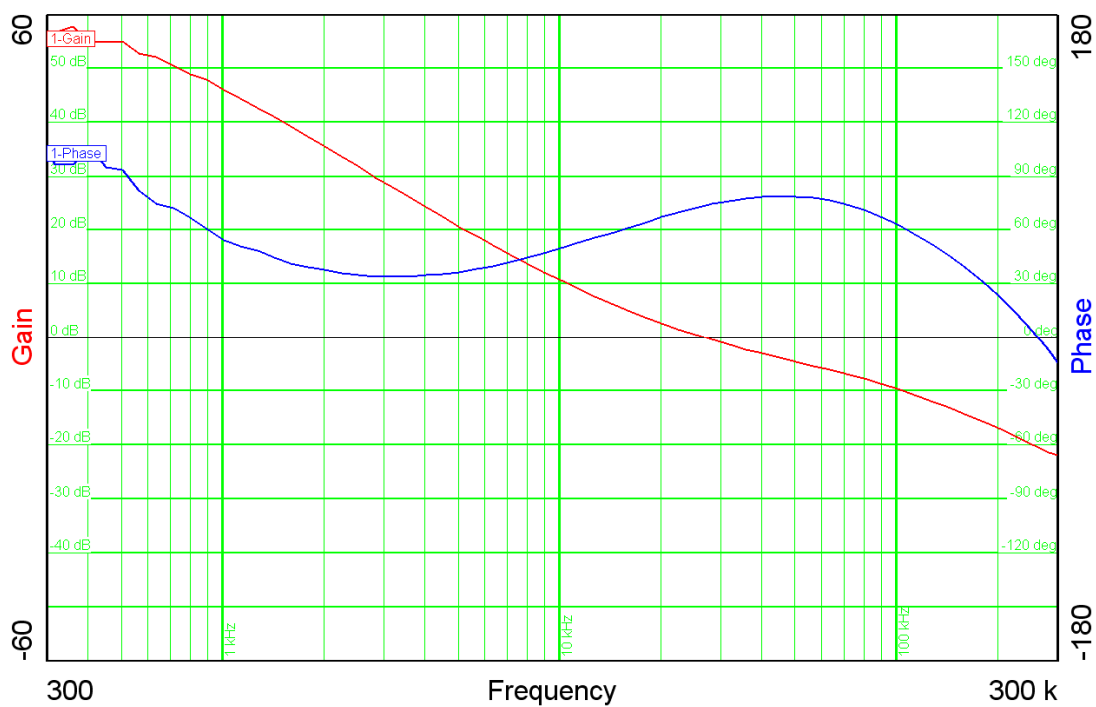


TPS54040 Buck Circuit - 3.3V @ 0.3A

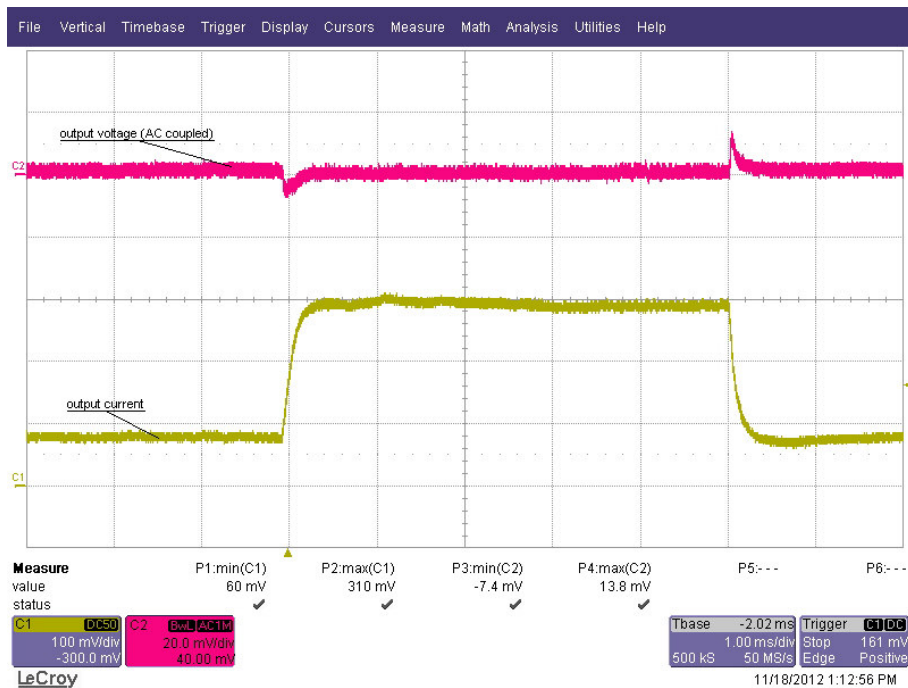
- Input 9..14V DC
Can withstand up to 40V
- Output 3.3V @ 0.3A
- Working in continuous conduction mode
- Revision B
 - Changes
 - Switching frequency: 790 kHz (R3 = 140k)
 - Inductor L2: 22uH (Wuerth 744043220)
 - Output capacitance: 47uF/6.3V (C4)
 - Compensation: R1 = 68.1k, C10 = 220pF, C9 = open
 - 100pF in parallel to R10 (feed-forward on output voltage divider)

1 Closed loop

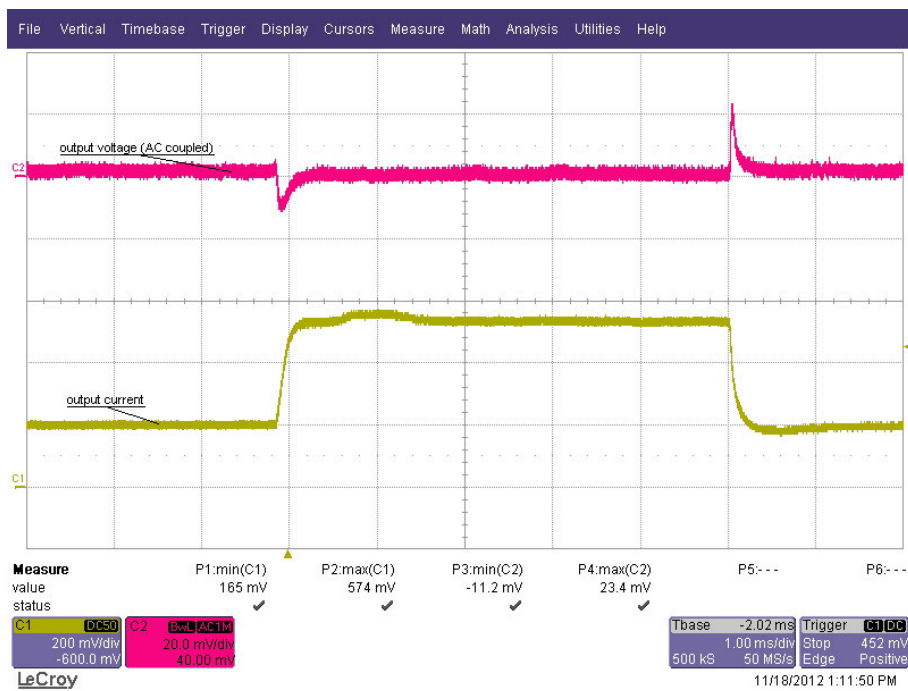


- 12.0V in, 3.3V @ 0.3A load
- 73 deg phase margin @ 26.8 kHz bandwidth
- -21 dB gain margin

2 Load step with low slew rate

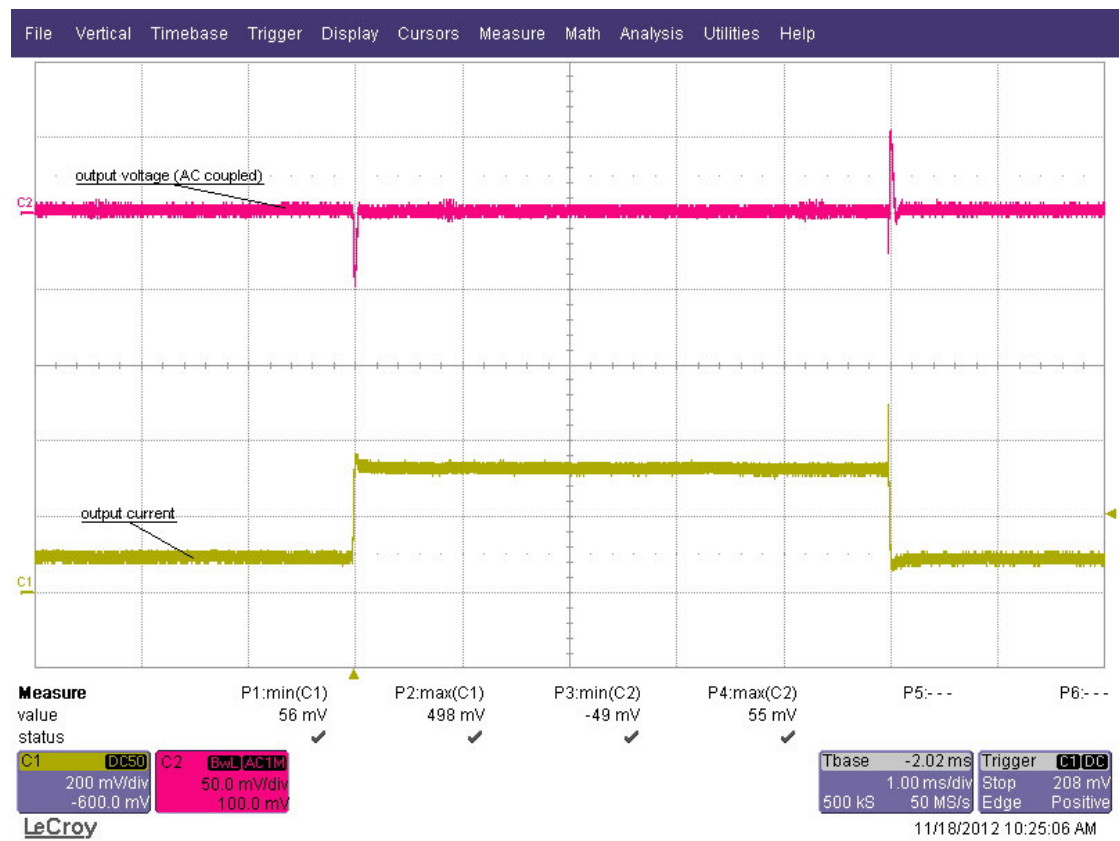


- 12.0V in, 3.3V out **0.1A load to 0.3A and vice versa**
- -7mV undershoot, 14mV overshoot



- 12.0V in, 3.3V out **0.1A load to 0.43A and vice versa**
- -11mV undershoot, 23mV overshoot

3 Load step with high slew rate



- 12.0V in, 3.3V out **0.1A load to 0.3A** and vice versa
- -49mV undershoot, 55mV overshoot

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For Feasibility Evaluation Only, in Laboratory/Development Environments. The EVM is not a complete product. It is intended solely for use for preliminary feasibility evaluation in laboratory / development environments by technically qualified electronics experts who are familiar with the dangers and application risks associated with handling electrical / mechanical components, systems and subsystems. It should not be used as all or part of a production unit.

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