Photo of the prototype

PMP9042 Rev A Test Results

TEXAS INSTRUMENTS

1 Startup and shutdown

12Vin, Ch2 on, Ch1 off to on
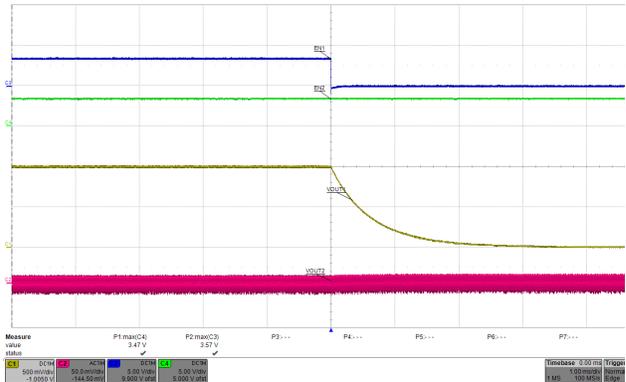
12Vin, Ch2 on, Ch1 on to off
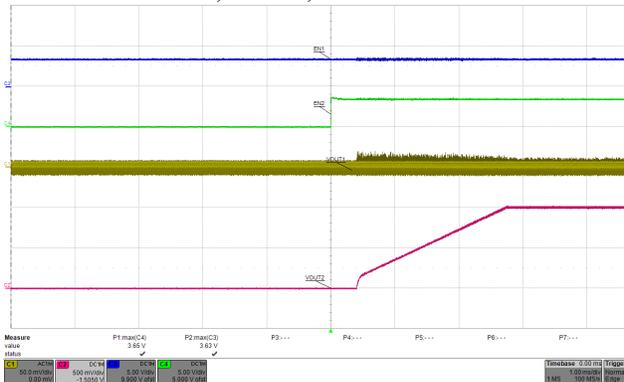
12Vin, Ch1 on, Ch2 off to on
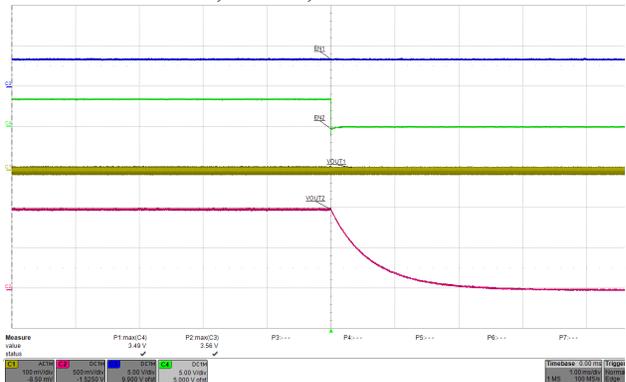
12Vin, Ch1 on, Ch2 on to off

2 Output Ripple

12Vin, Ch1 at 10% load, Ch2 at 100% load (2x 100uF, 6.3V, 1210+4x470uF, 4V, 7343)

12Vin, Ch1 at 100% load, Ch2 at 10% load (2x 100uF, 6.3V, 1210+4x470uF, 4V, 7343)
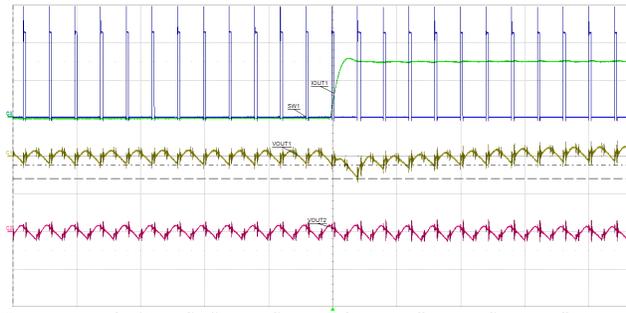
Power Management Solutions

TEXAS
INSTRUMENTS

3   Transient

12Vin, Ch1 75% to 100% Load Step, Ch2 50% static load

12Vin, Ch1 75% to 100% Load Step, Ch2 50% static load
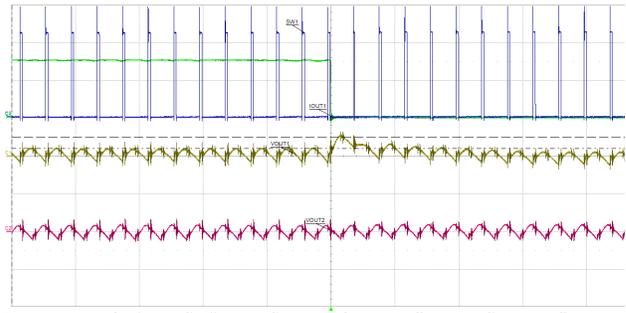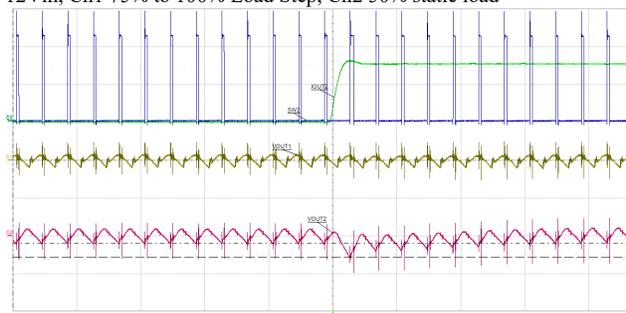
12Vin, Ch2 75% to 100% Load Step, Ch1 50% static load
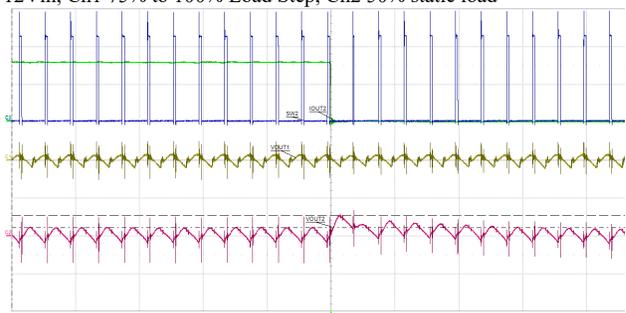
12Vin, Ch2 75% to 100% Load Step, Ch1 50% static load

4   Over-Current protection
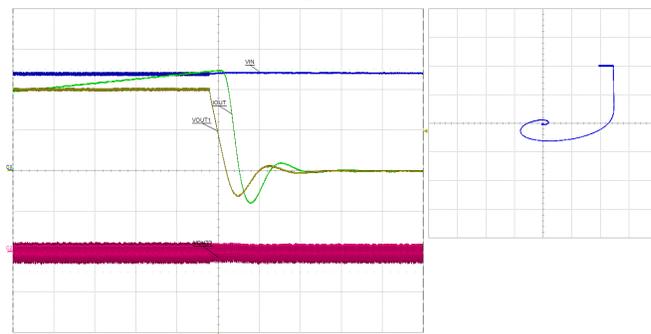
12Vin, Ch1 load regulation and over-current protection, Ch2 10% load
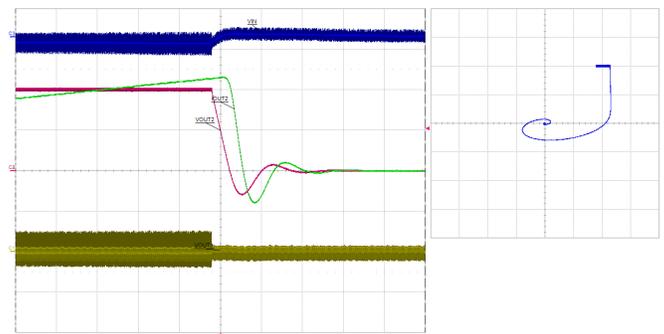
12Vin, Ch2 load regulation and over-current protection, Ch1 10% load

Power Management Solutions

5 Short-Circuit Protection
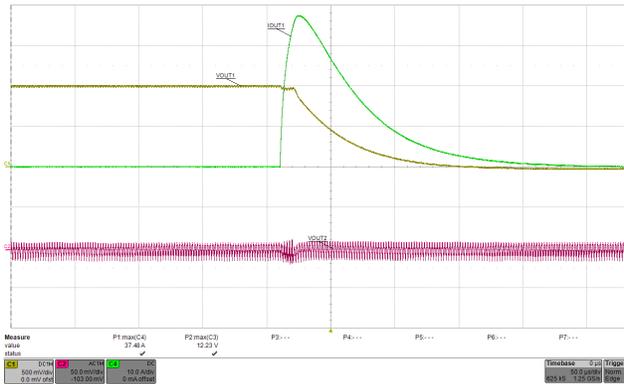
12Vin, Ch1, Short circuit applied
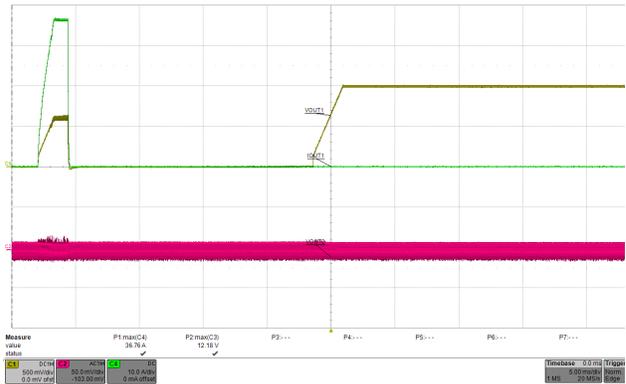
12Vin, Ch1, Short circuit released
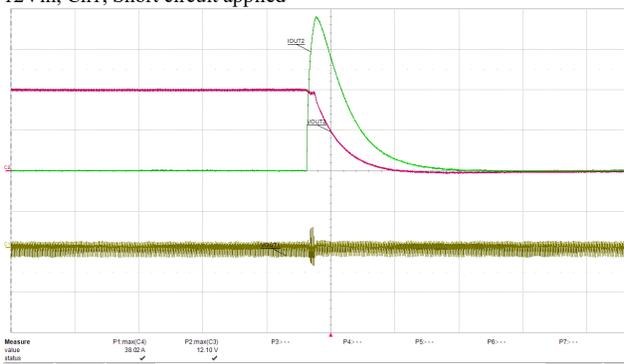
12Vin, Ch2, Short circuit applied
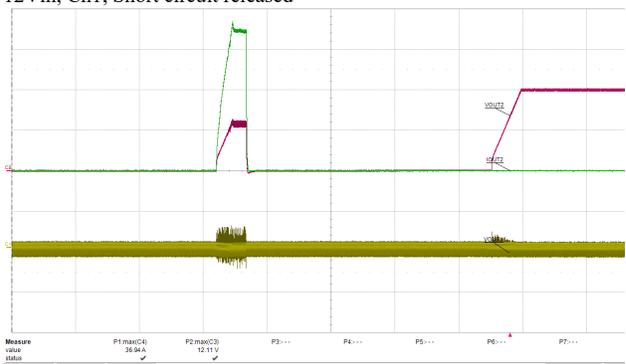
12Vin, Ch2, Short circuit released

6 Bode Plot
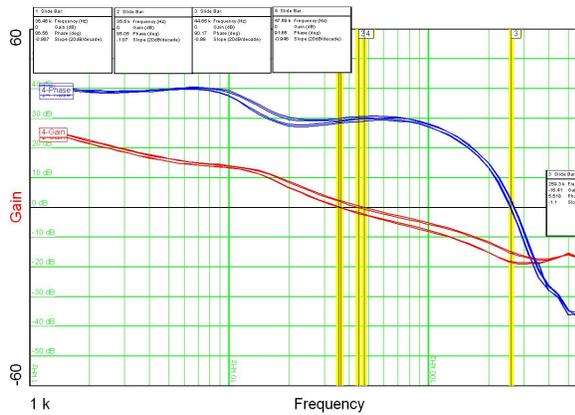
CH1, 1V, 30A, VIN=7V, 8V, 10V, 12V(BW=48kHz, PM=92D)
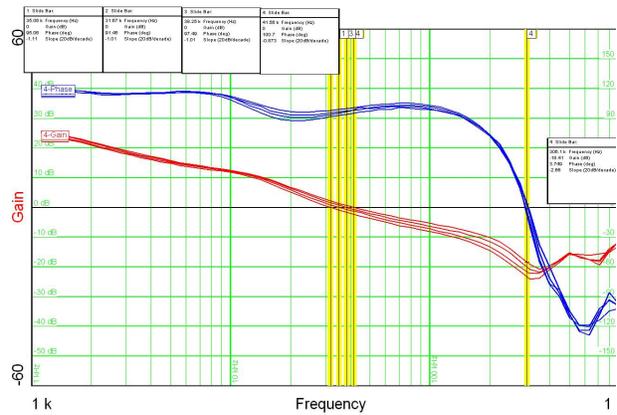
CH2, 1V, 30A, VIN=7V, 8V, 10V, 12V(BW=41.6kHz, PM=101D)

7 Efficiency

PMP9042, 500kHz, 1V
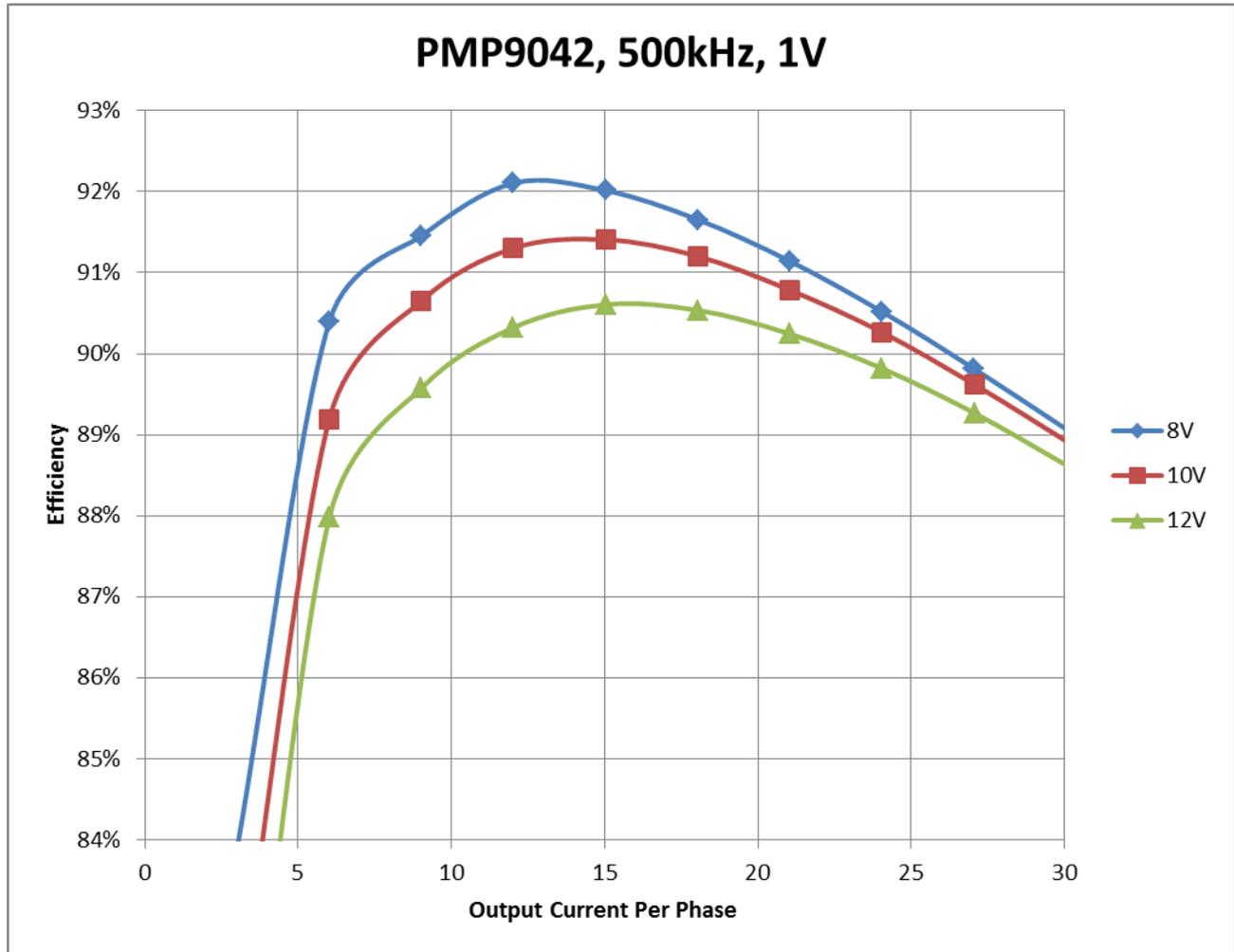
8 Thermal
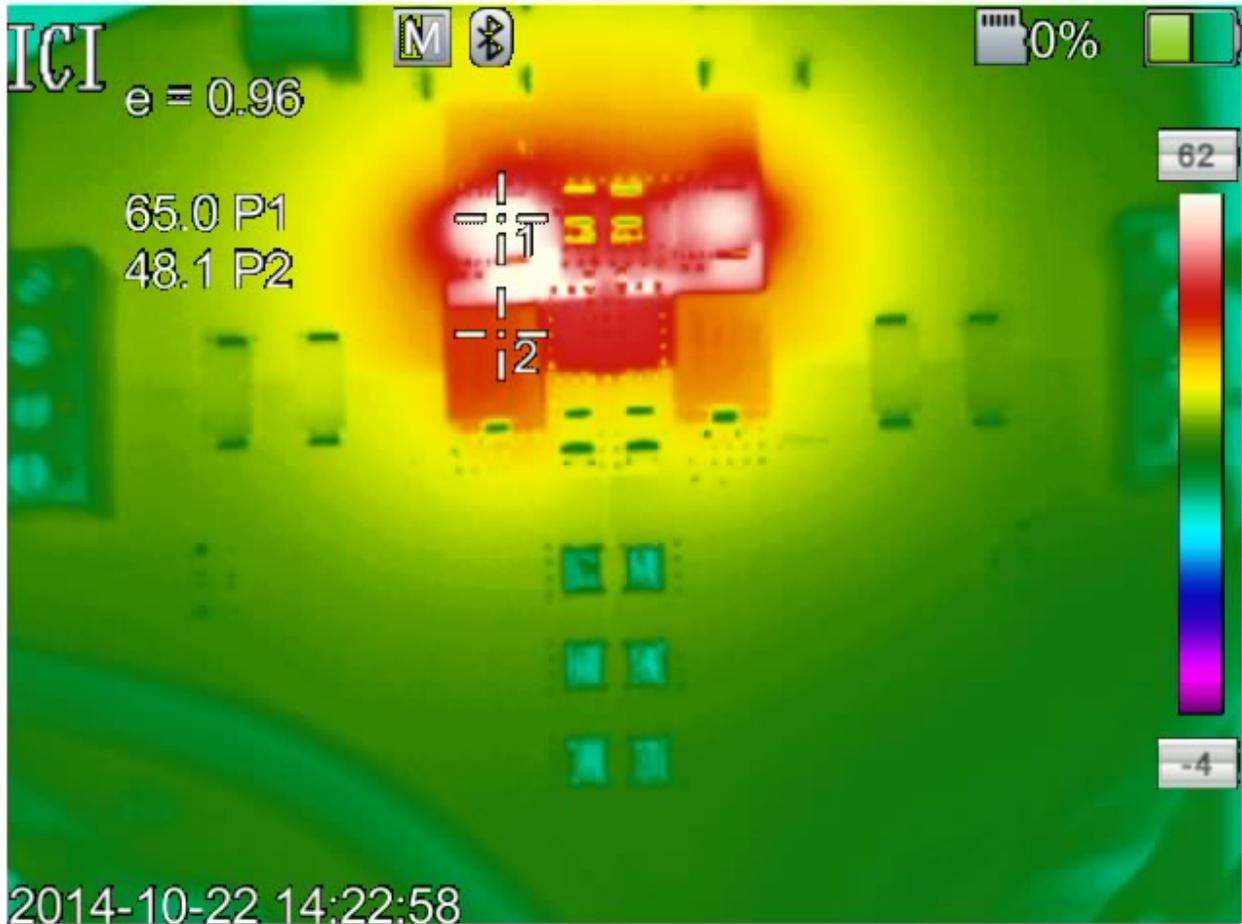
Test conditions: 12Vin, Vout1=1V/30A, Vout2=1V/30A, 300kHz, 200LFM Forced Convection, 25C ambient temperature. (T_{FET}=65C, T_{IND}=48.1C)

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