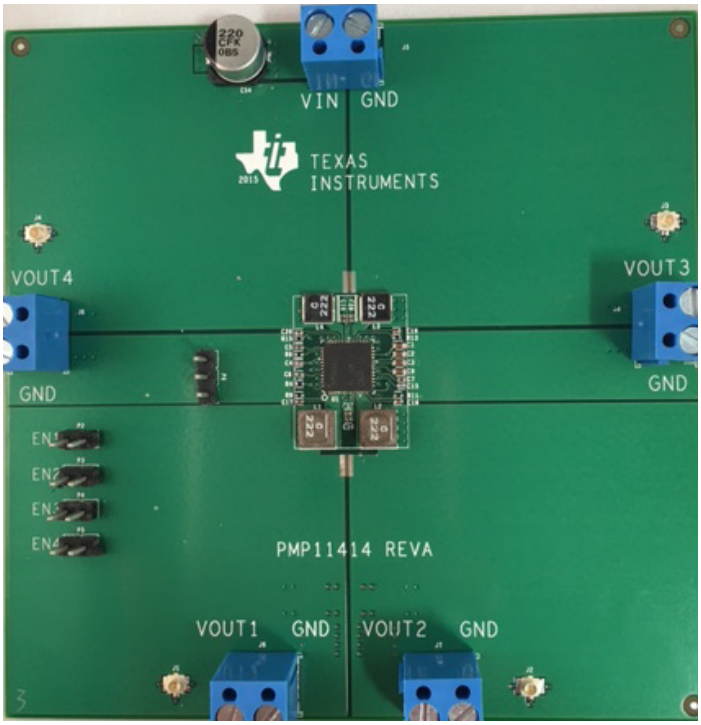
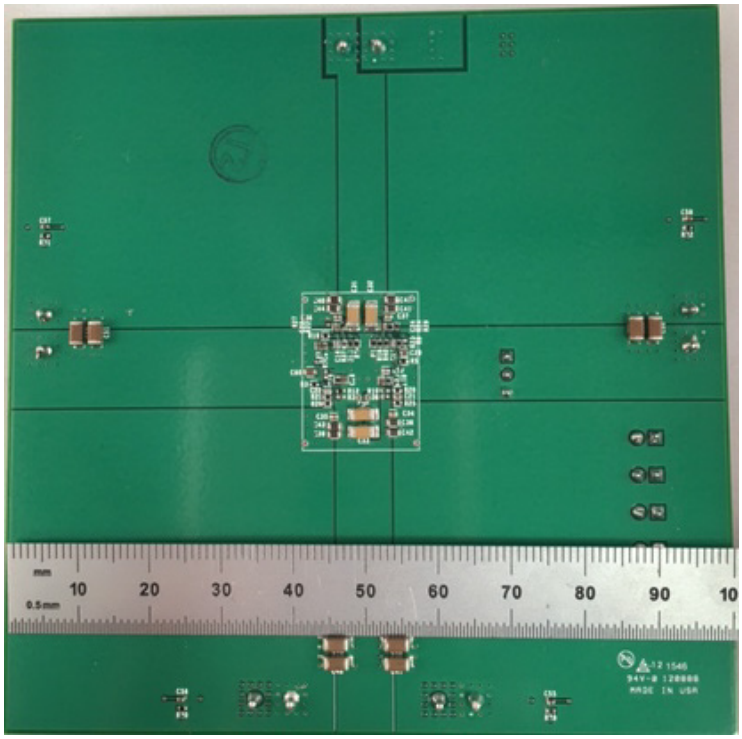
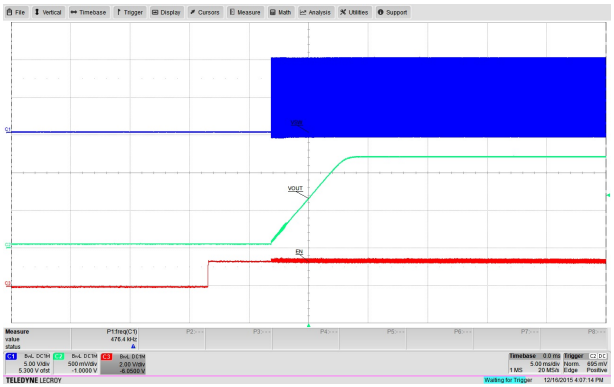
## Photo of the prototype



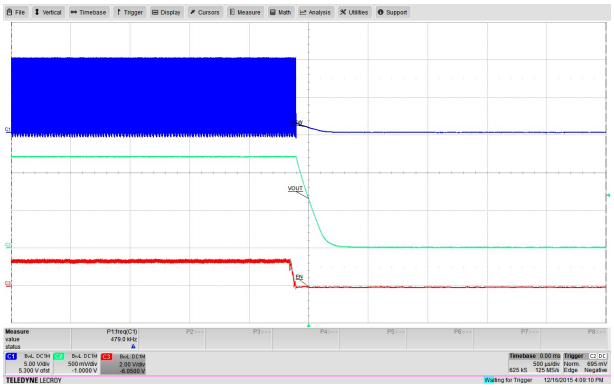



# 1 VOUT1=1.2V

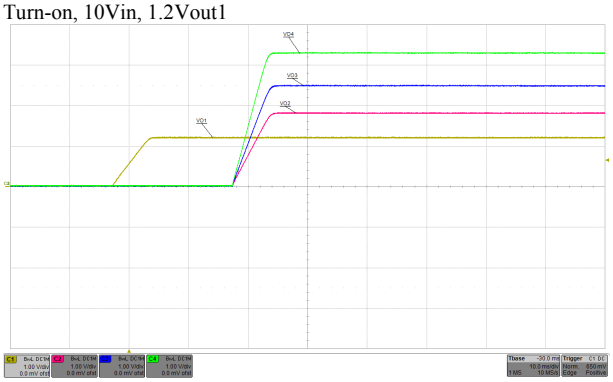
## *1.1 Startup and shutdown*



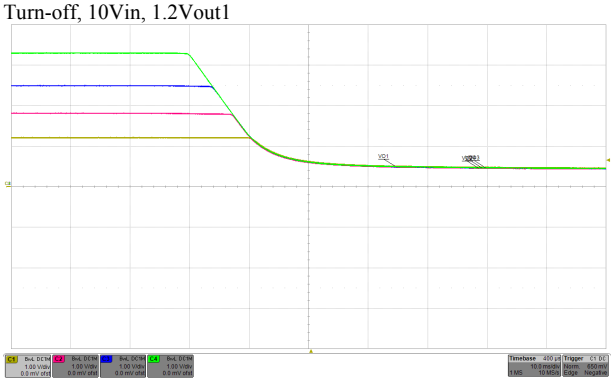
Turn-on, 10Vin, 1.2Vout1



Turn-off, 10Vin, 1.2Vout1

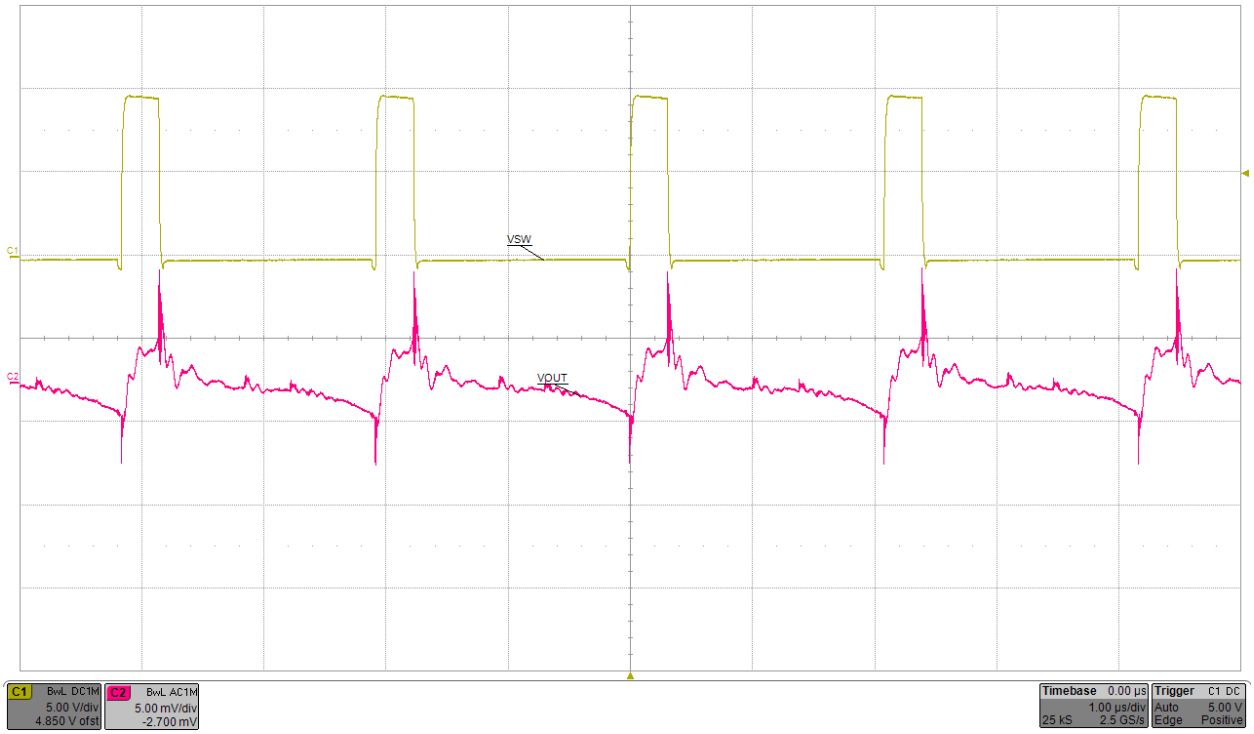


Turn-on, 10Vin, 1.2Vout1, 1.8Vout2, 2.5Vout3, 3.3Vout4



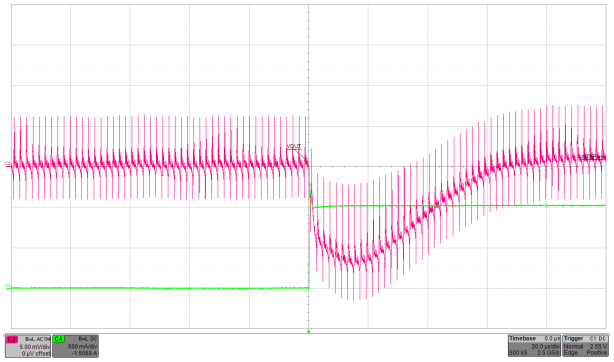
Turn-off, 10Vin, 1.2Vout1, 1.8Vout2, 2.5Vout3, 3.3Vout4

## 1.2 Ripple

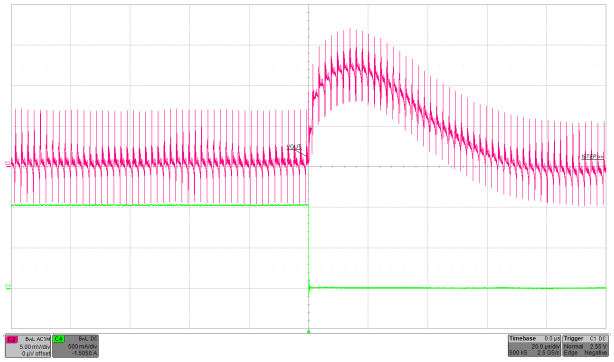



10Vin, 1.2Vout1, 4A Load (1x470uF, 2.5V, 7mohm+2x100uF,6.3V,1206)

## 1.3 Transient

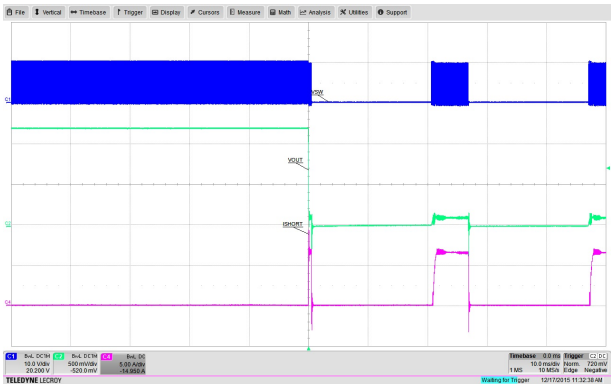


10Vin, 1.2Vout1, 3A to 4A Load Step

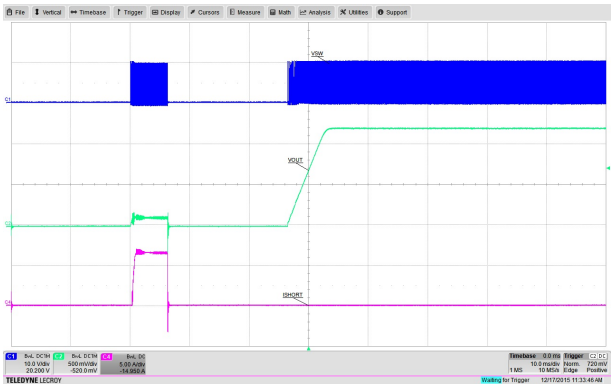


10Vin, 1.2Vout1, 4A to 3A Load Step

## 1.4 Short-circuit protection

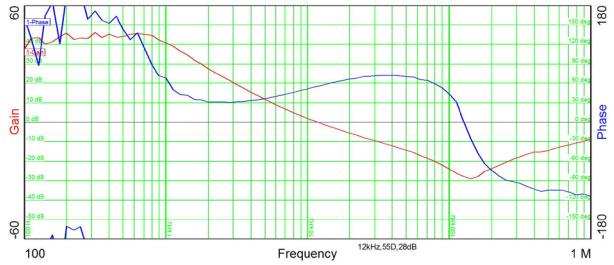



10Vin, 1.2Vout1, Short circuit applied

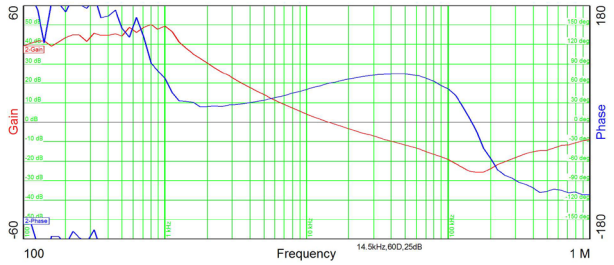



10Vin, 1.2Vout1, Short circuit released

## 1.5 Bode Plot

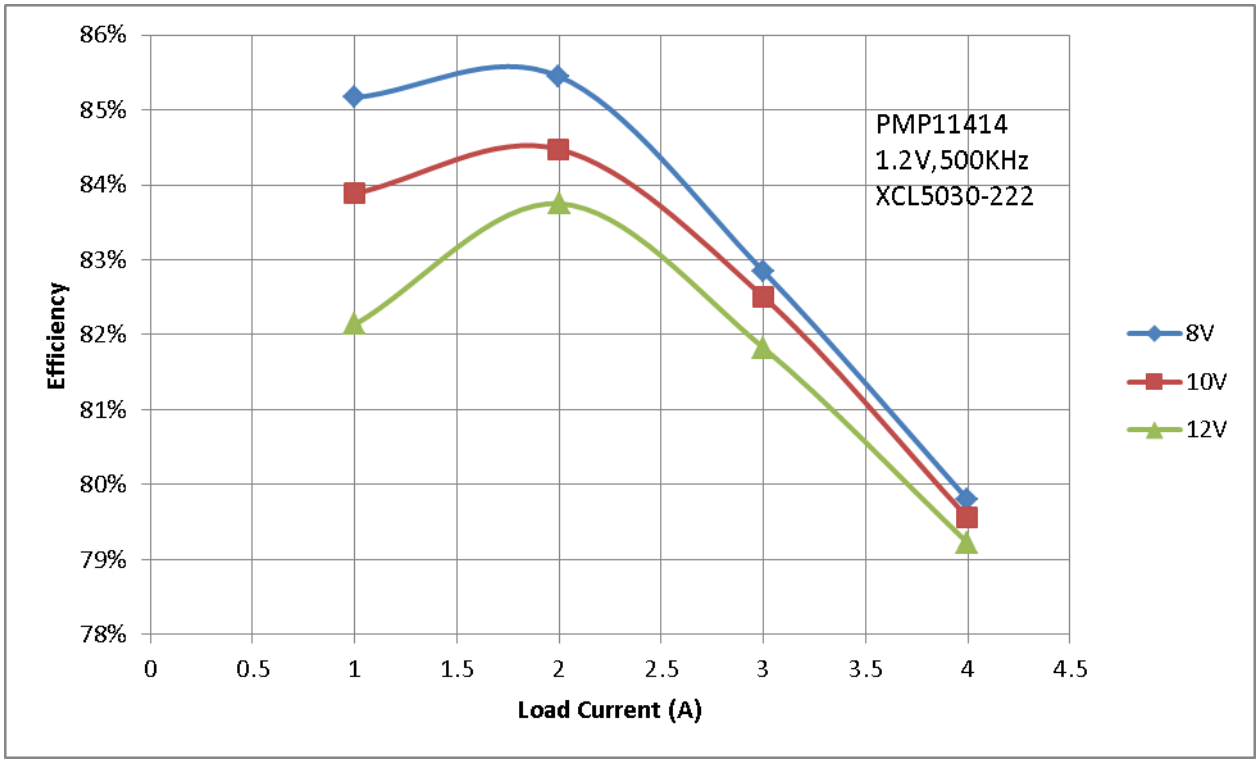



10Vin, 1.2Vout1, No Load, BW=12kHz, PM=55deg




10Vin, 1.2Vout1, 4A Load, BW=14.5kHz, PM=60deg

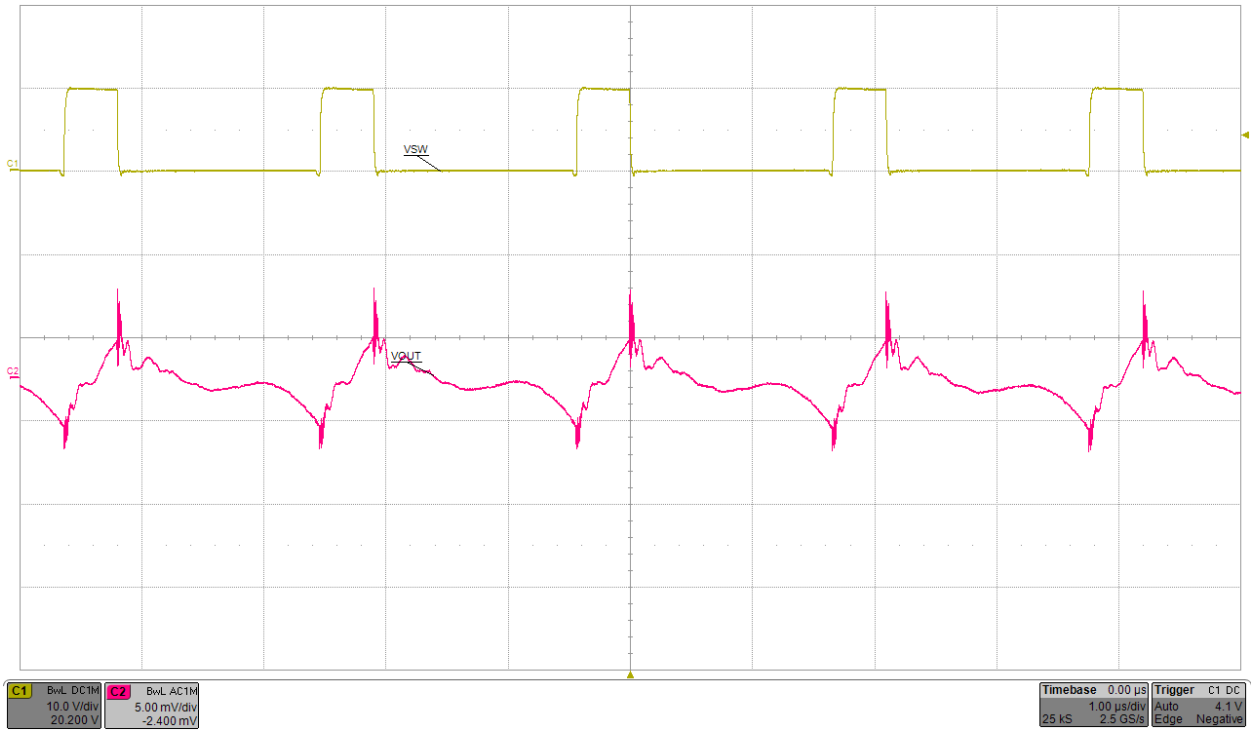
### 1.6 Efficiency




Test conditions: 1.2Vout1, 500kHz, XCL5030-222.

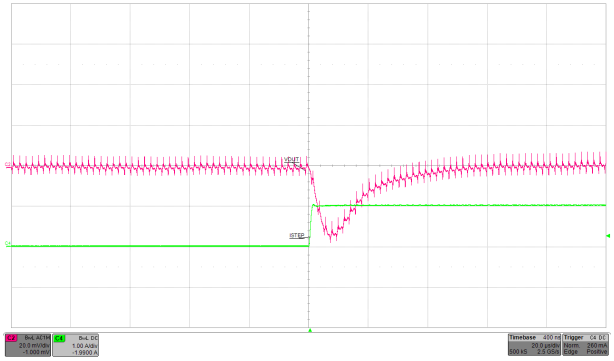
# 2 VOUT2=1.8V

## 2.1 Ripple

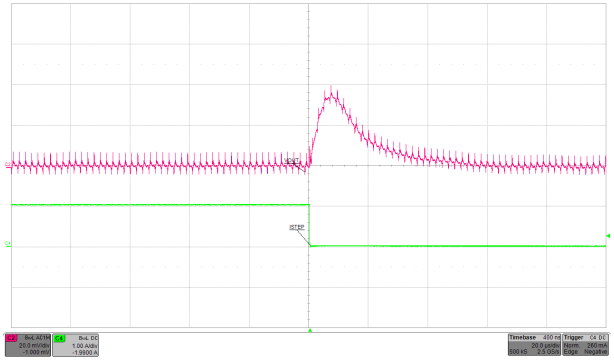



10Vin, 1.8Vout2, 4A Load (2x100uF, 6.3V, 1206)

## 2.2 Transient

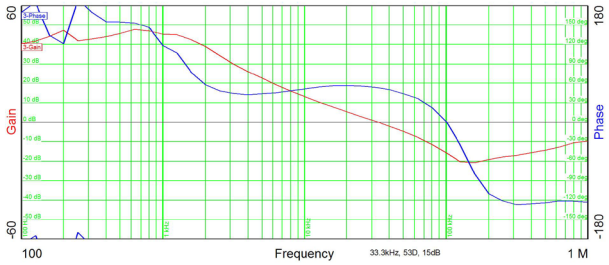


10Vin, 1.8Vout2, 3A to 4A Load Step

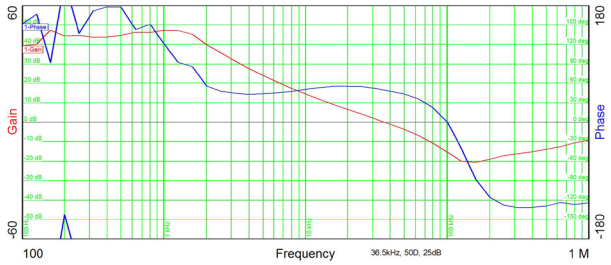


10Vin, 1.8Vout2, 4A to 3A Load Step

## 2.3 Bode Plot

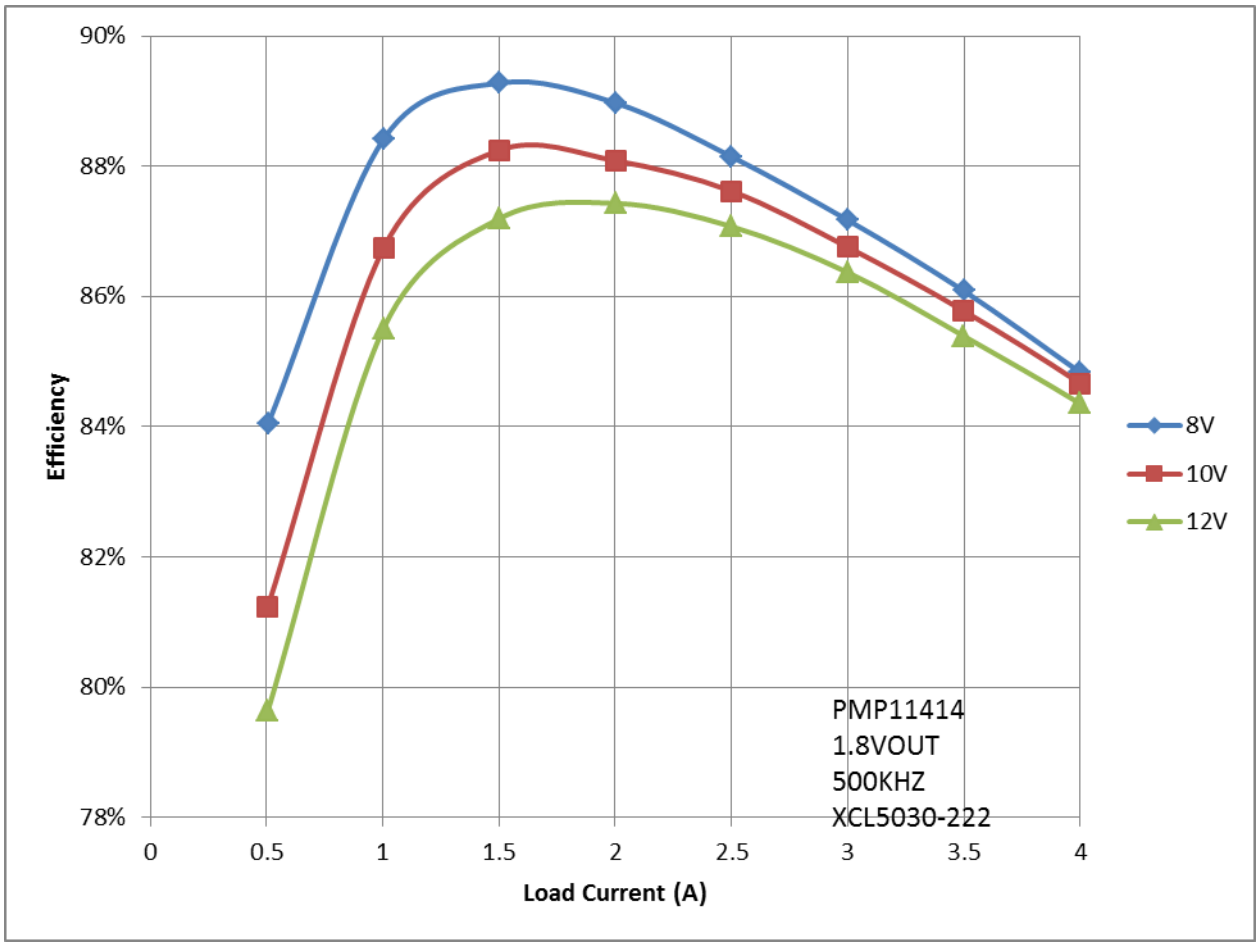



10Vin, 1.8Vout2, No Load, BW=33.3kHz, PM=53deg




10Vin, 1.8Vout2, 4A Load, BW=36.5kHz, PM=50deg

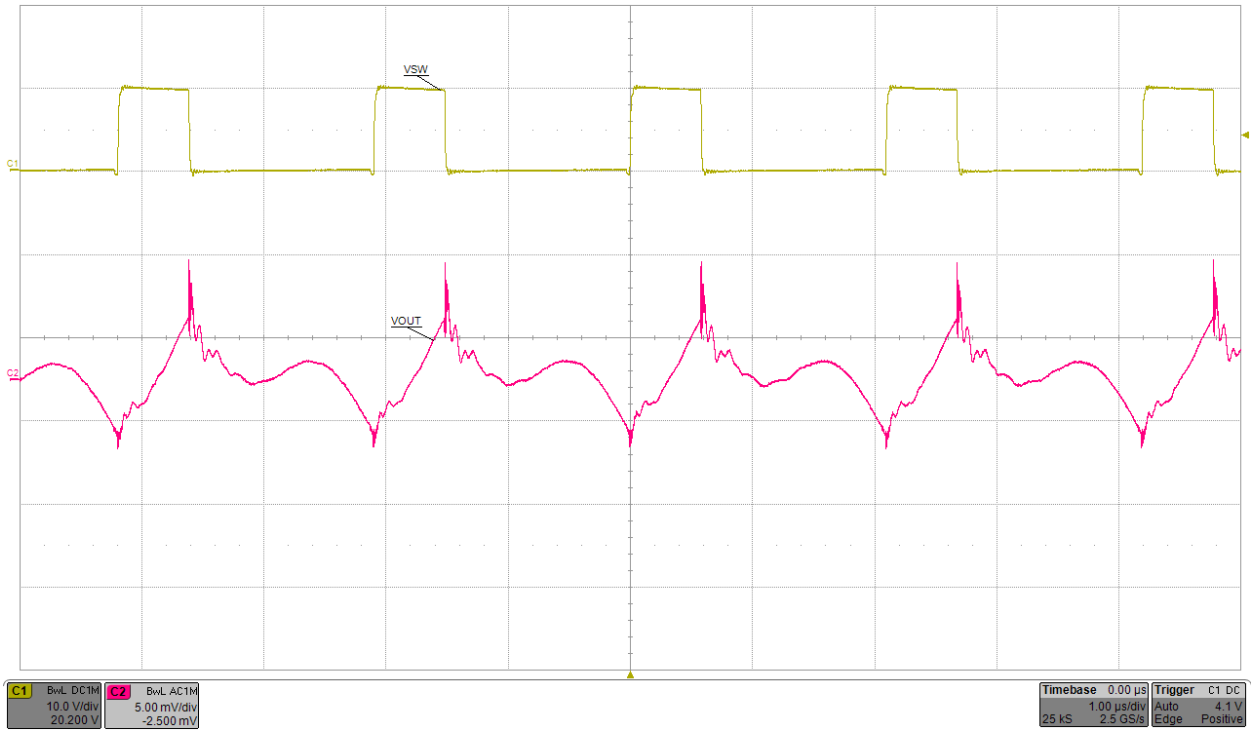
## 2.4 Efficiency




Test conditions: 1.8Vout2, 500kHz, XCL5030-222.

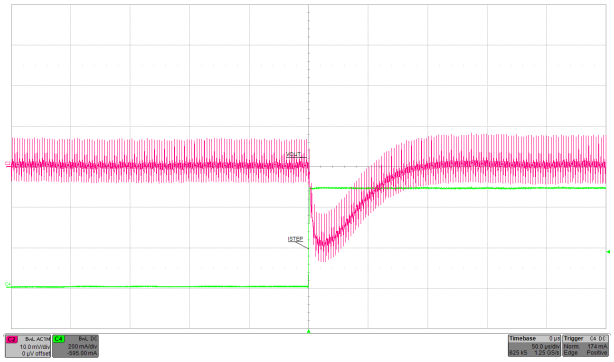
# 3 VOUT3=2.5V

## 3.1 Ripple

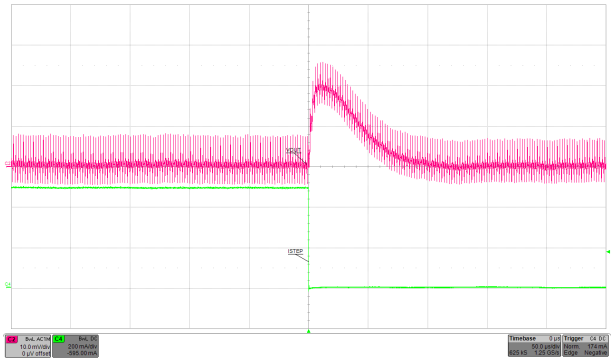



10Vin, 2.5Vout3, 2A Load (2x100uF, 6.3V, 1206)

## 3.2 Transient

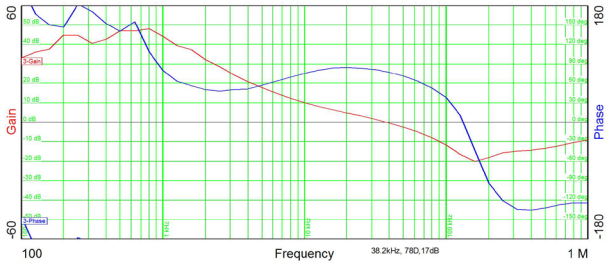


10Vin, 2.5Vout3, 1.5A to 2A Load Step

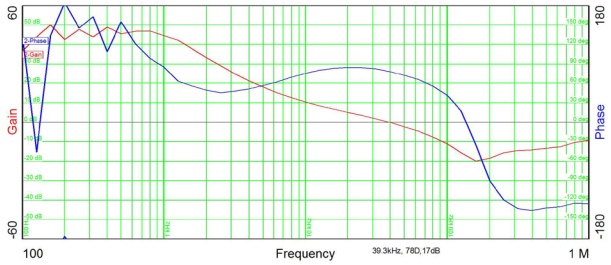


10Vin, 2.5Vout3, 2A to 1.5A Load Step

## 3.3 Bode Plot

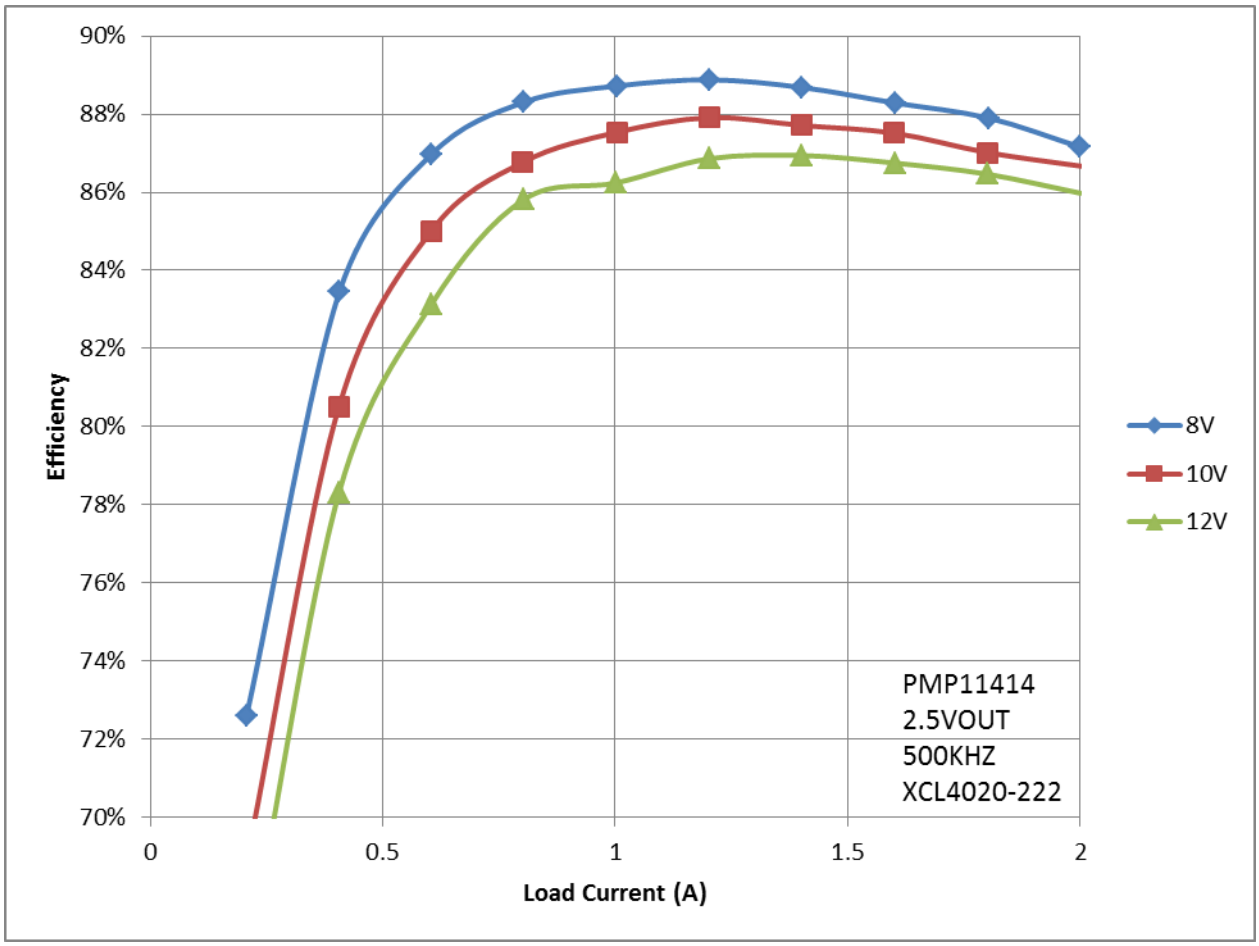



10Vin, 2.5Vout3, No Load, BW=38.2kHz, PM=78deg




10Vin, 2.5Vout3, 4A Load, BW=39.3kHz, PM=78deg

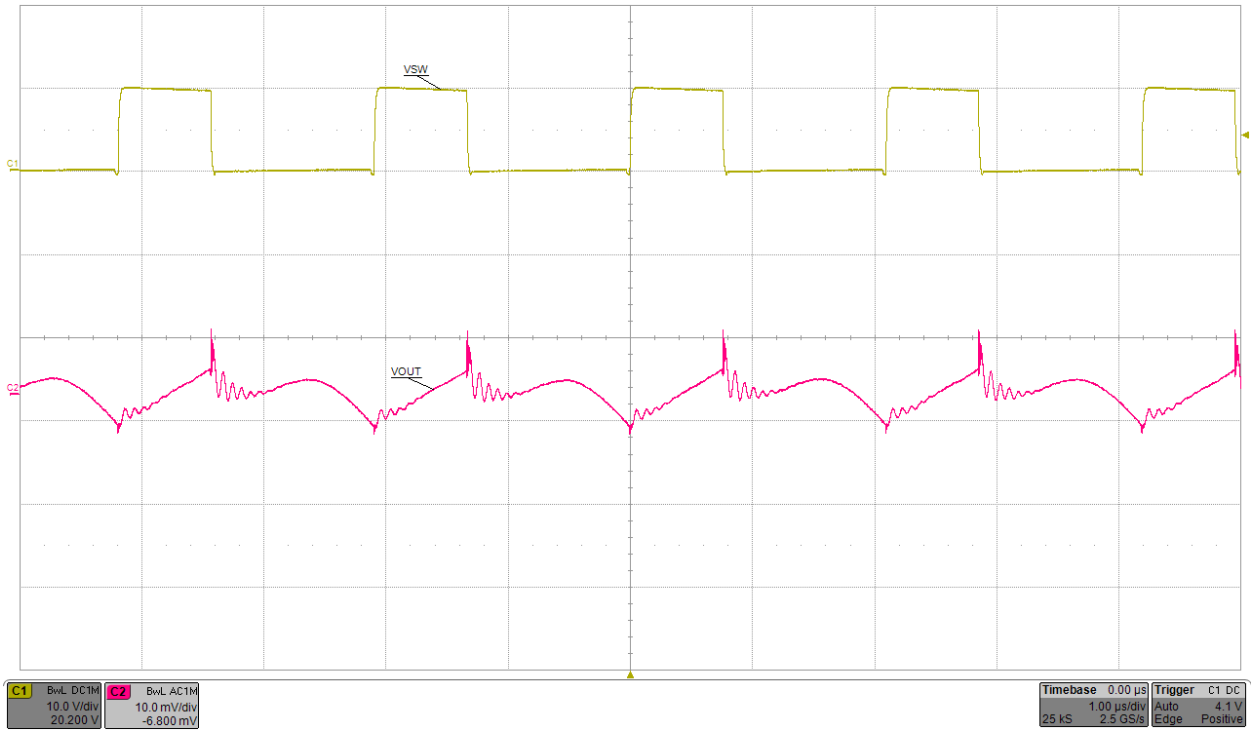
## 3.4 Efficiency




Test conditions: 2.5Vout3, 500kHz, XCL4020-222.

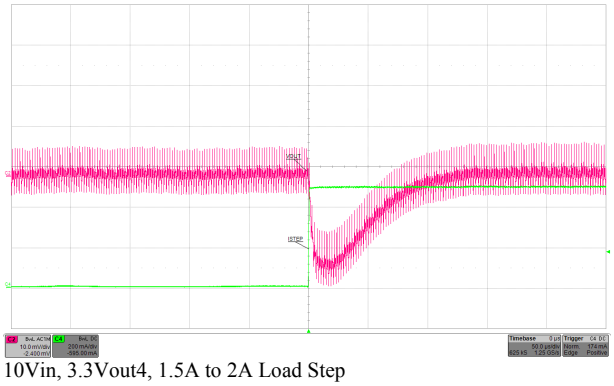
# 4 VOUT4=3.3V

## 4.1 Ripple

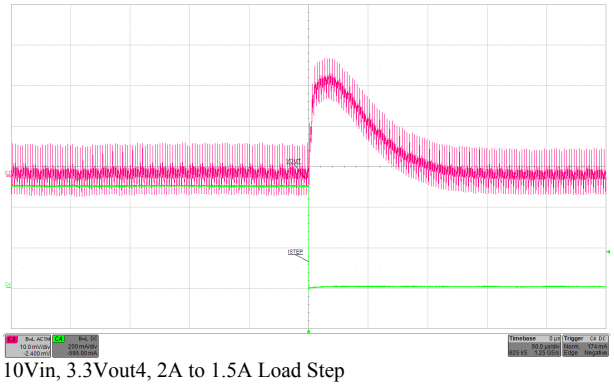



10Vin, 3.3Vout4, 2A Load (2x100uF, 6.3V, 1206)

## 4.2 Transient

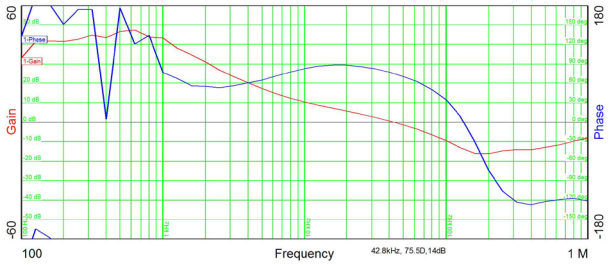


10Vin, 3.3Vout4, 1.5A to 2A Load Step

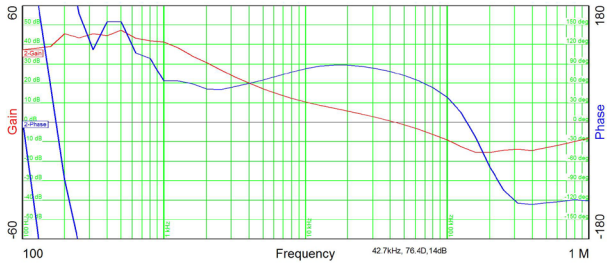


10Vin, 3.3Vout4, 2A to 1.5A Load Step

## 4.3 Bode Plot

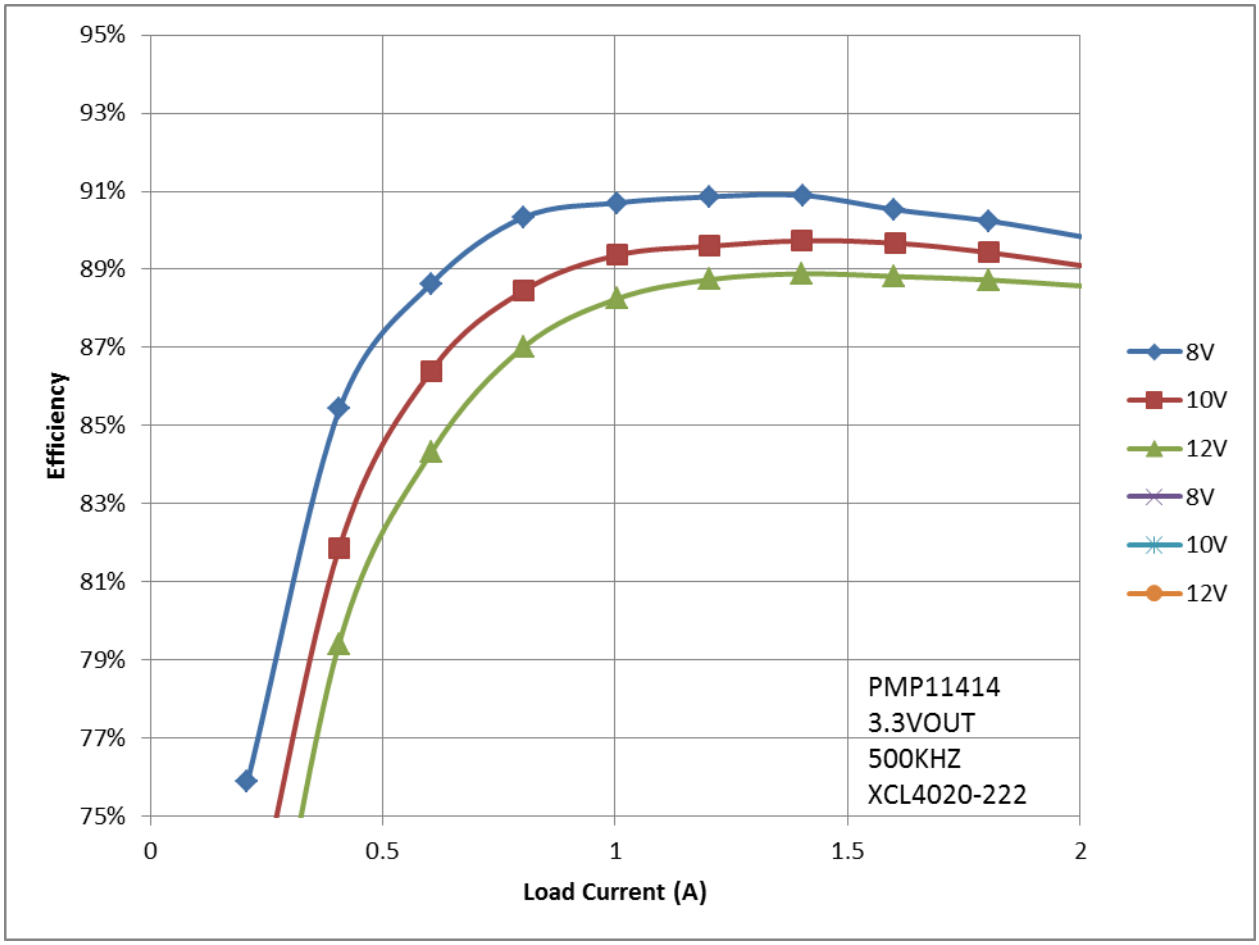



10Vin, 3.3Vout4, No Load, BW=42.8kHz, PM=75.5deg




10Vin, 3.3Vout4, 4A Load, BW=42.7kHz, PM=76.4deg

## 4.4 Efficiency




Test conditions: 3.3Vout4, 500kHz, XCL4020-222.

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