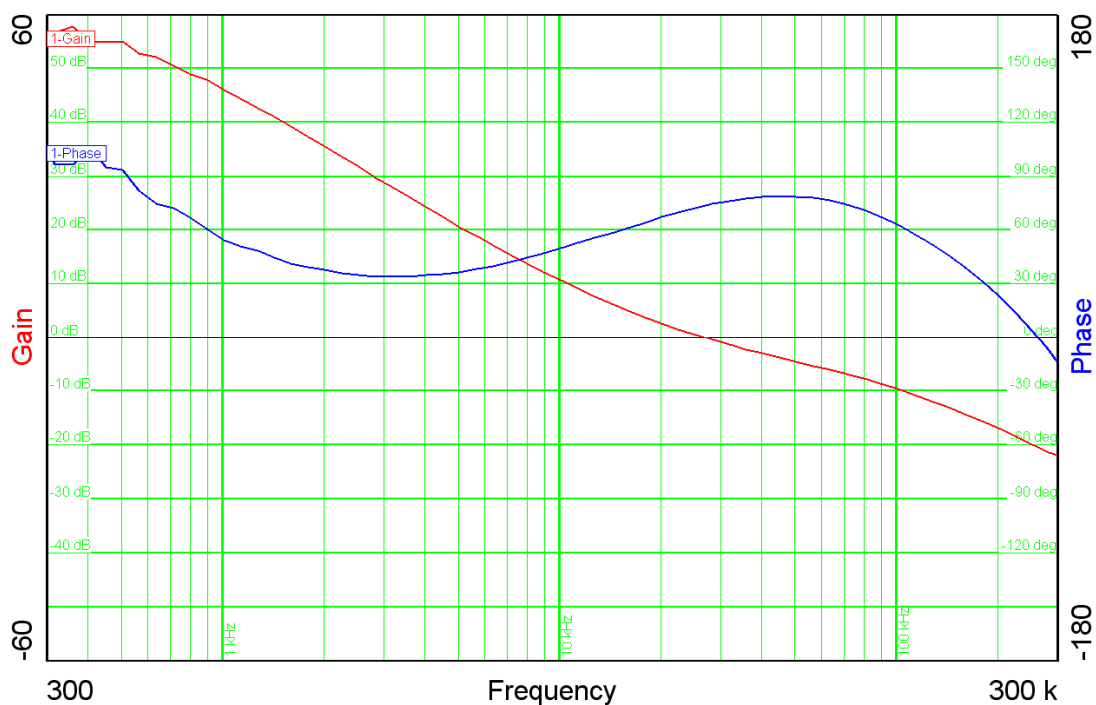


TPS54040 Buck Circuit - 3.3V @ 0.3A

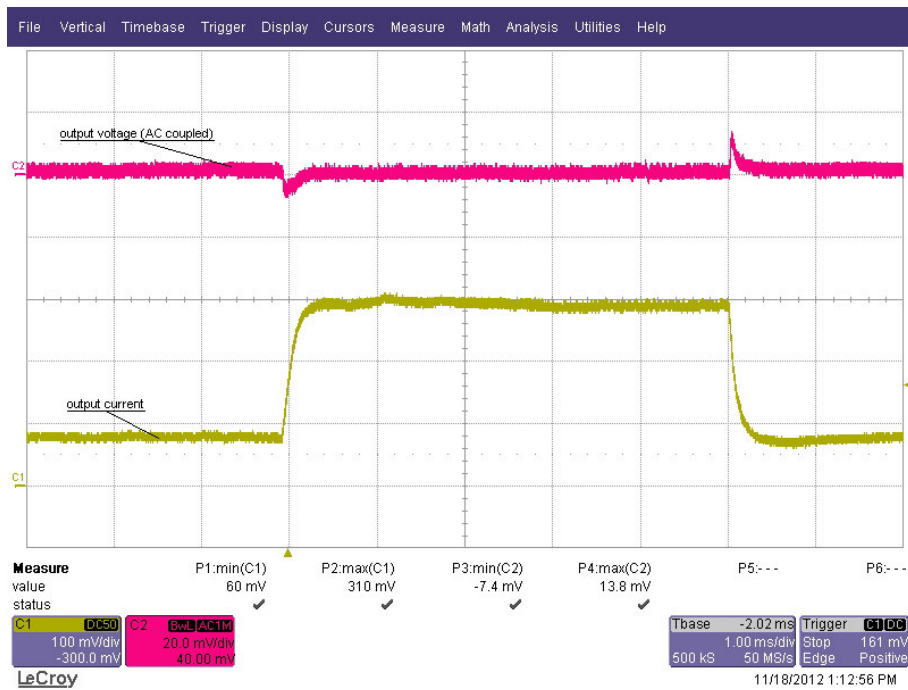
- Input 9..14V DC
Can withstand up to 40V
- Output 3.3V @ 0.3A
- Working in continuous conduction mode
- Revision B
 - Changes
 - Switching frequency: 790 kHz (R3 = 140k)
 - Inductor L2: 22uH (Wuerth 744043220)
 - Output capacitance: 47uF/6.3V (C4)
 - Compensation: R1 = 68.1k, C10 = 220pF, C9 = open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

1 Closed loop

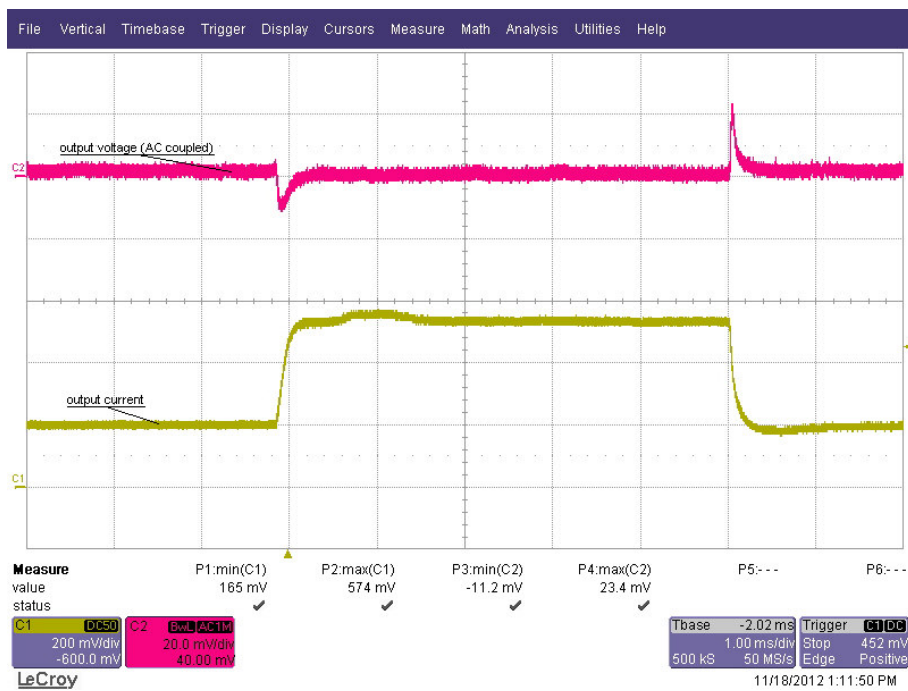


- 12.0V in, 3.3V @ 0.3A load
- 73 deg phase margin @ 26.8 kHz bandwidth
- -21 dB gain margin

2 Load step with low slew rate

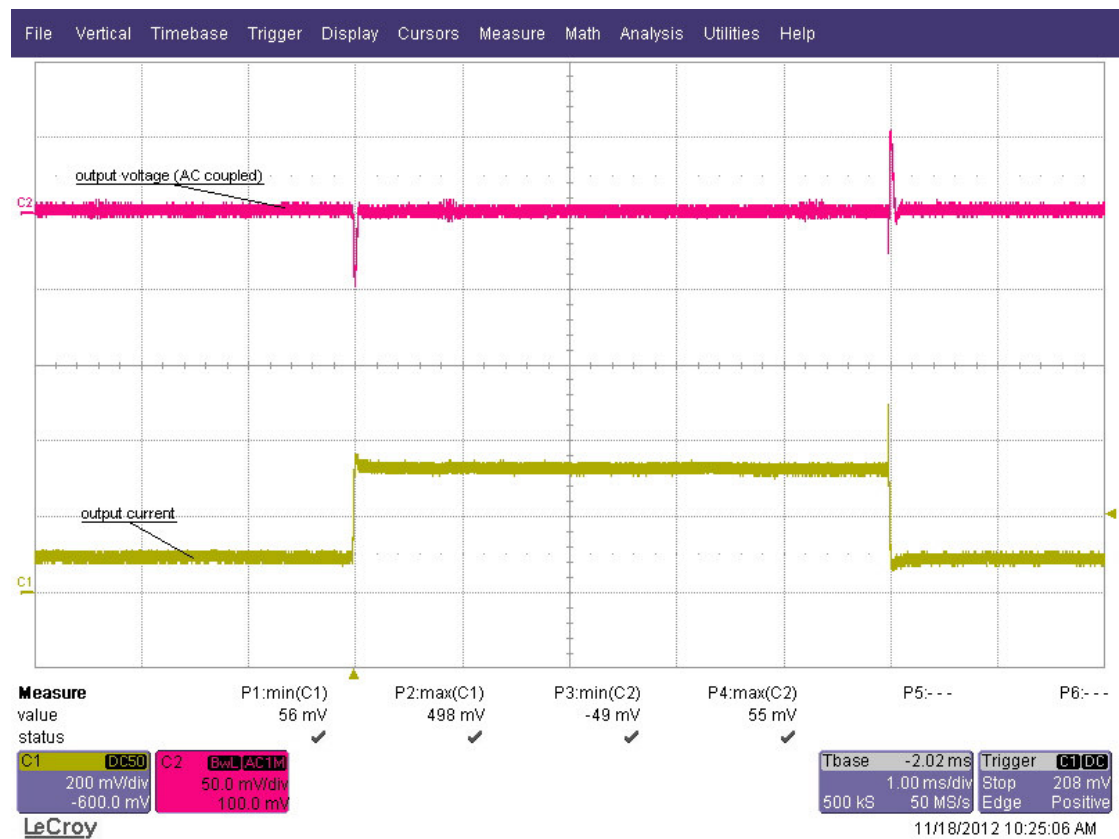


- 12.0V in, 3.3V out **0.1A load to 0.3A and vice versa**
- -7mV undershoot, 14mV overshoot



- 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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3. Since the EVM is not a completed product, it may not meet all applicable regulatory and safety compliance standards (such as UL, CSA, VDE, CE, RoHS and WEEE) which may normally be associated with similar items. You assume full responsibility to determine and/or assure compliance with any such standards and related certifications as may be applicable. You will employ reasonable safeguards to ensure that your use of the EVM will not result in any property damage, injury or death, even if the EVM should fail to perform as described or expected.

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