

## LM25118MH Stability and Output Ripple

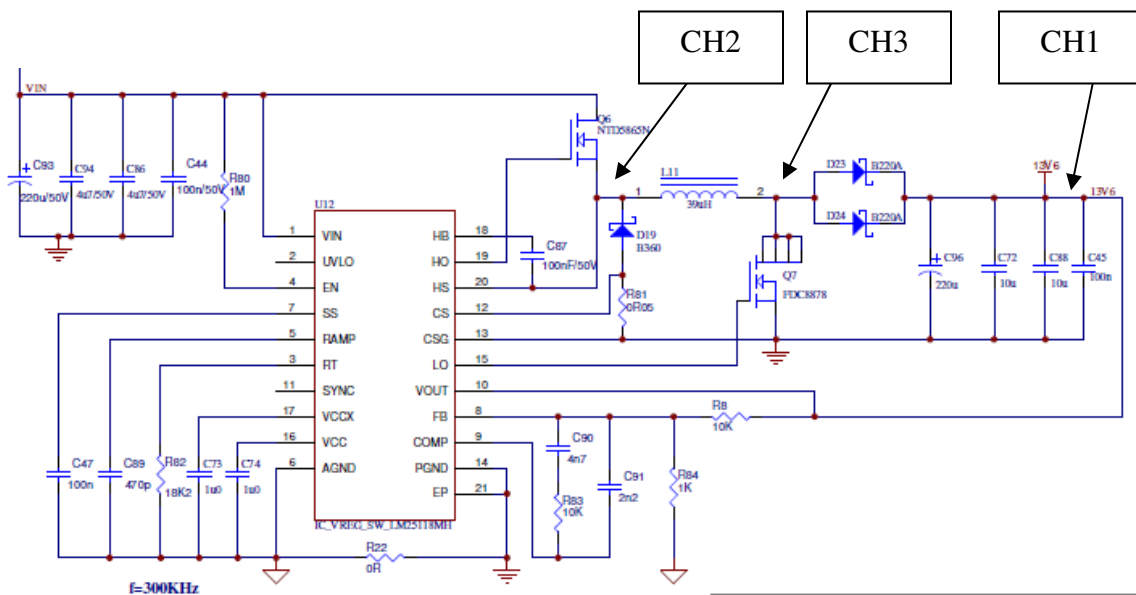
### 1. The Problem

- High output ripple voltage - 300mV in worst case
- Unstable switching

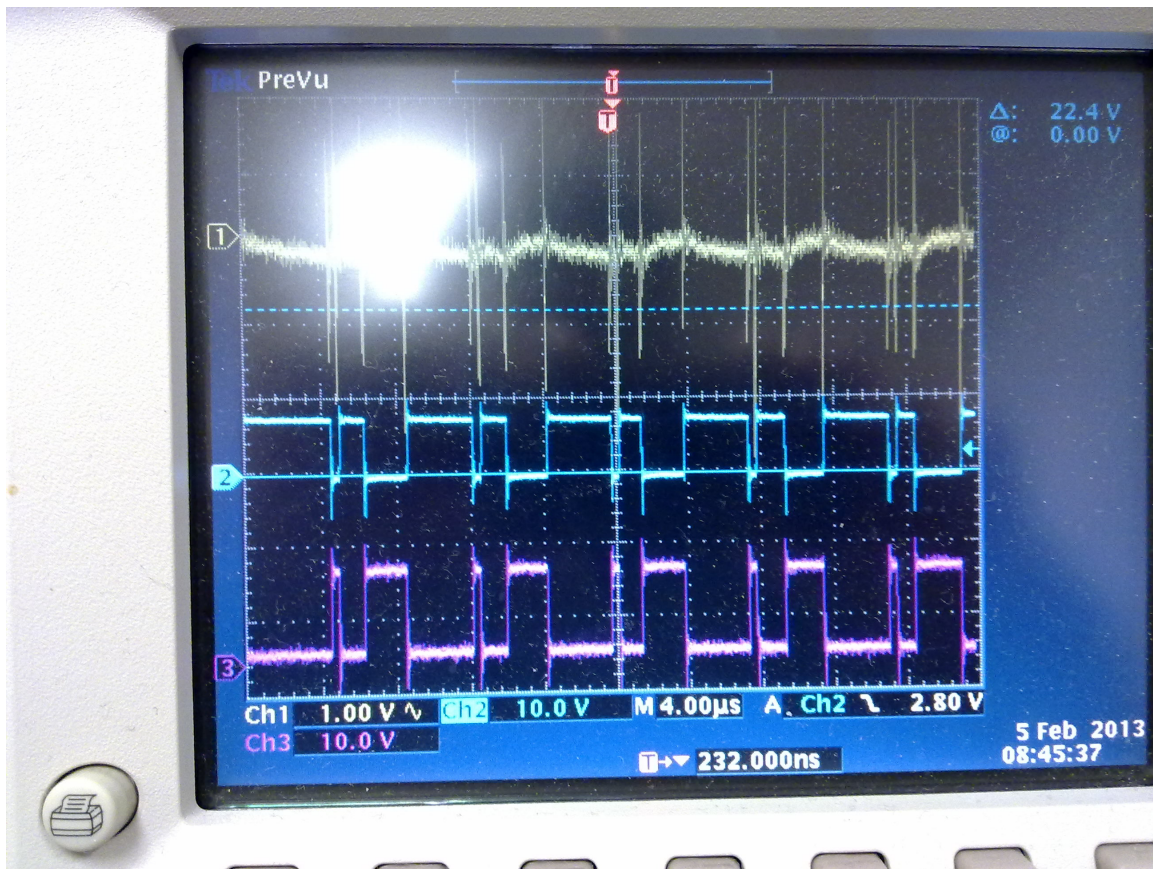
### 2. The Design

- Input: 8-32V
- Output: 13.6V, 100mA - 1A
- Use WEBENCH recommended inductor value, and the output capacitor ESR is lower than required by the WEBENCH.
- 6-layer PCB with Ground plane

### 3. Measurements



Probe Points



CH1 – Output Ripple

CH2 – High Switch

CH3 – Low Switch

Input: 8V, Output: 13.7V/1A. Output Ripple: 300mVpp

#### 4. The Questions

- Is the circuit stable?
- Why the output ripple is so high?