

# **Buck with coupled inductor**

## **TI reference design number: PMP 7798**

**Input: 36V to 75V**  
**Outputs: 10V @ 40mA**  
**5V @ 80mA**  
**10V @ 120mA**

**DC-DC Test Results**

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## 1.0 Circuit Description

An isolated bias supply is implemented in this evaluation board with LM5017 Constant-On-Time regulator using a coupled inductor. LM5017 regulator integrates both the high and low side power switches essential for creating isolated converter.

The switching frequency is 750kHz.

Some of the typical applications are:

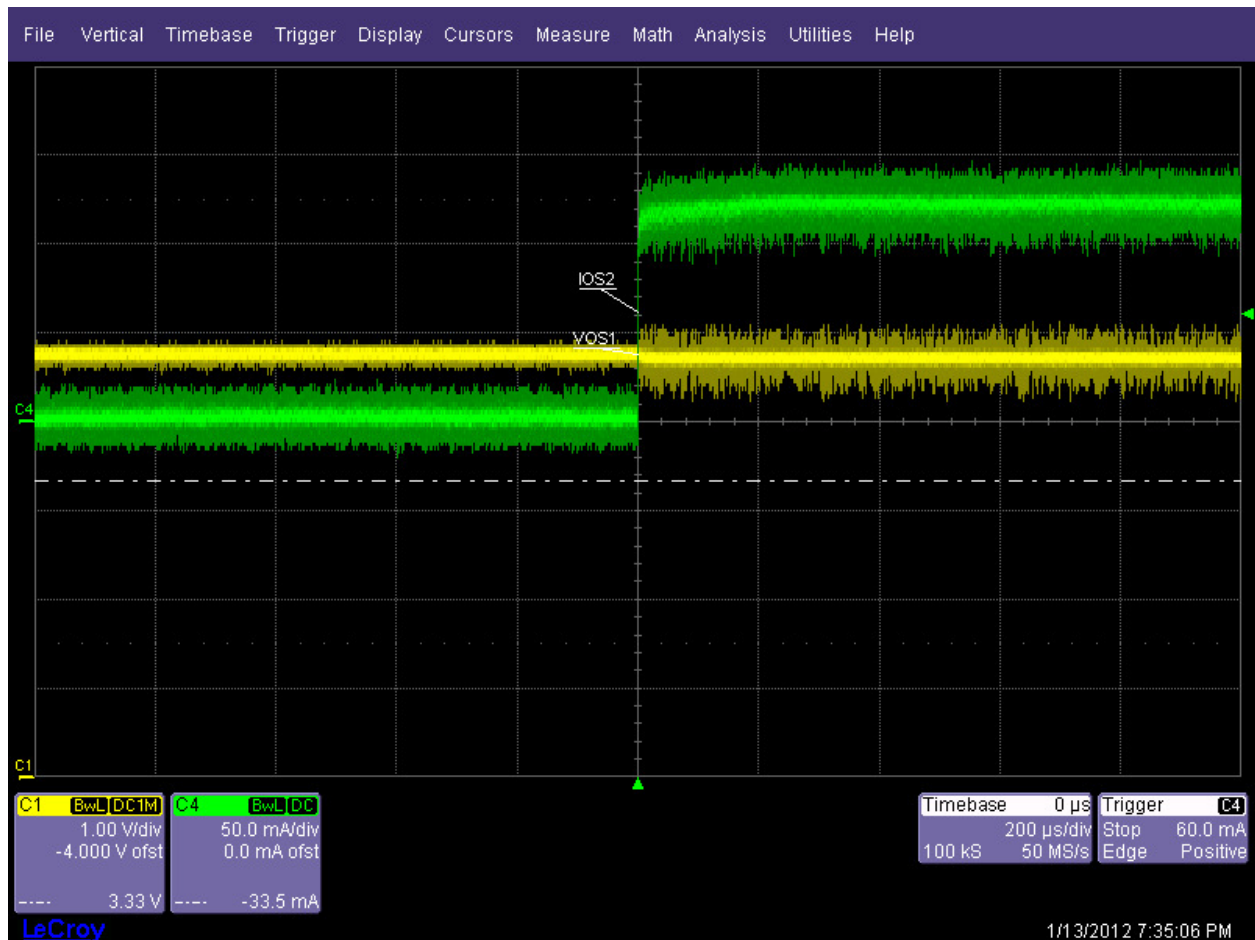
- Smart Power Meters
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- Isolated Bias Supply

## 2.0 Load Regulation

Vin (V)	10V Primary (No Load)	5V Secondary (60 mA)	10V Secondary (No Load)
36	10.26	4.59	9.83
48	10.35	4.64	9.95
75	10.52	4.75	10.14

## 2.0 Waveform

### 2.1 Transient Response for $V_{in} = 75V$ with a load step from 0mA to 120mA



■ Output voltage  
■ Output current

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