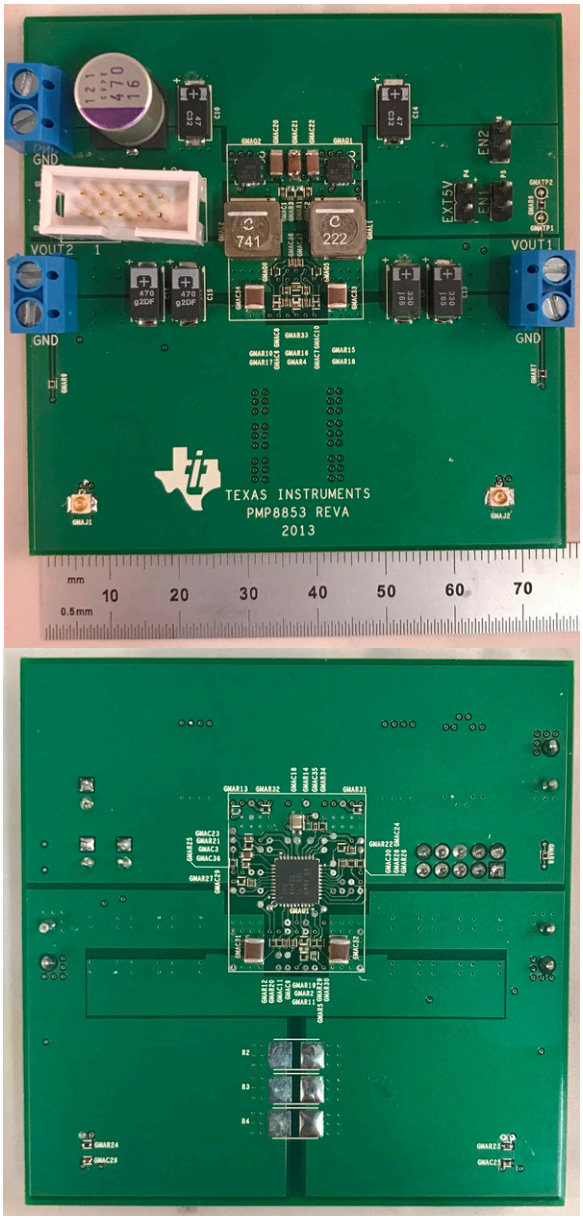
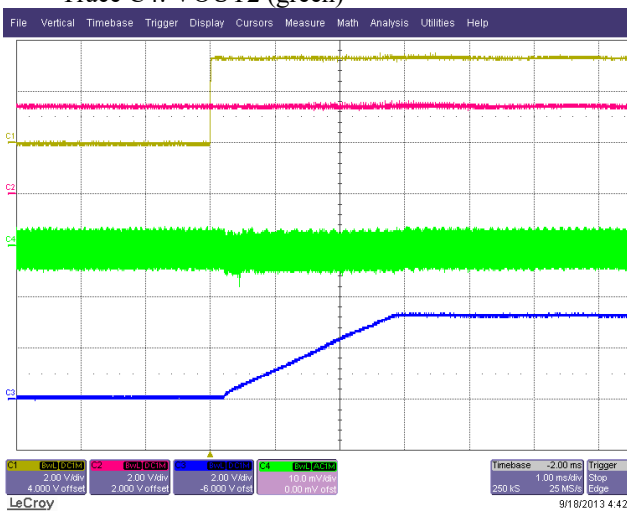
PMP8853 Rev A Test Results

Photo of the prototype

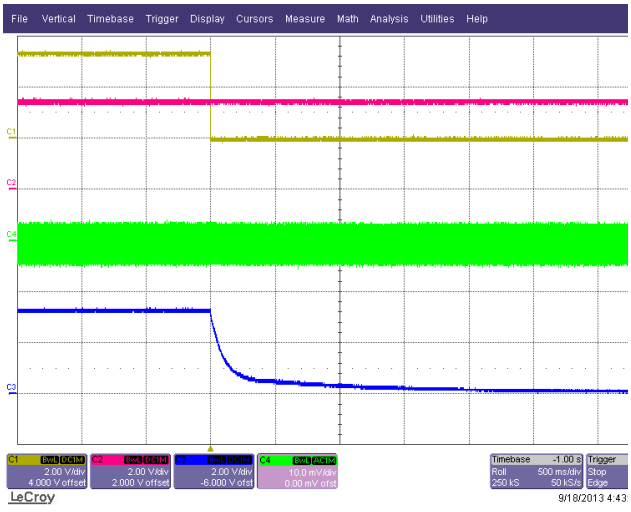


1 Startup and shutdown

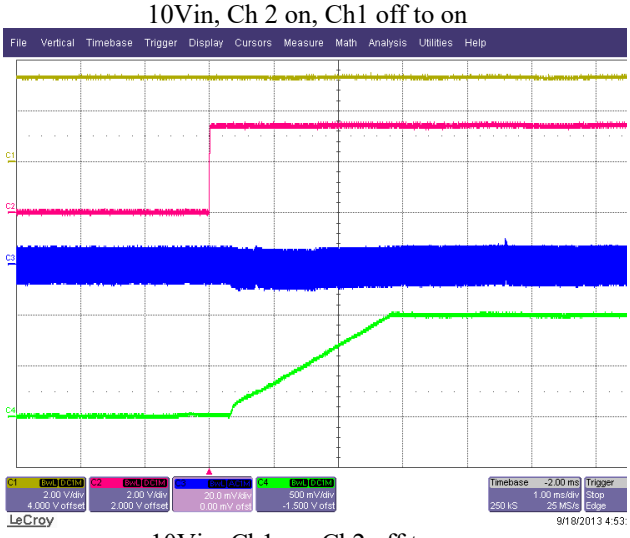
Ch1 is VOUT1=3.3V and Ch2 is VOUT2=1V.
Trace C1: EN1 (yellow)
Trace C2: EN2 (red)
Trace C3: VOUT1 (blue)
Trace C4: VOUT2 (green)



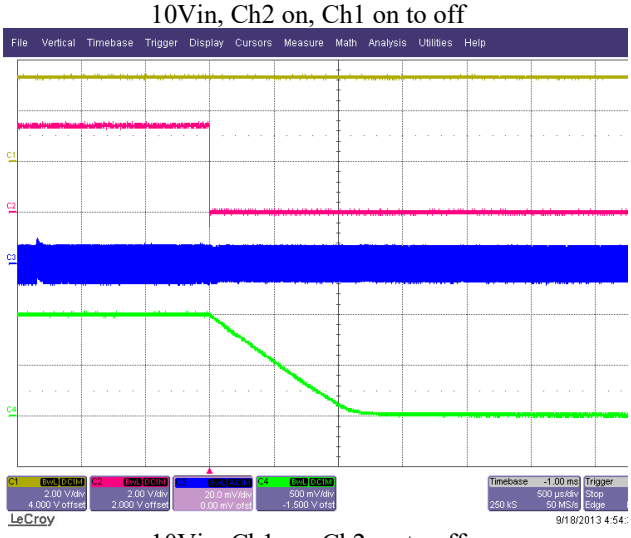
10Vin, Ch 2 on, Ch1 off to on



10Vin, Ch2 on, Ch1 on to off



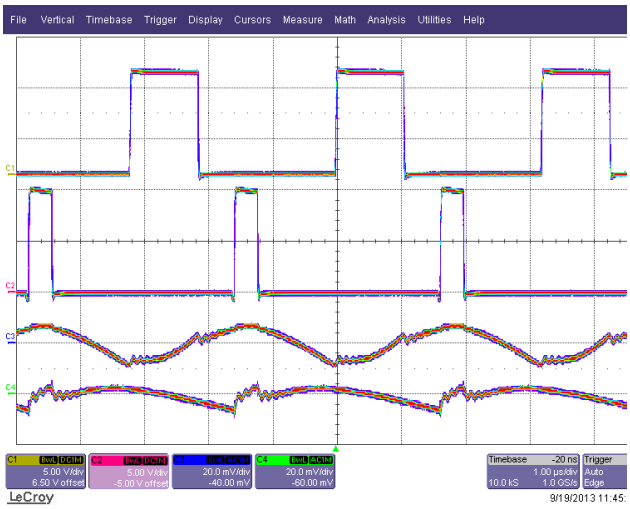
10Vin, Ch1 on, Ch2 off to on



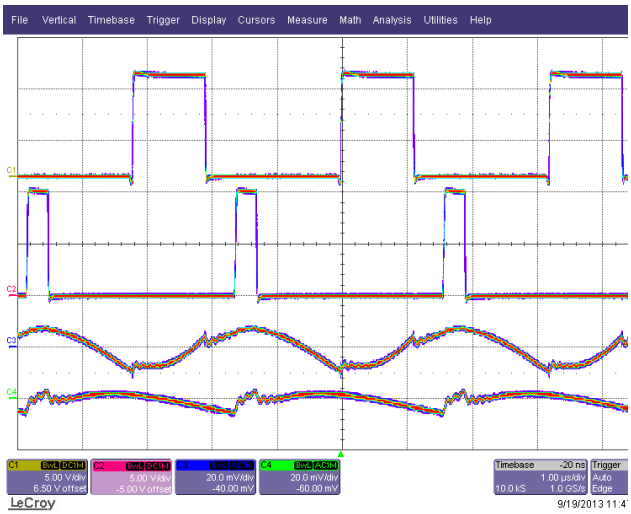
10Vin, Ch1 on, Ch2 on to off

2 Output Ripple

Ch1 is VOUT1=3.3V and Ch2 is VOUT2=1V.
Trace C1: VSW1
Trace C2: VSW2
Trace C3: VOUT1
Trace C4: VOUT2

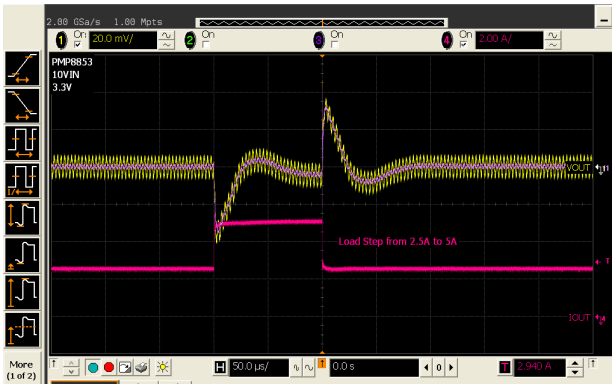


10Vin, Ch1 =3.3V/0.8A, Ch2 =1.0V/10A (2x 100uF, 6.3V, 1210+2x470uF, 4V, 10mohm, 7343), VOUT1=20mVpp

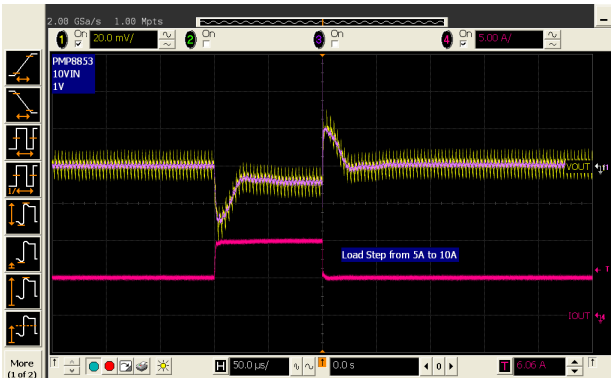


10Vin, Ch1 =3.3V/8A, Ch2 =1.0V/1A (2x 100uF, 6.3V, 1210+2x330uF, 6.3V, 9mohm, 7343), VOUT2=10mVpp

3 Transient



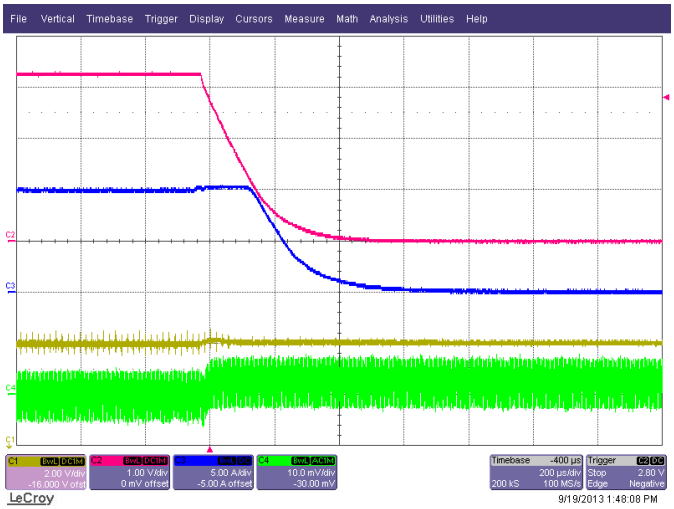
10VIN, 3.3V/2.5A->5A->2.5A (-35mV/+30mV)



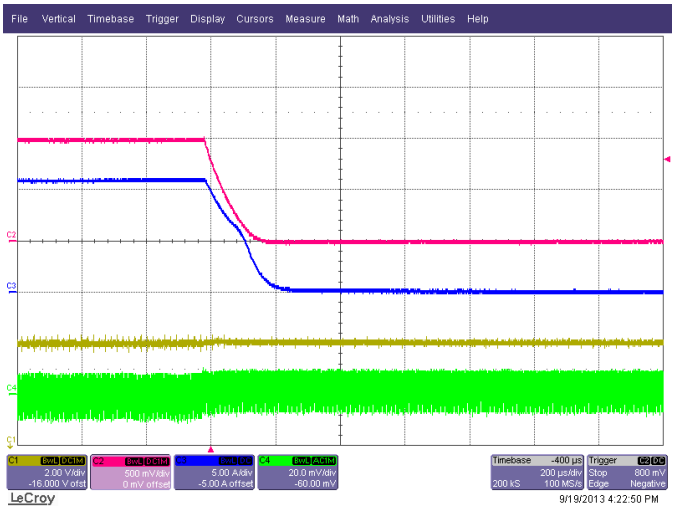
10VIN, 1V/5A->10A->5A (-30mV/+20mV)

4 Over-Current protection

Ch1 is VOUT1=3.3V and Ch2 is VOUT2=1V.
Trace C1: VIN (yellow)
Trace C2: VOUT of channel under test (red)
Trace C3: IOUT (blue)
Trace C4: VOUT of other channel (green)



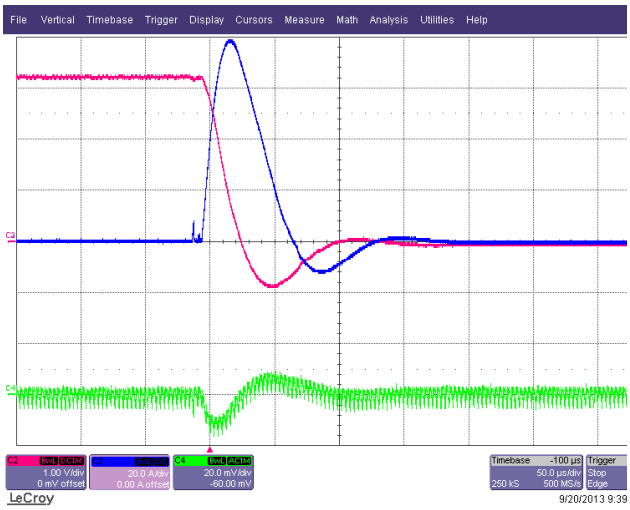
12Vin, Ch1 load regulation and over-current protection, Ch2=1V/5A



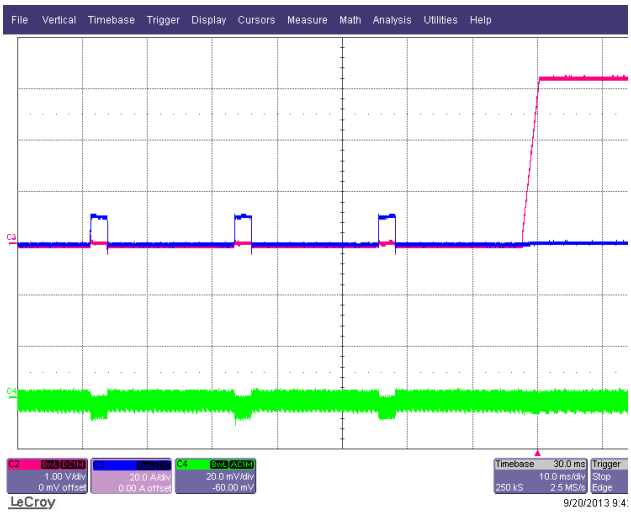
12Vin, Ch2 load regulation and over-current protection, Ch1 =3.3V/4A

5 Short-Circuit Protection

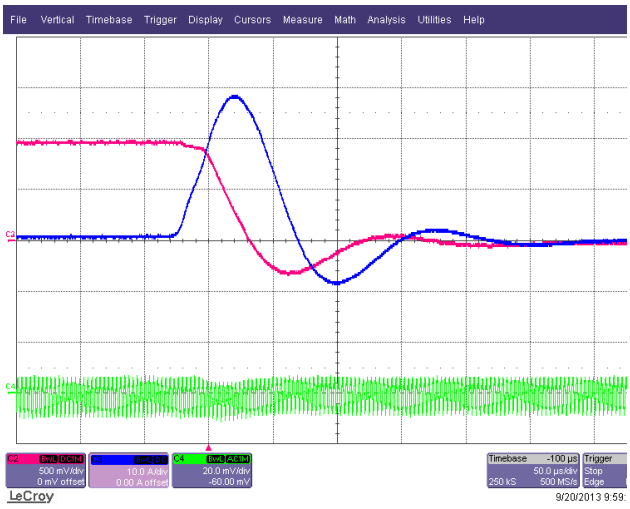
Ch1 is VOUT1=3.3V and Ch2 is VOUT2=1V.
Trace C2: VOUT of channel under test (red)
Trace C3: IOUT (blue)
Trace C4: VOUT of other channel (green)



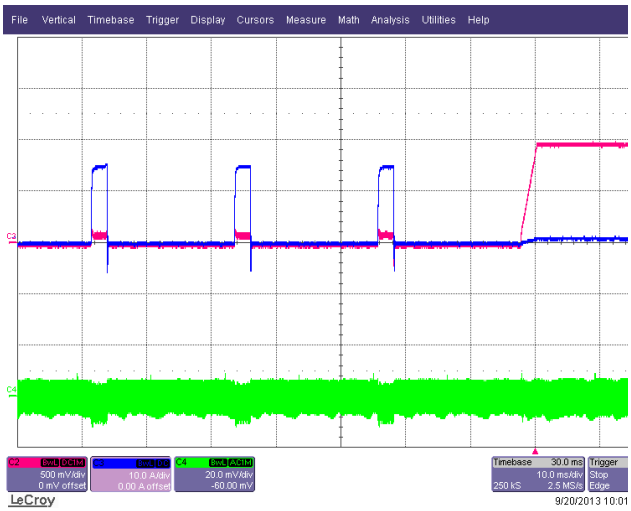
12Vin, Ch1, Short circuit applied



12Vin, Ch1, Short circuit released

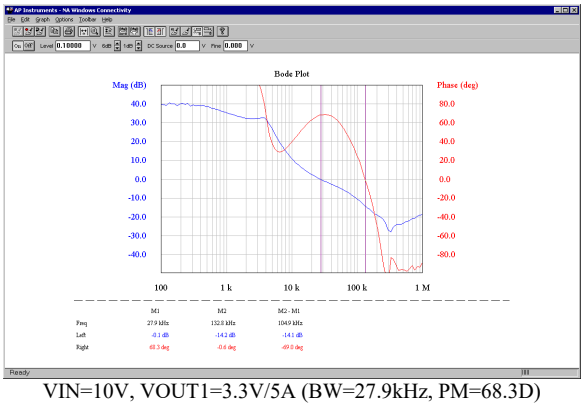


12Vin, Ch2, Short circuit applied

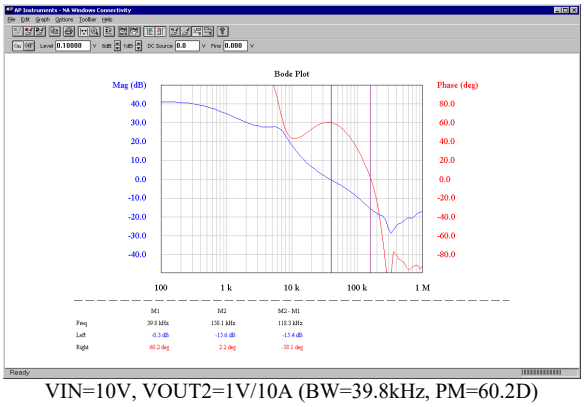


12Vin, Ch2, Short circuit released

6 Bode Plot

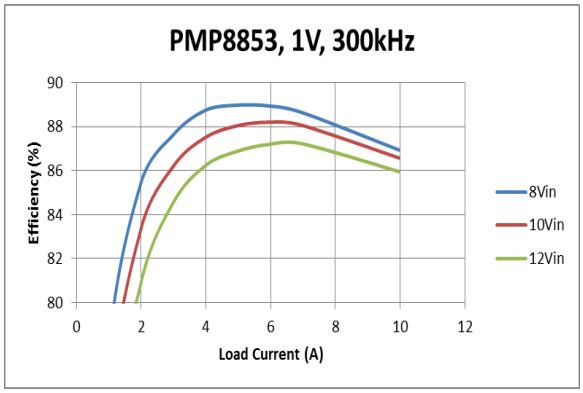


VIN=10V, VOUT1=3.3V/5A (BW=27.9kHz, PM=68.3D)

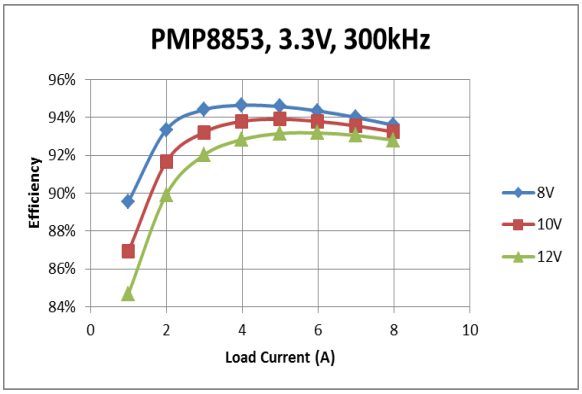


VIN=10V, VOUT2=1V/10A (BW=39.8kHz, PM=60.2D)

7 Efficiency



1V efficiency @300kHz



3.3V efficiency @300kHz

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