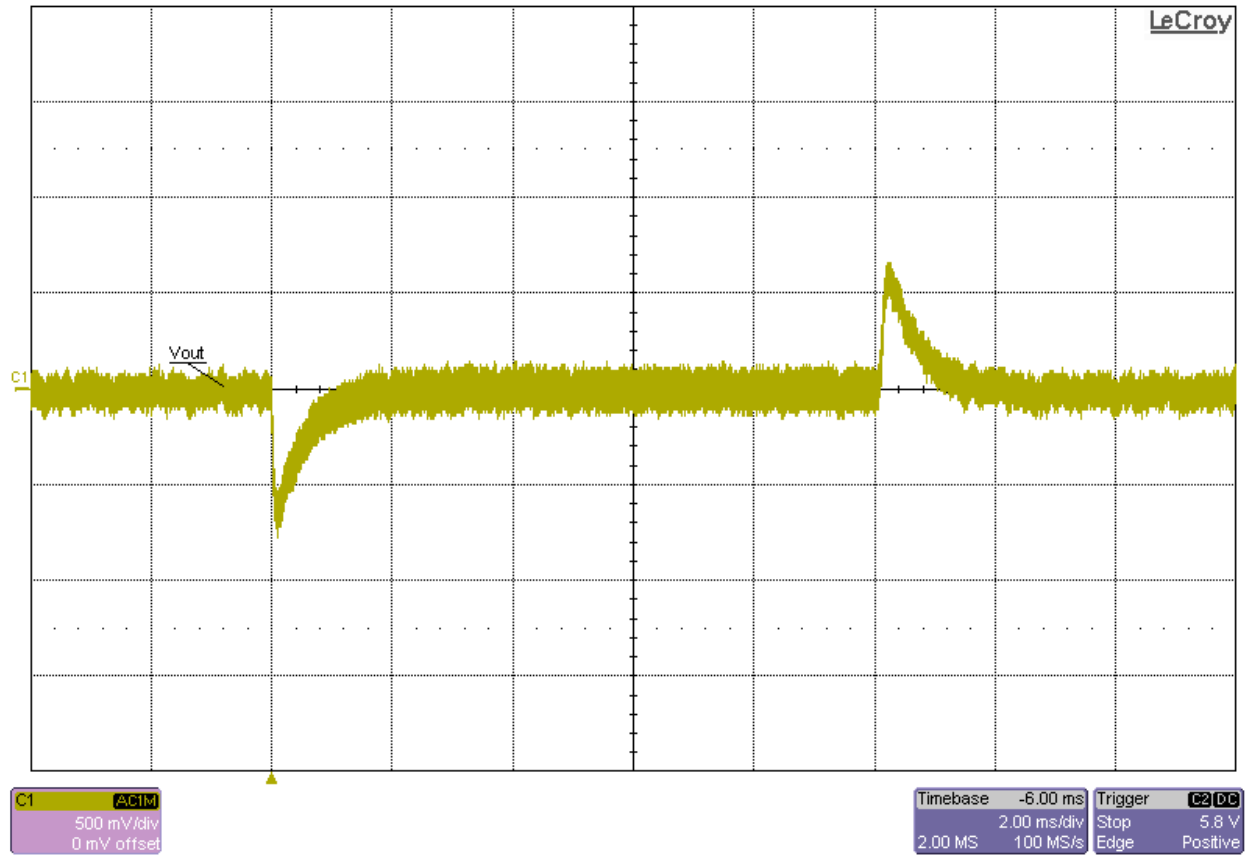


#### Efficiency Data

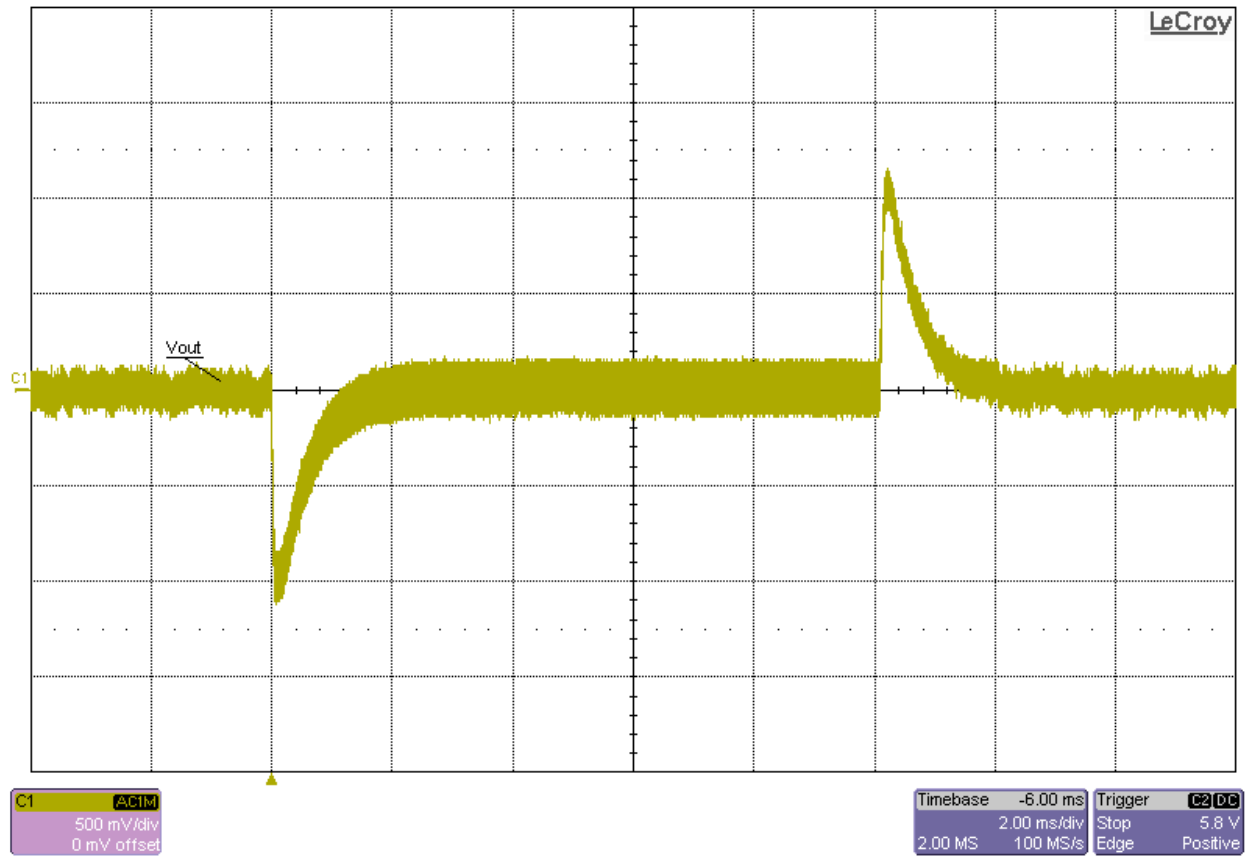
Vin (V)	Iin (A)	Vout (V)	Iout (mA)	Pin (W)	Pout (W)	Efficiency (%)
4.999	0.0411	80.079	0.22	0.20546	0.01762	8.6
4.999	0.0446	80.077	0.41	0.22296	0.03283	14.7
4.999	0.0477	80.075	0.62	0.23845	0.04965	20.8
4.999	0.0507	80.075	0.81	0.25345	0.06486	25.6
4.9992	0.0536	80.076	1.01	0.26796	0.08088	30.2
4.999	0.0562	80.072	1.21	0.28094	0.09689	34.5
4.999	0.0587	80.071	1.41	0.29344	0.11290	38.5
4.999	0.0614	80.07	1.61	0.30694	0.12891	42.0
4.999	0.0641	80.07	1.81	0.32044	0.14493	45.2
4.999	0.0668	80.07	2.01	0.33393	0.16094	48.2

## Waveforms

### Load Transient Response

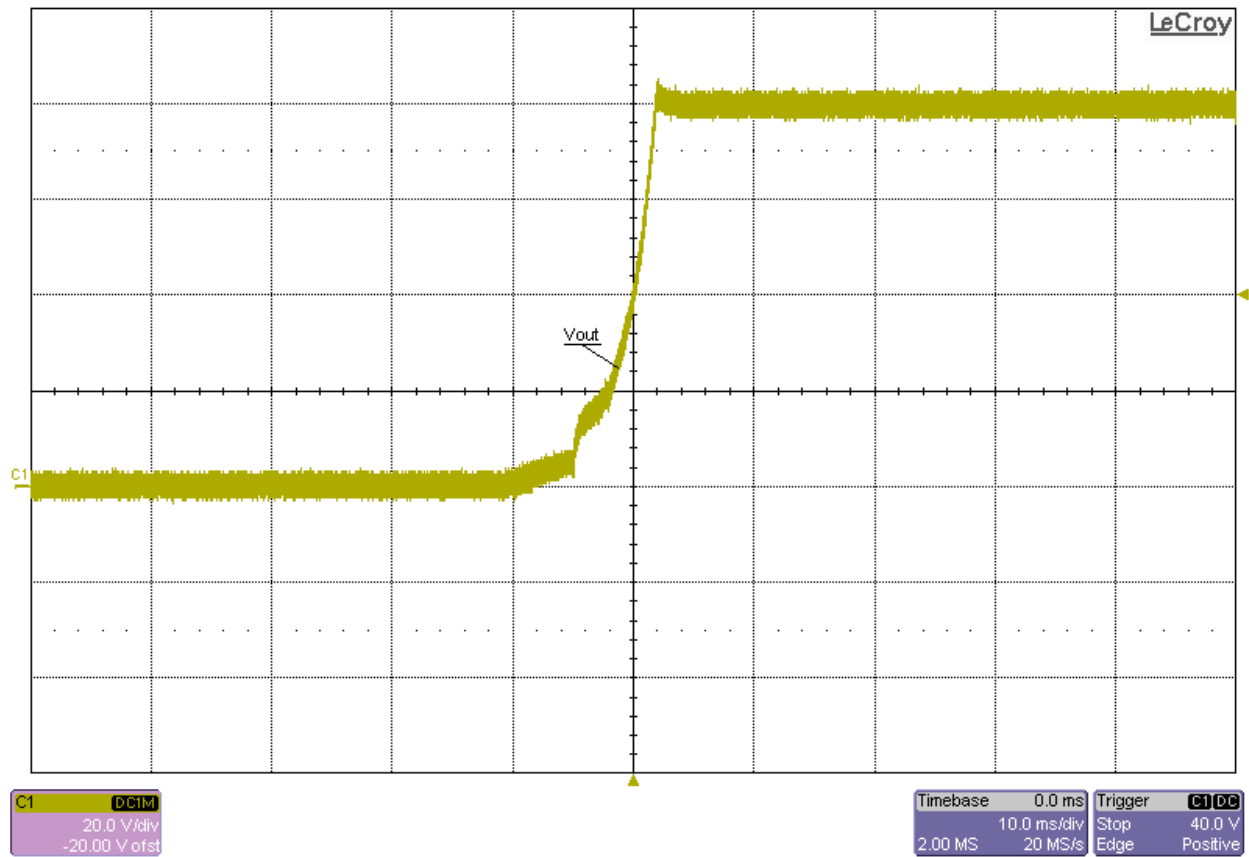


**Load Transient Response at  $V_{in} = 5V$  with 50%-to-100% (1mA-to-2mA) Load Step**



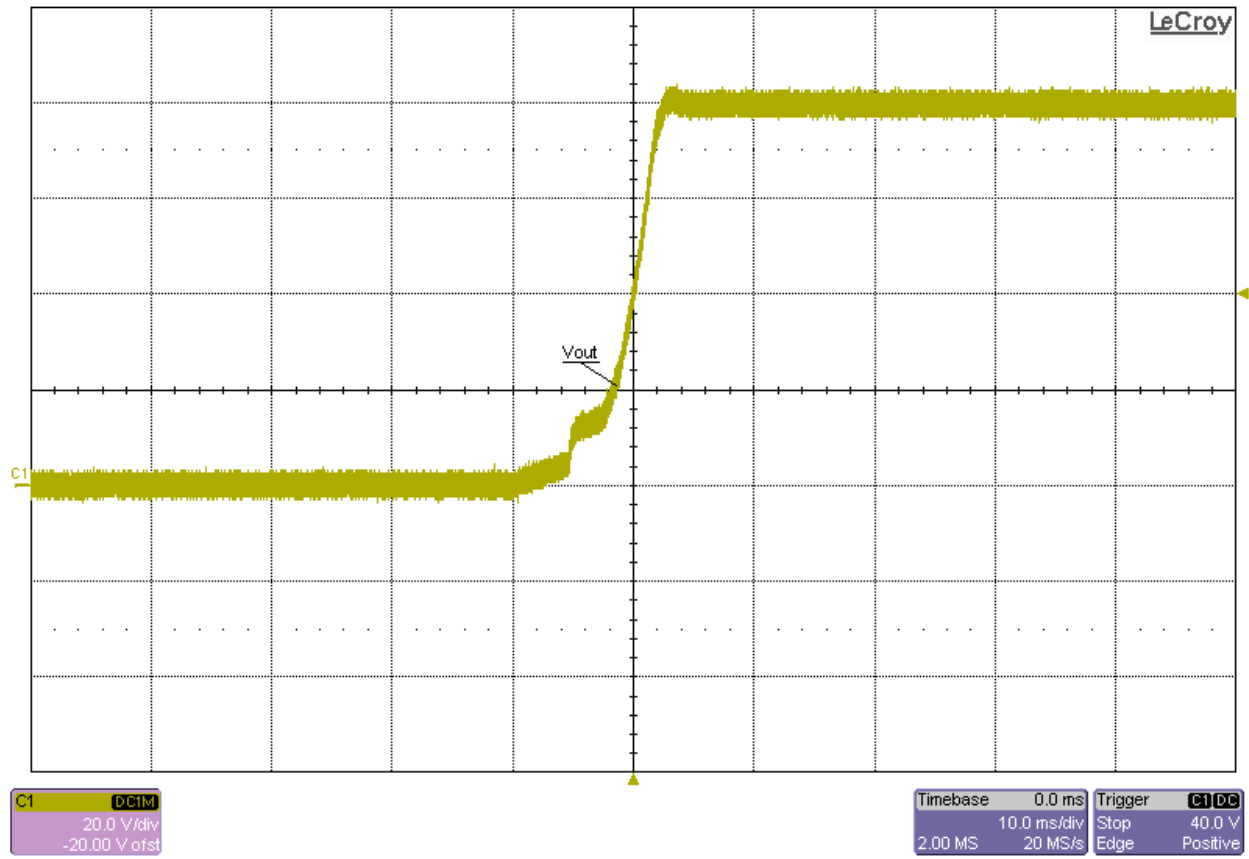
**Load Transient Response at Vin = 5V with 50%-to-100% (0mA-to-2mA) Load Step**

**Startup**



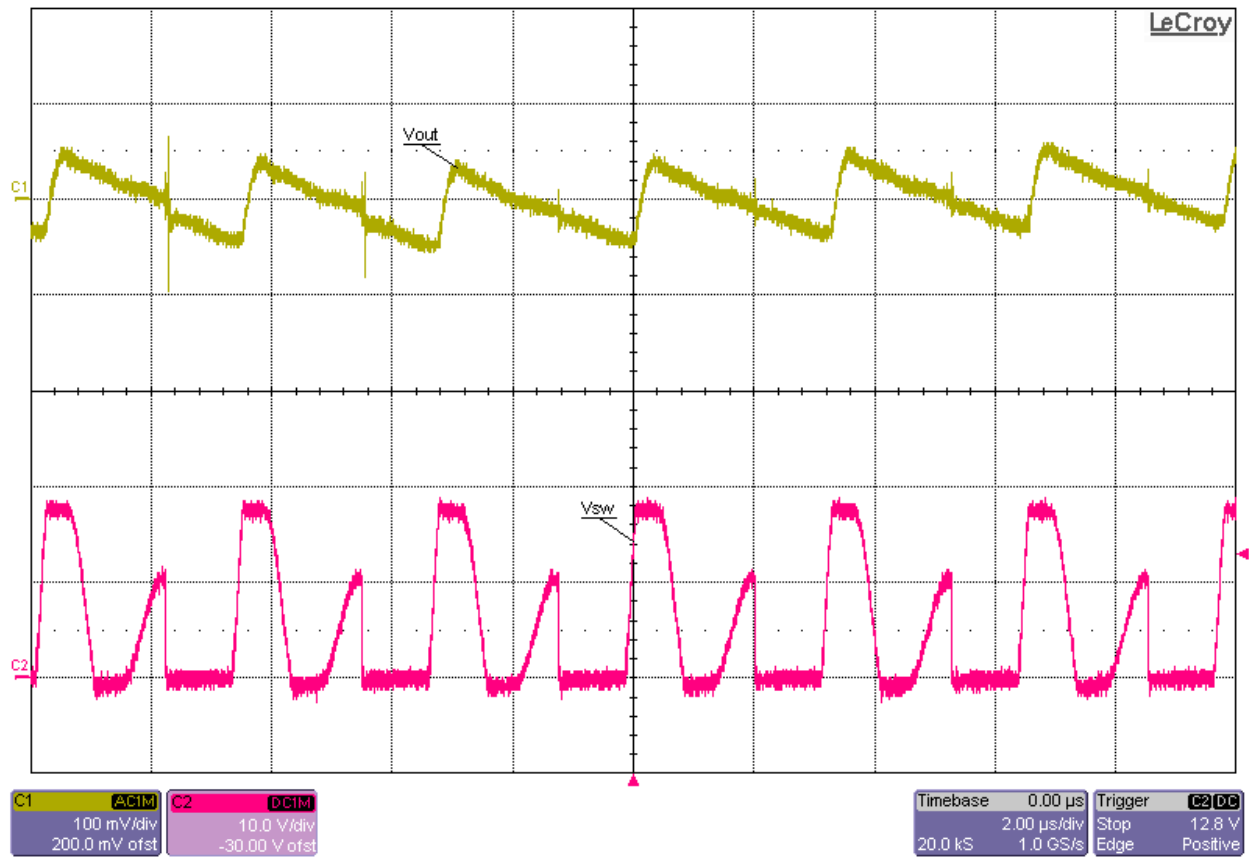
**Startup into No Load (Vin = 5V)**



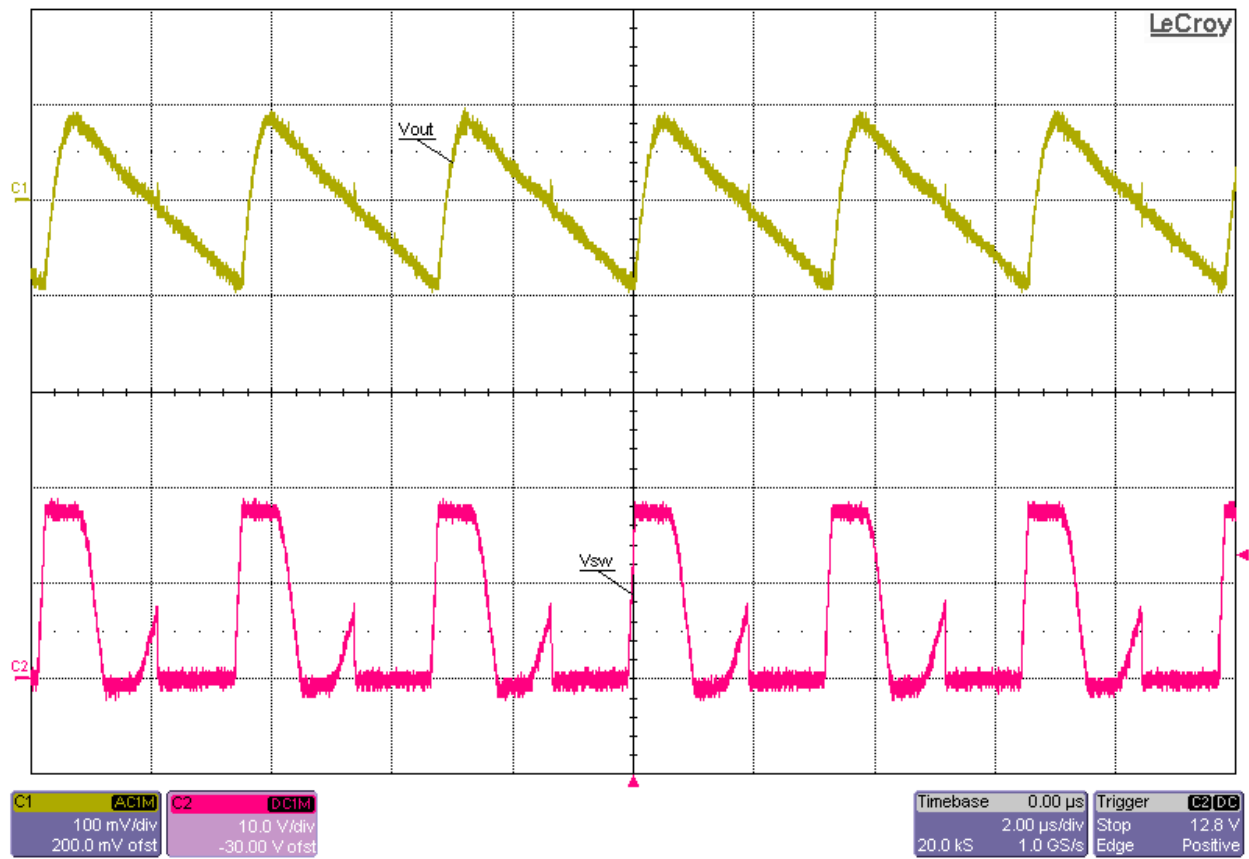


**Startup into 2mA Load (Vin = 5V)**

**Output Voltage Ripple and Switch Node Voltage**

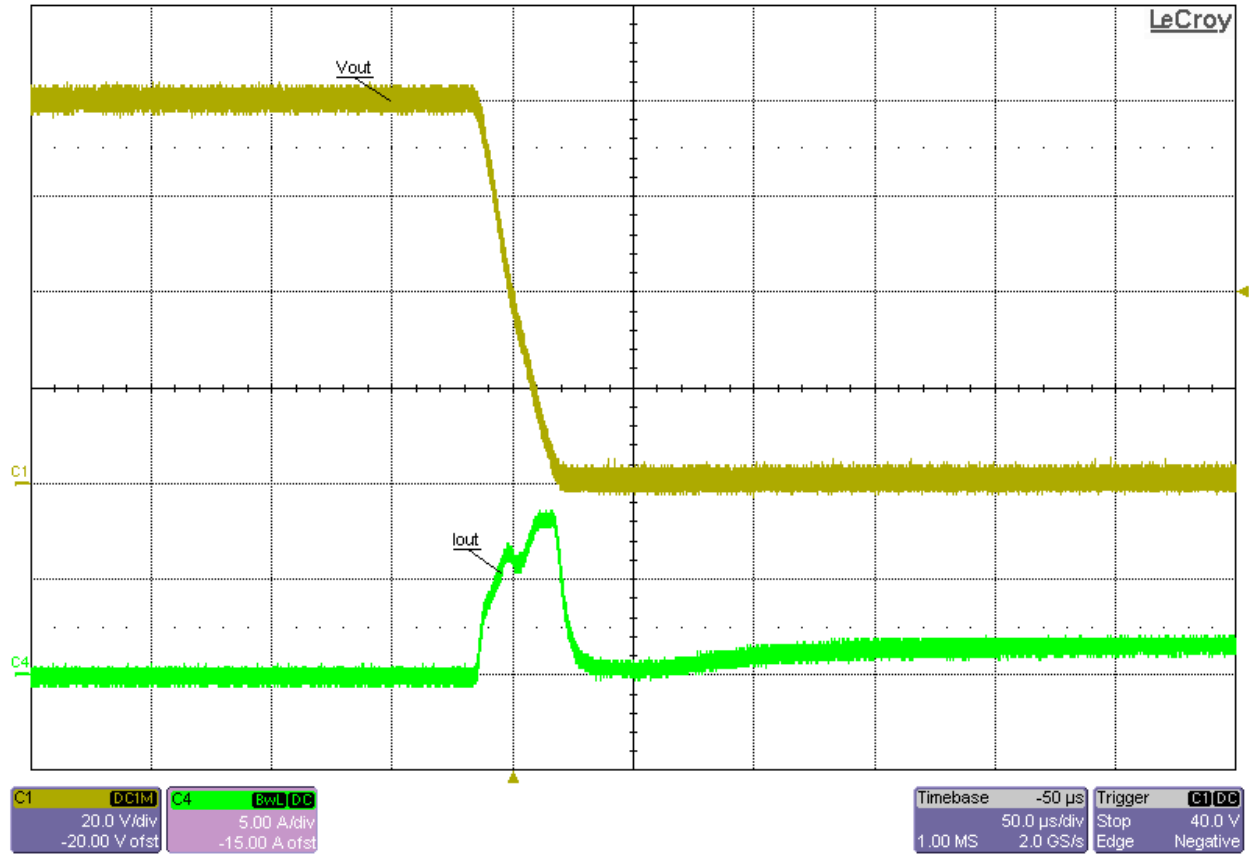


**Output Voltage Ripple and Switch Node Voltage at  $V_{in} = 5V$  and No Load ( $V_{ripple} \approx 80mV_{p-p}$ )**

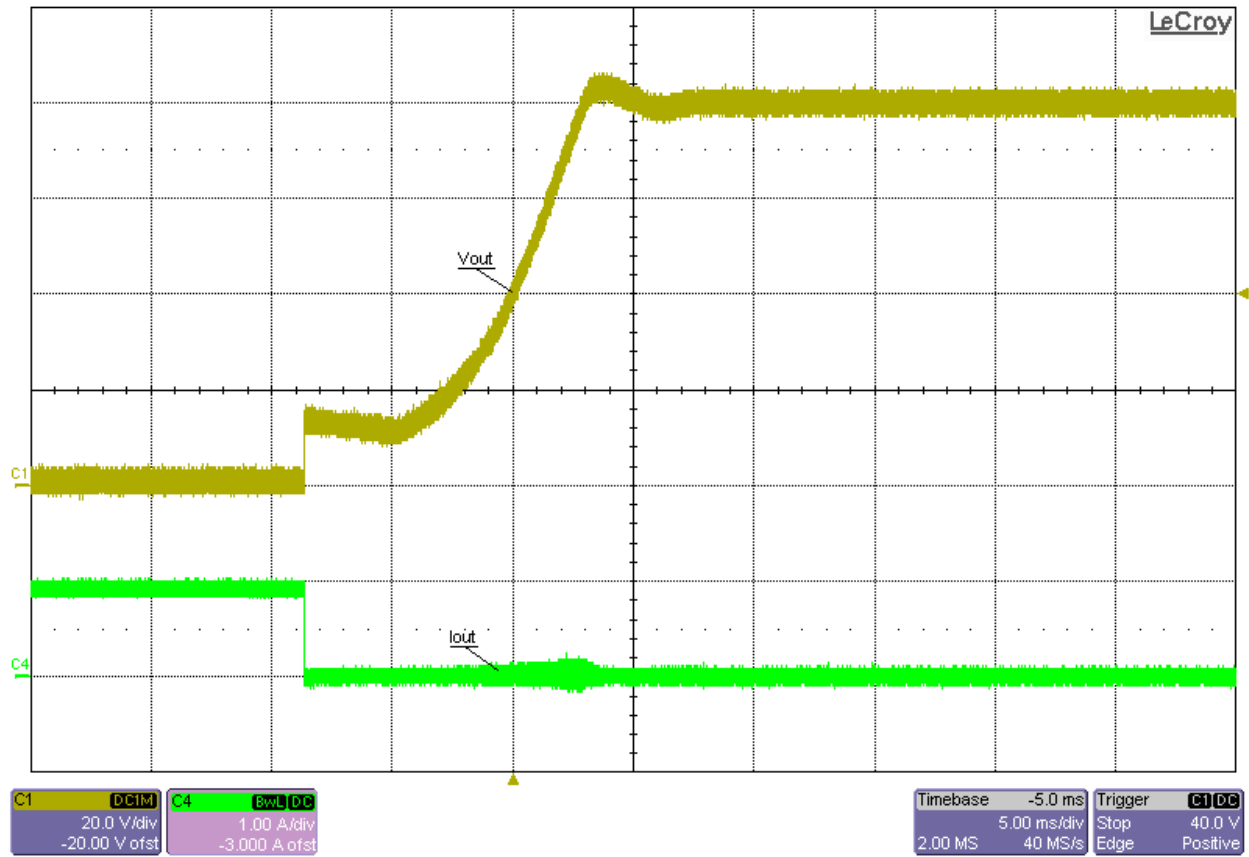


**Output Voltage Ripple and Switch Node Voltage at  $V_{in} = 5V$  and 2mA Load ( $V_{ripple} \approx 170mVp-p$ )**

**Short Circuit Performance**



**Short Circuit Applied at Vin = 5V from No Load**



Short Circuit Recovery at Vin = 5V into No Load

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