

PMP9449 Test Report

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1) Block Diagram

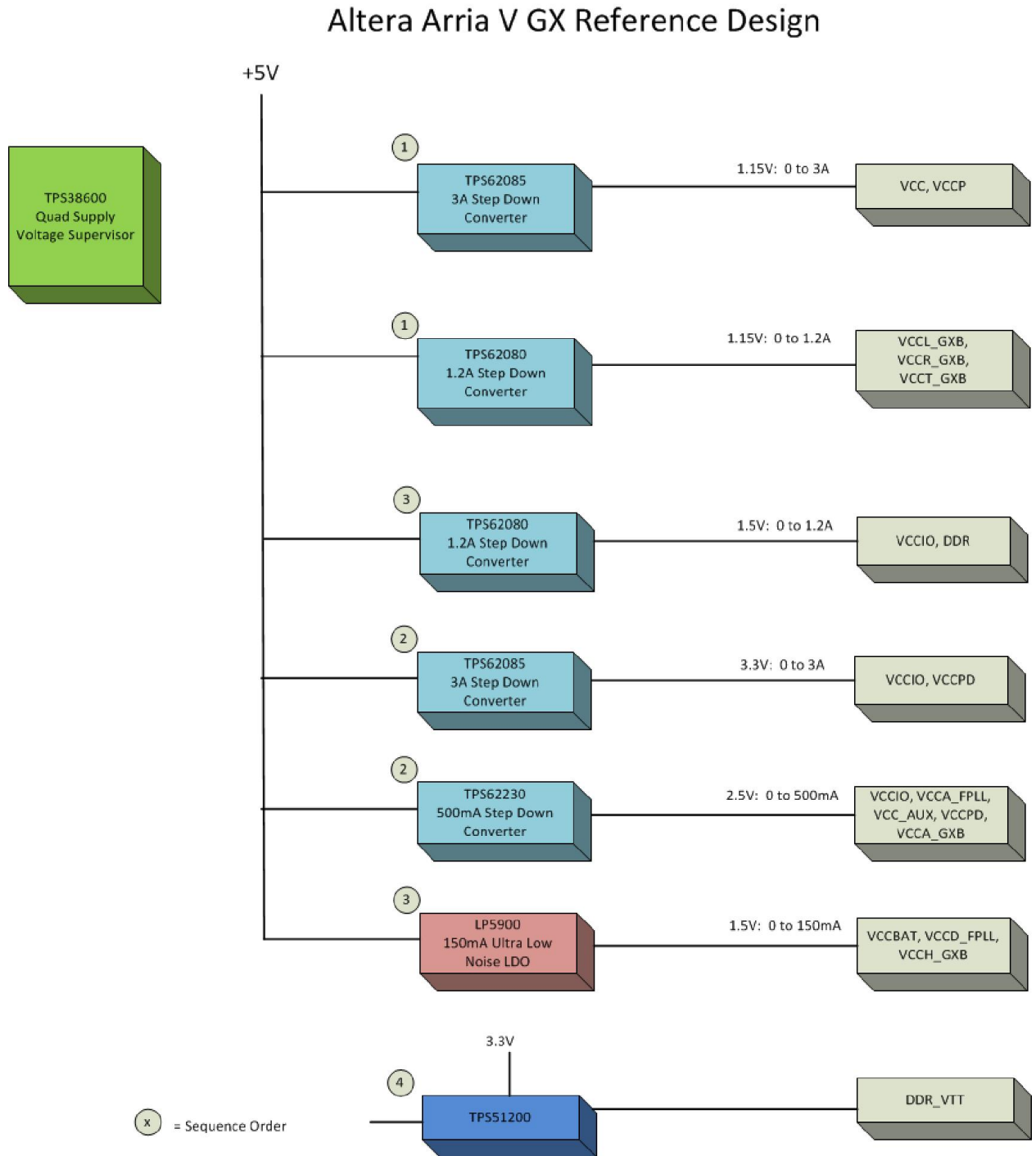


Figure 1. Block Diagram

2) Board Photos

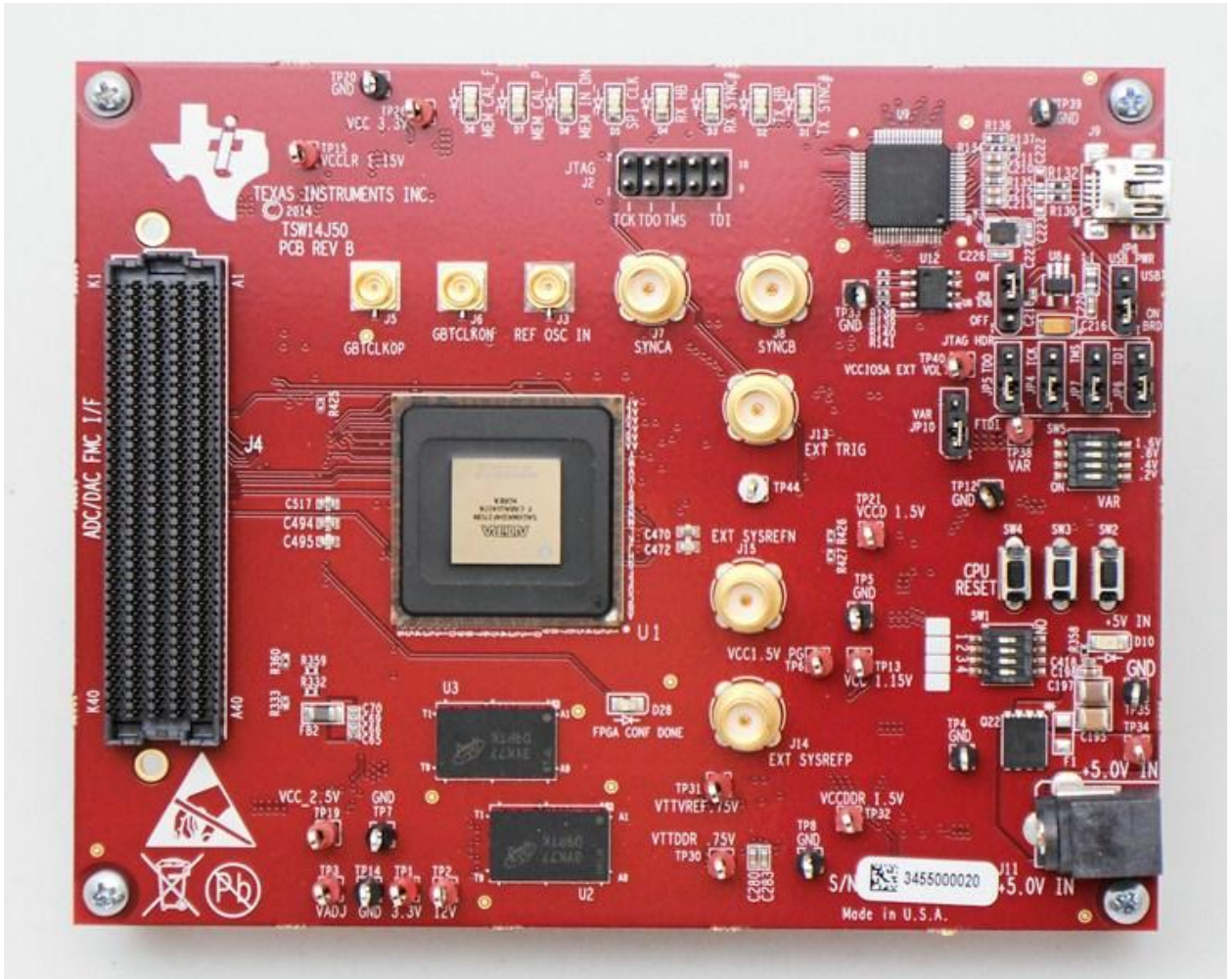


Figure 2. Board Photo Top

3) Efficiency

The efficiency of the converters is shown in the figures below. The input voltage is set to 5V.

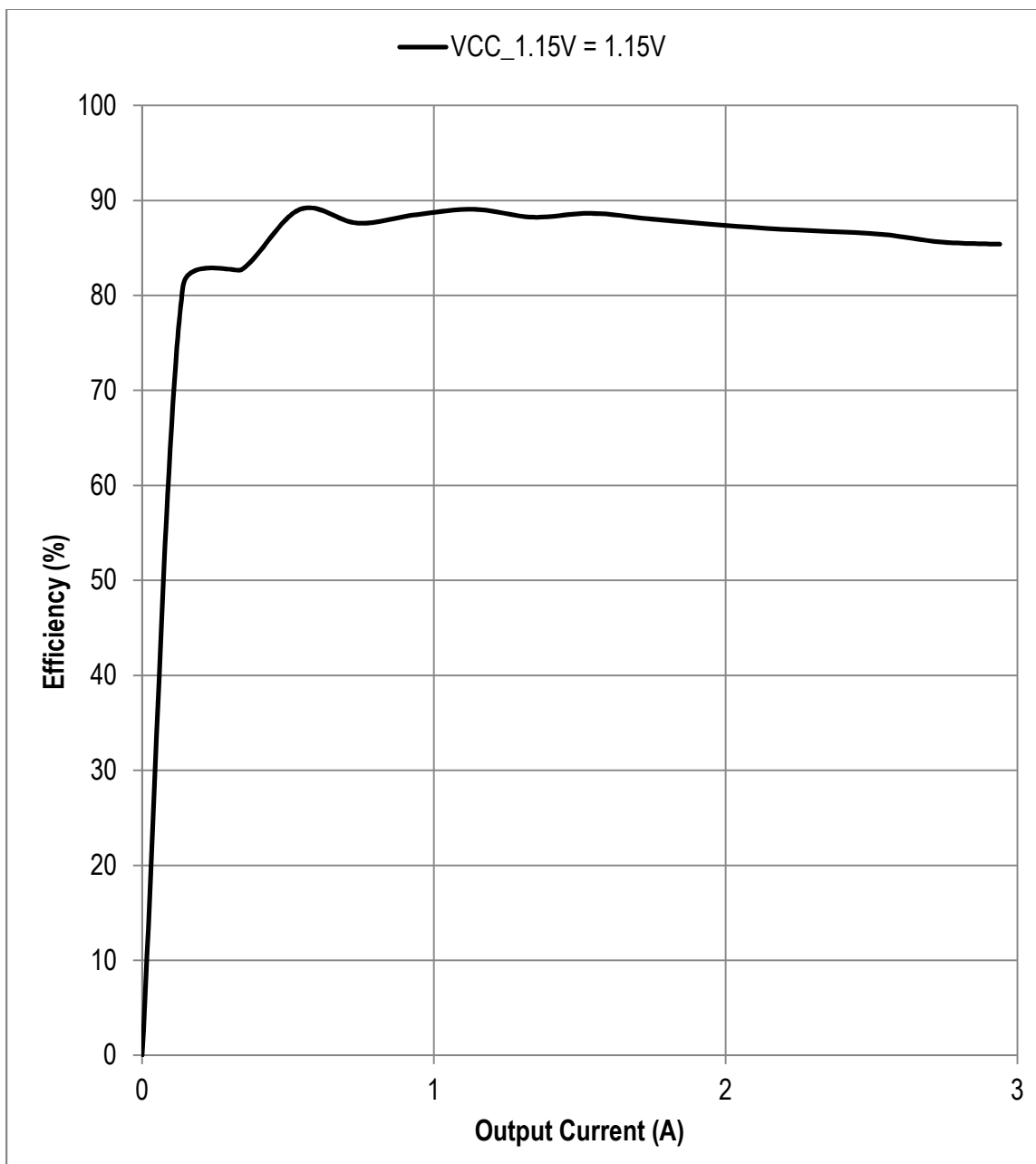


Figure 3. VIN = 5V, VCC_1.15V Efficiency

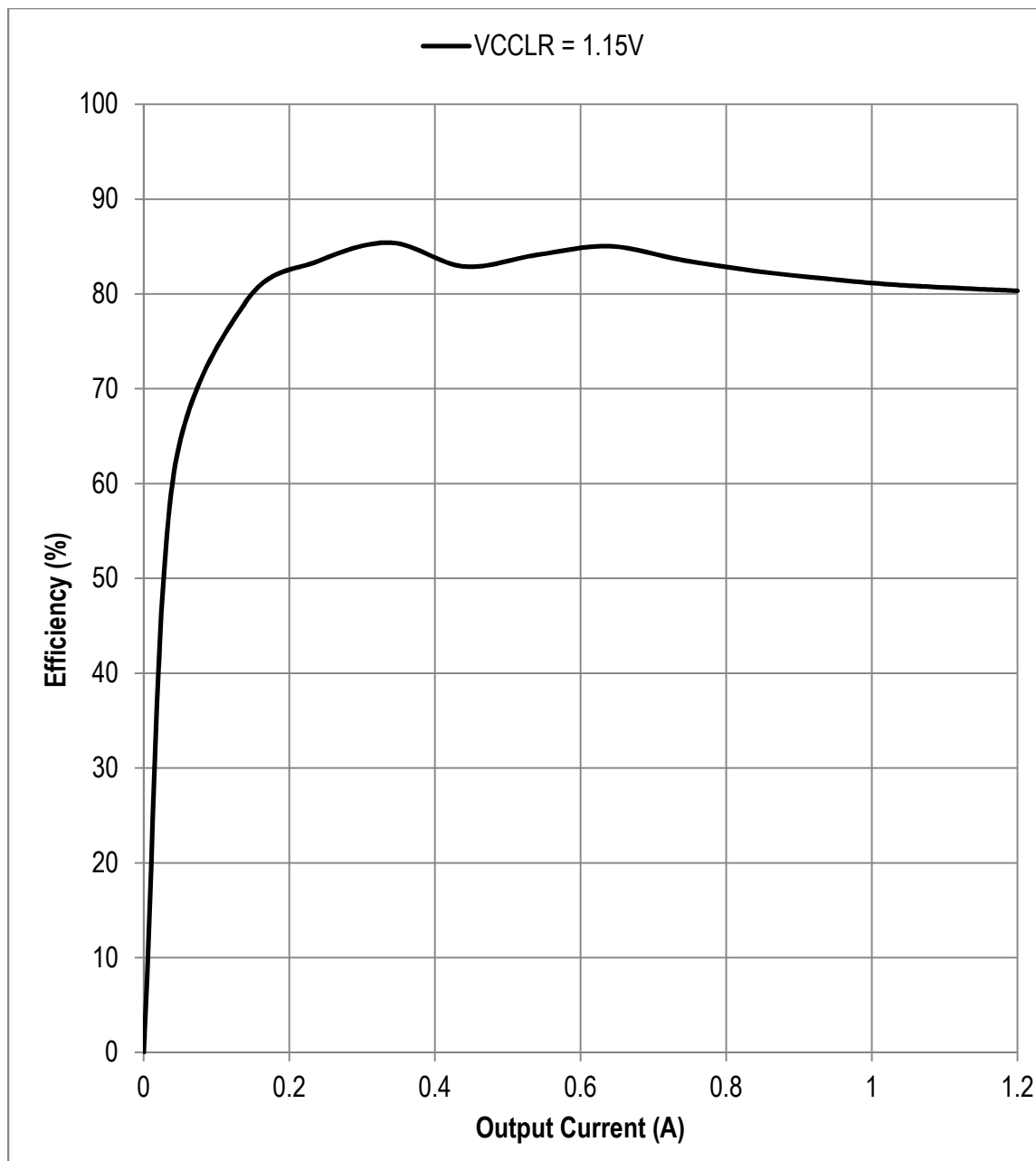


Figure 4. VIN = 5V, VCCLR_1.15V Efficiency

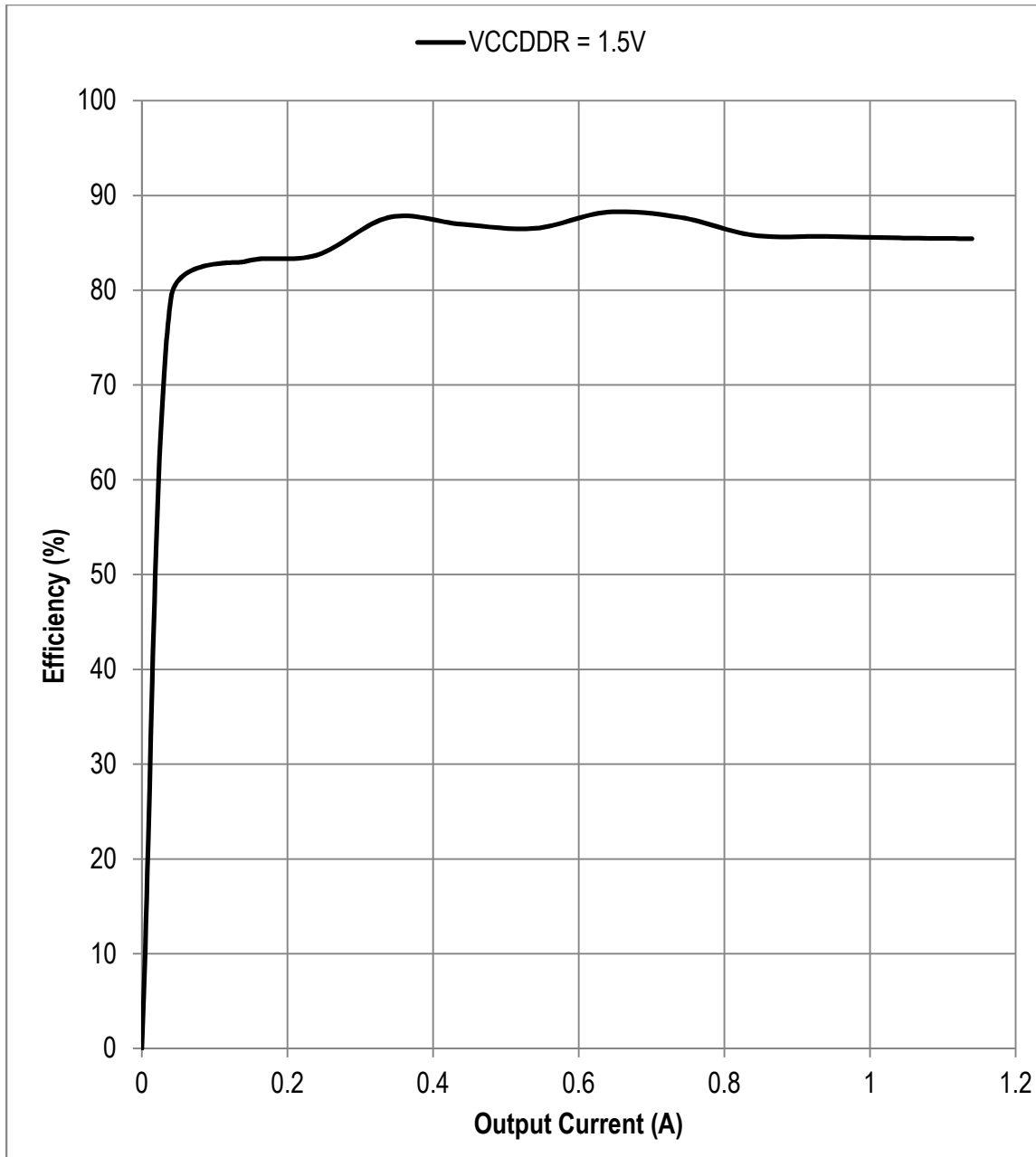


Figure 5. VIN = 5V, VCCDDR_1.5V Efficiency

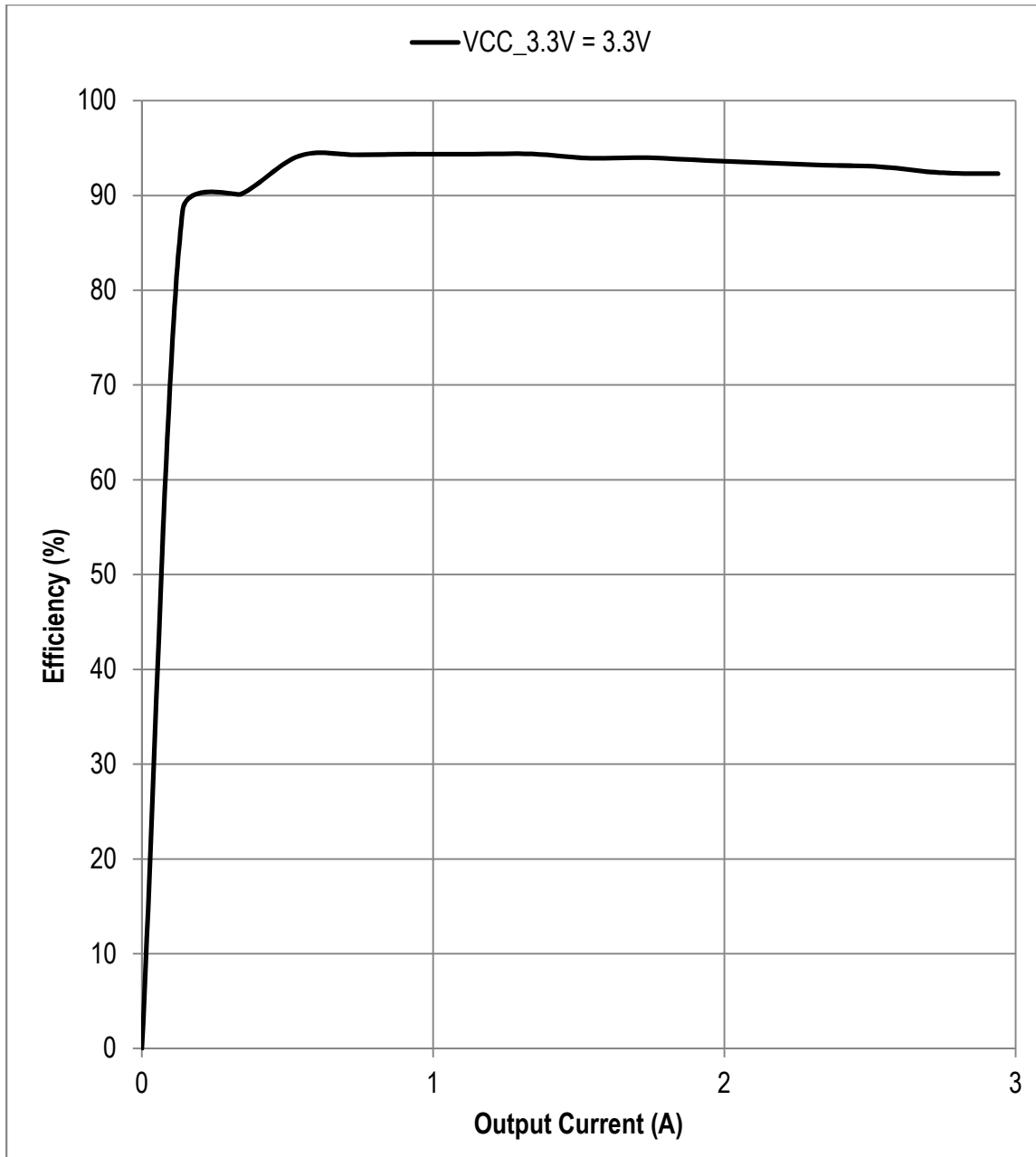


Figure 6. VIN = 5V, VCC_3.3V Efficiency

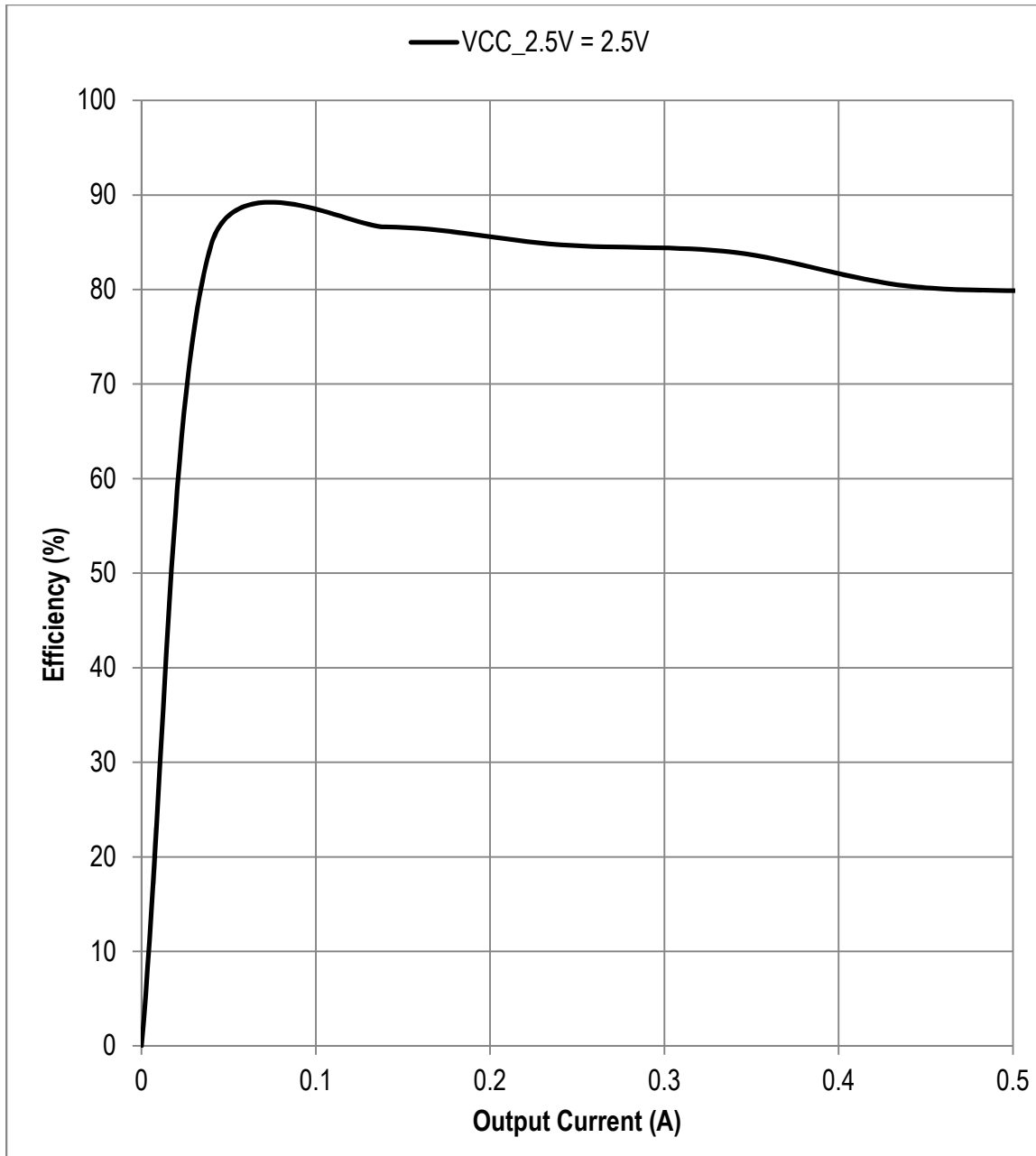


Figure 7. VIN = 5V, VCC_2.5V Efficiency

4) Load Regulation

The images below show the output load regulation. The input voltage is 5V.

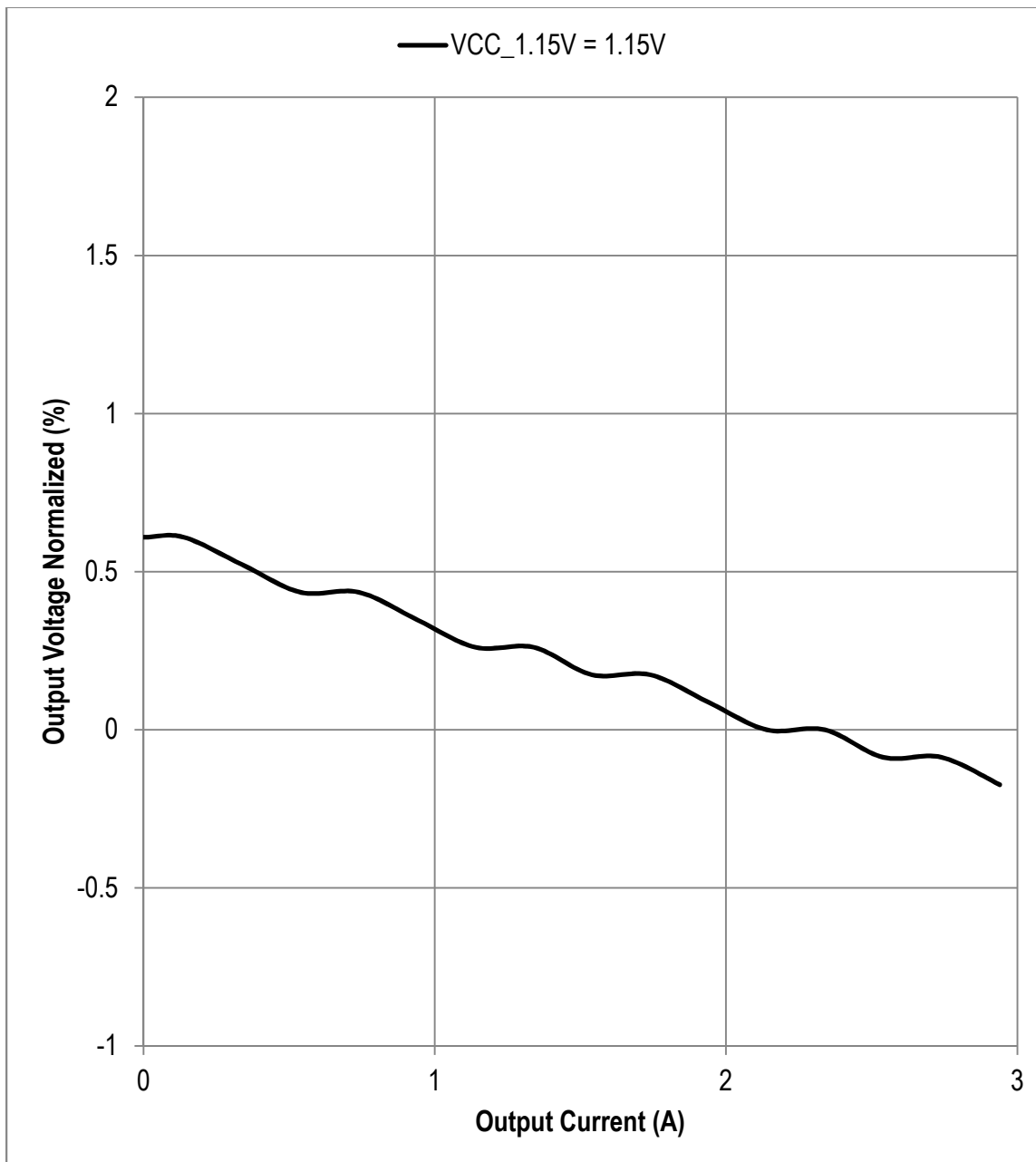


Figure 8. VIN = 5V, VCC_1.15V Load Regulation

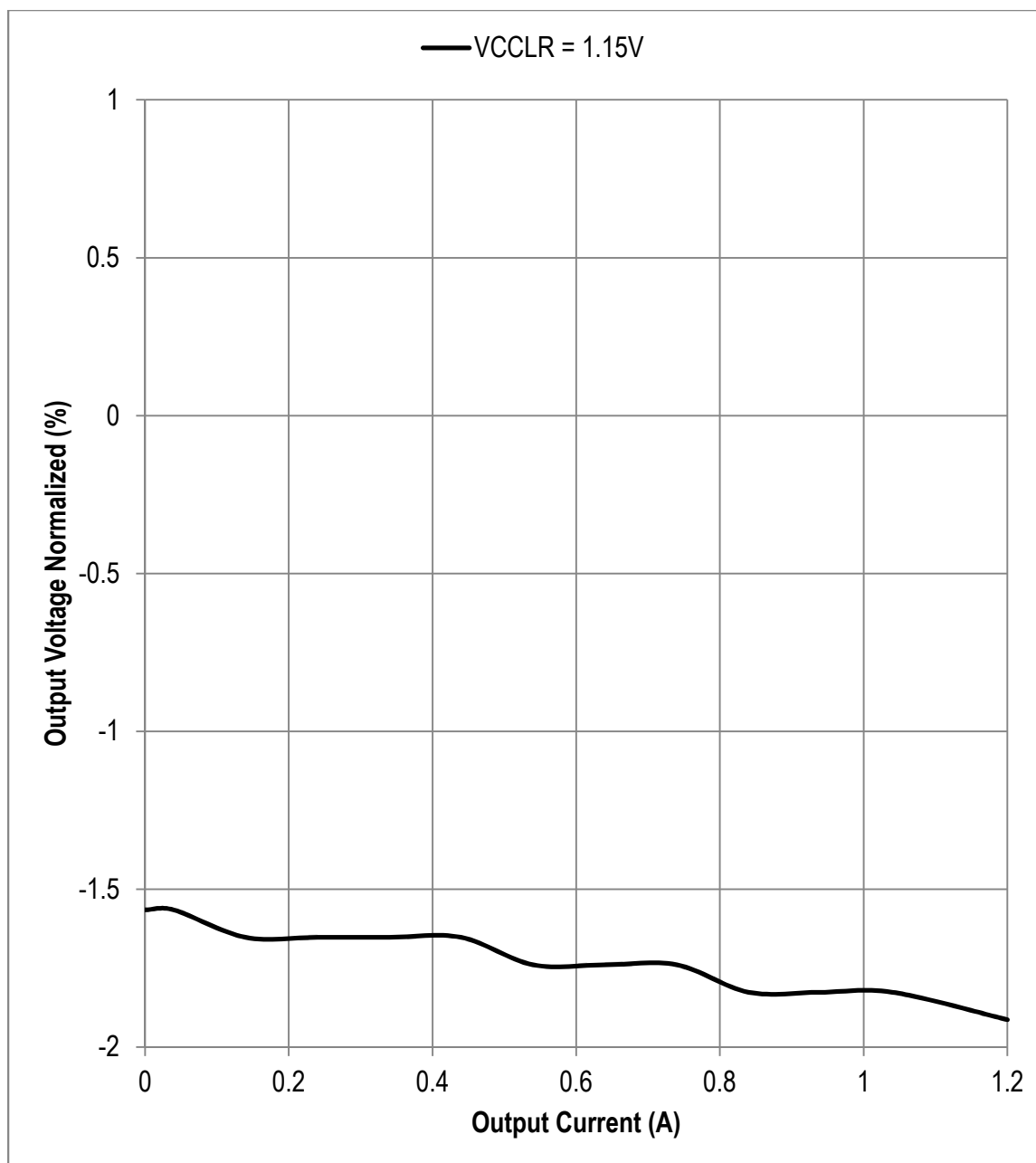


Figure 9. VIN = 5V, VCCLR_1.15V Load Regulation

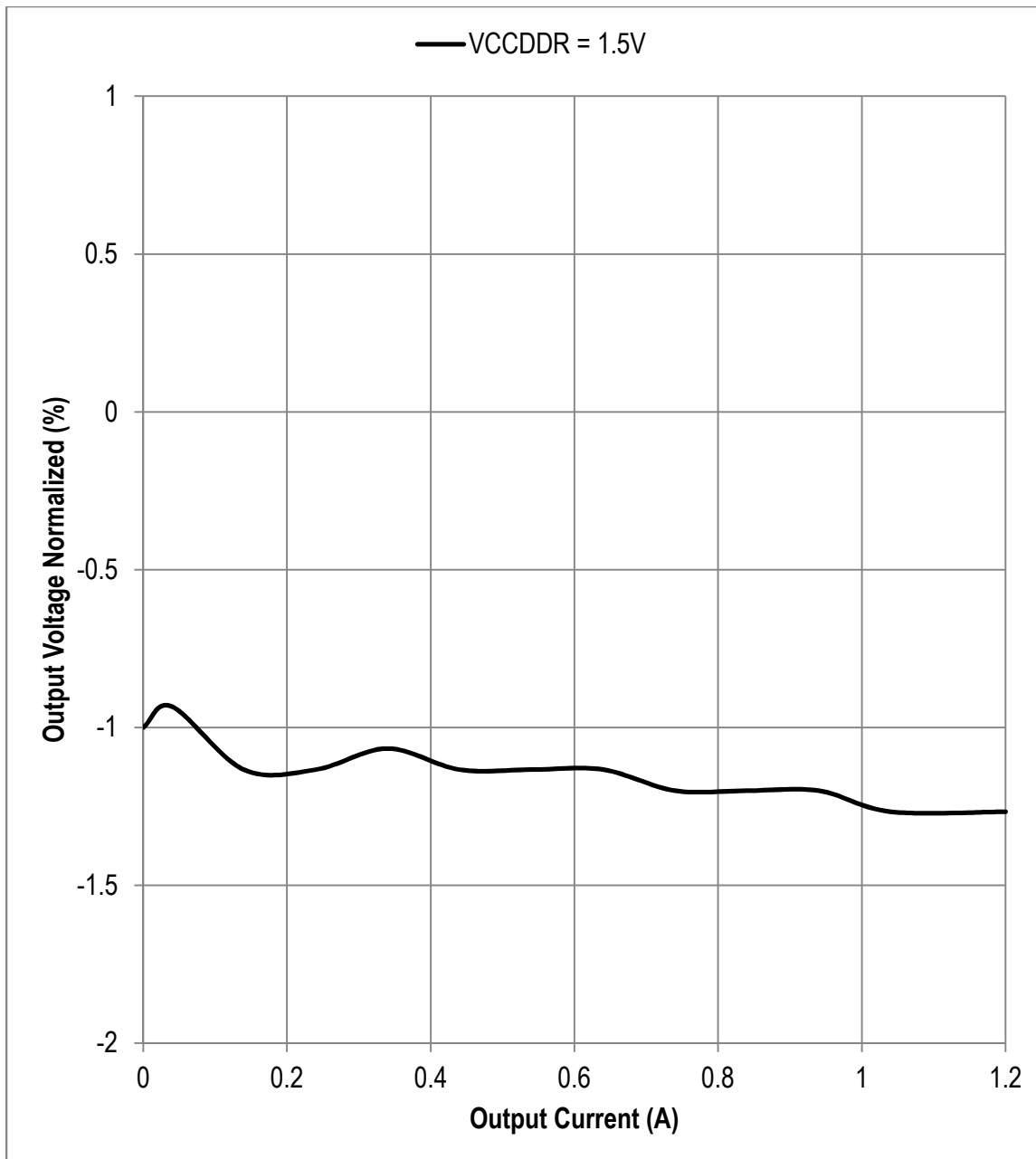


Figure 10. VIN = 5V, VCCDDR_1.5V Load Regulation

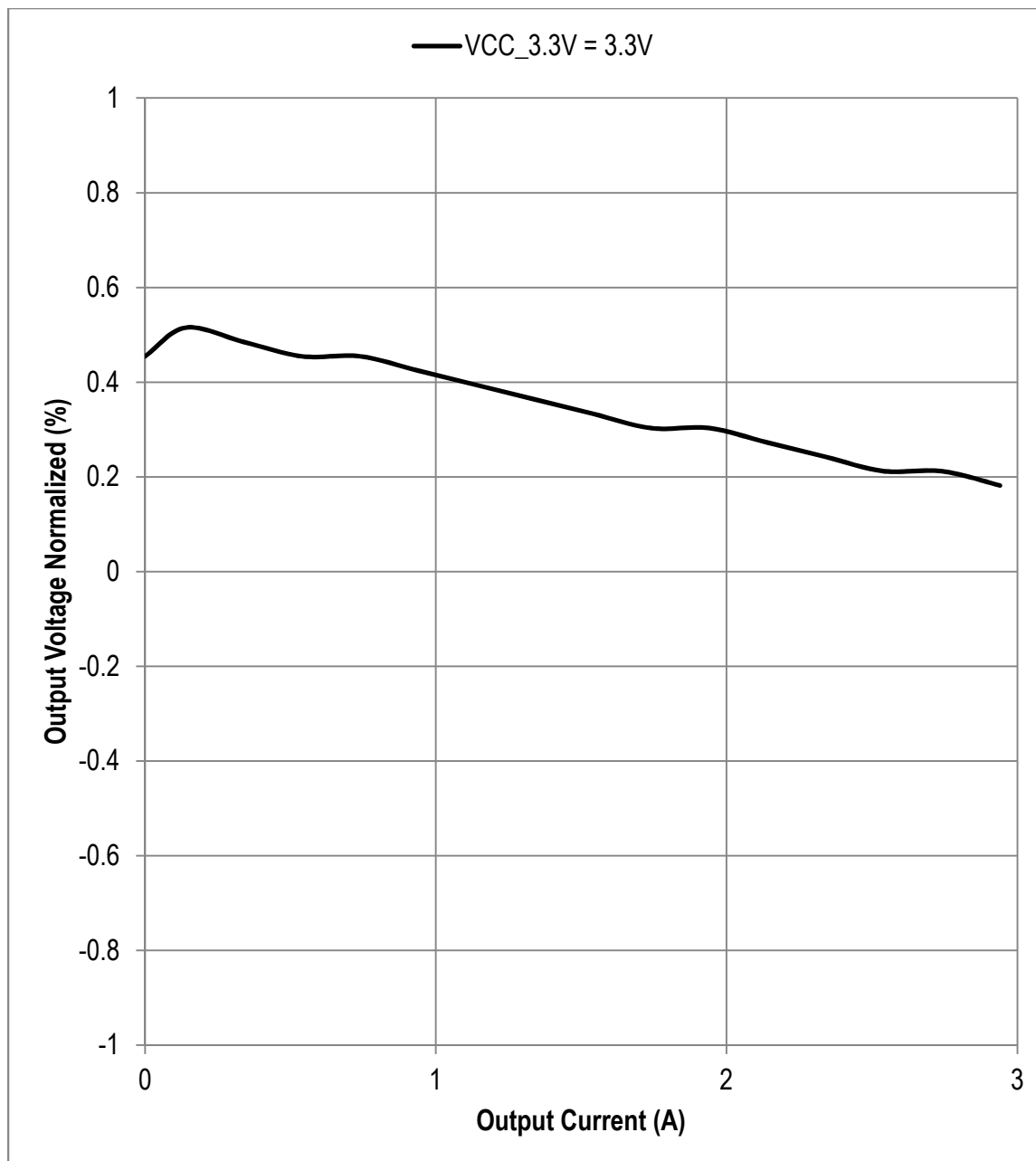


Figure 11. VIN = 5V, VCC_3.3V Load Regulation

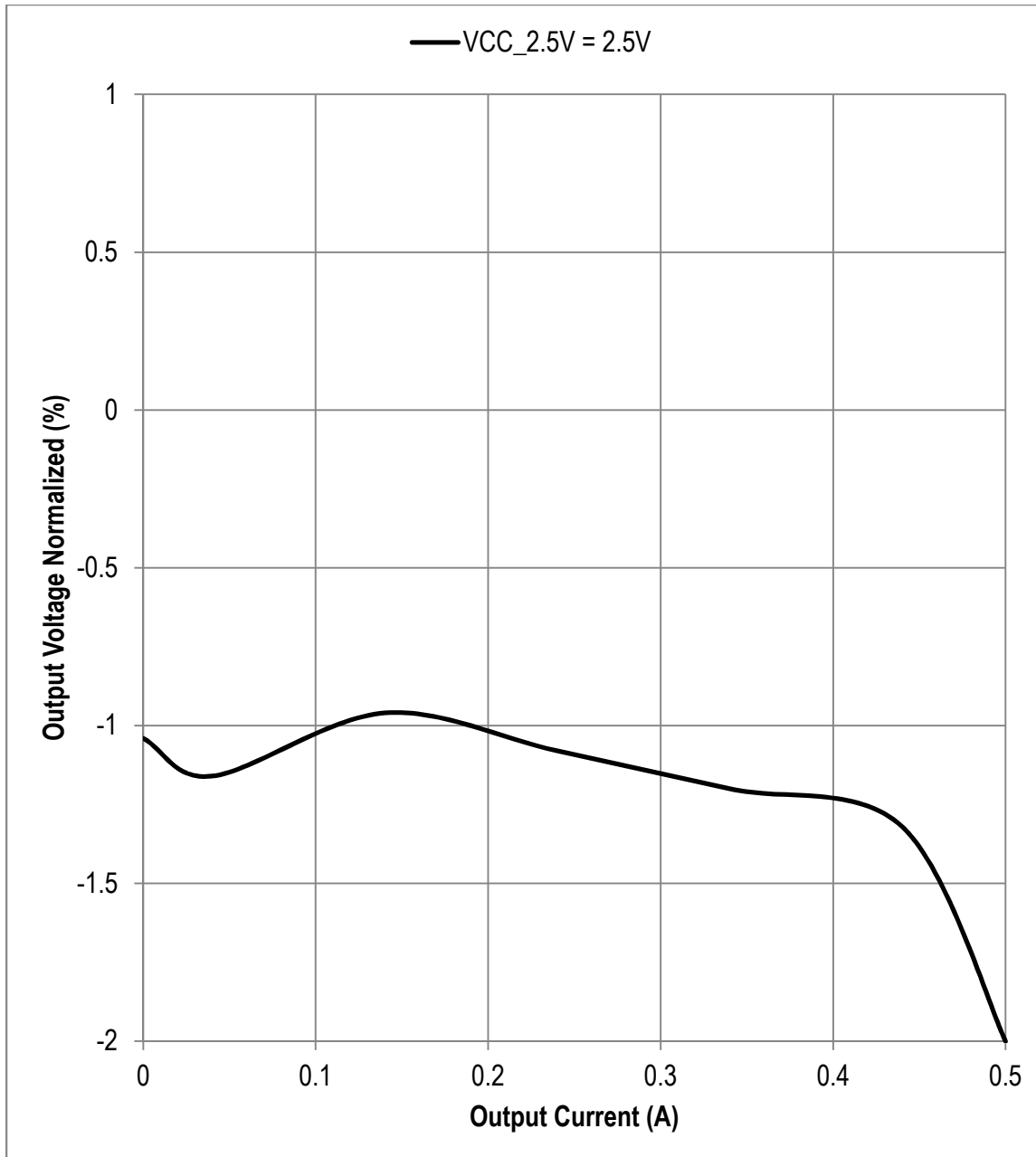
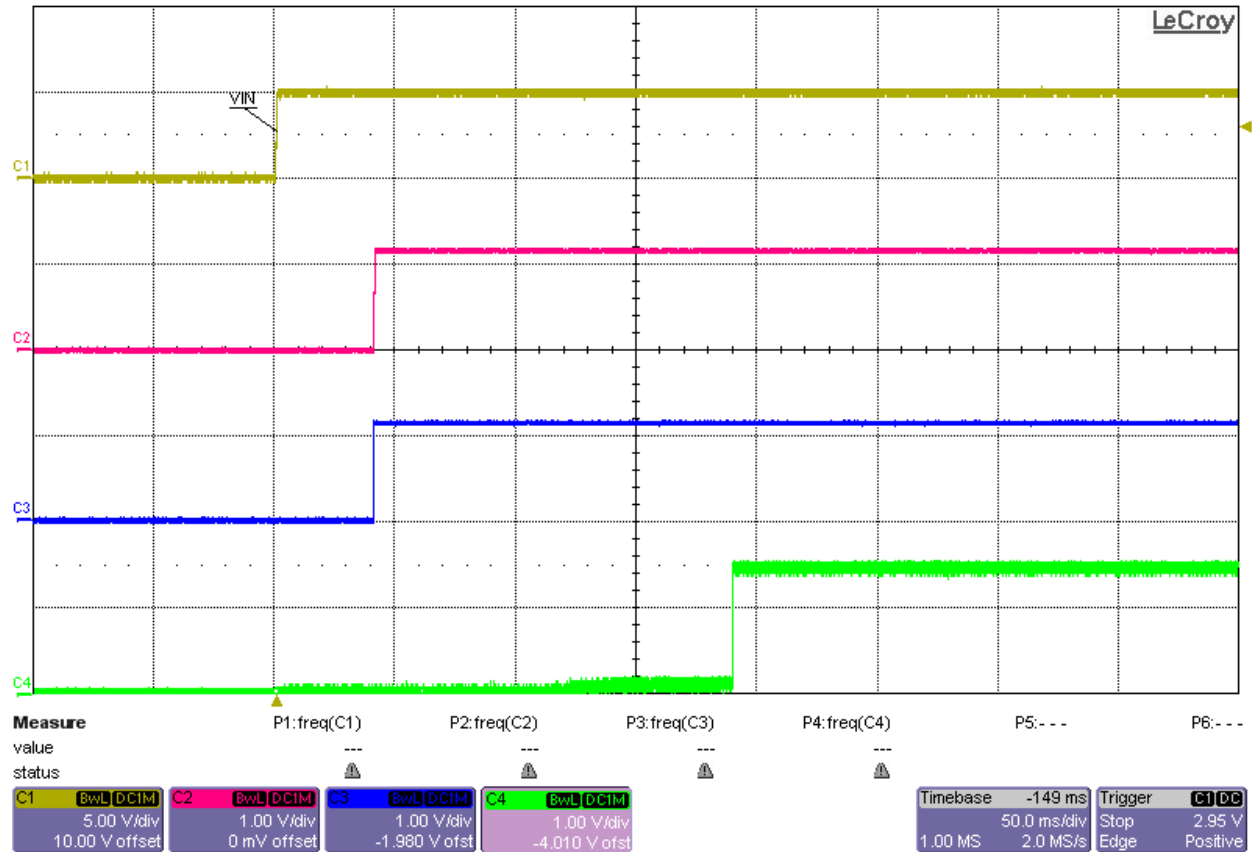


Figure 12. VIN = 5V, VCC_2.5V Load Regulation

5) Startup No Load

The images below shows the startup waveforms. The output is not loaded. The input voltage is set to 5V.



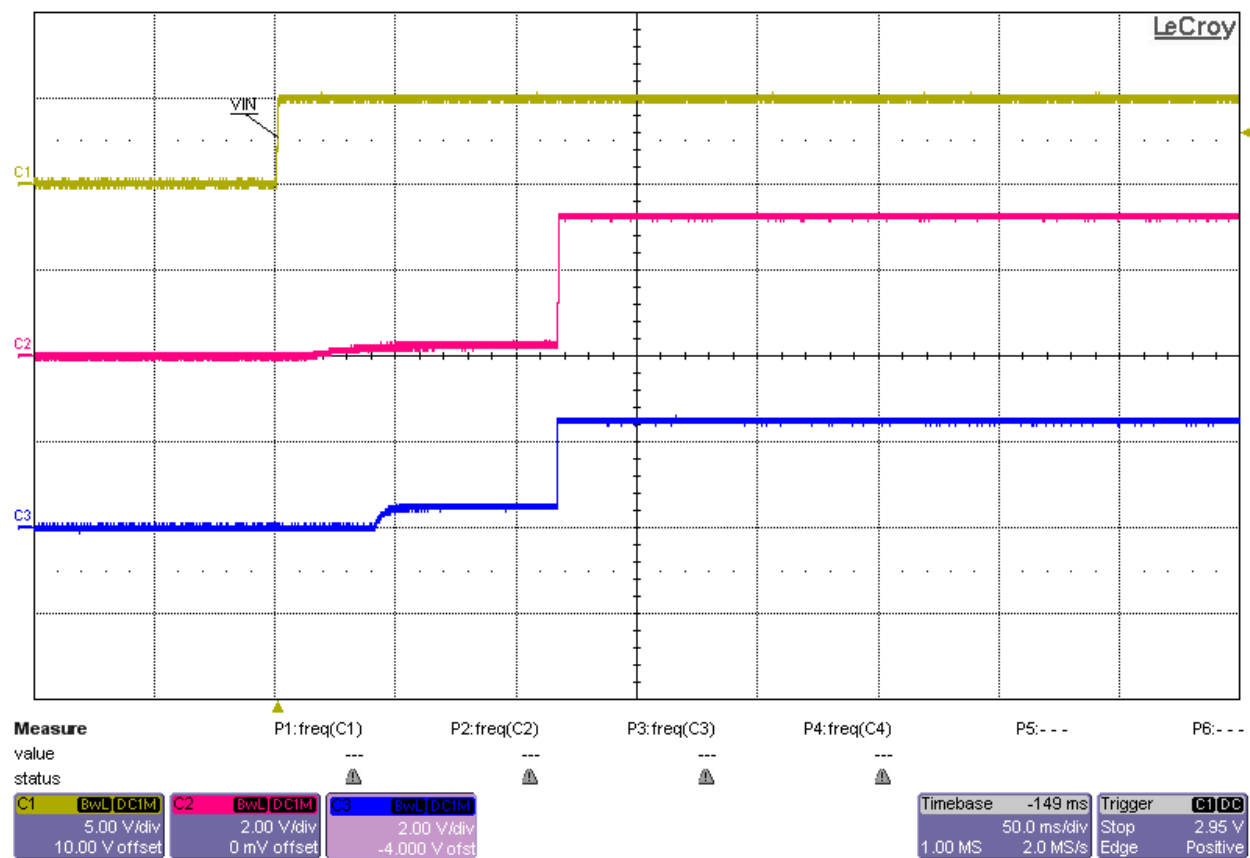
Ch.1: VIN = 5V

Ch.2: VCC_1.15V = 1.15V

Ch.3: VCCLR_1.15V = 1.15V

Ch.4: VCCDDR = 1.5V

Figure 12. VIN = 5V Startup with No Load



Ch.1: VIN = 5V

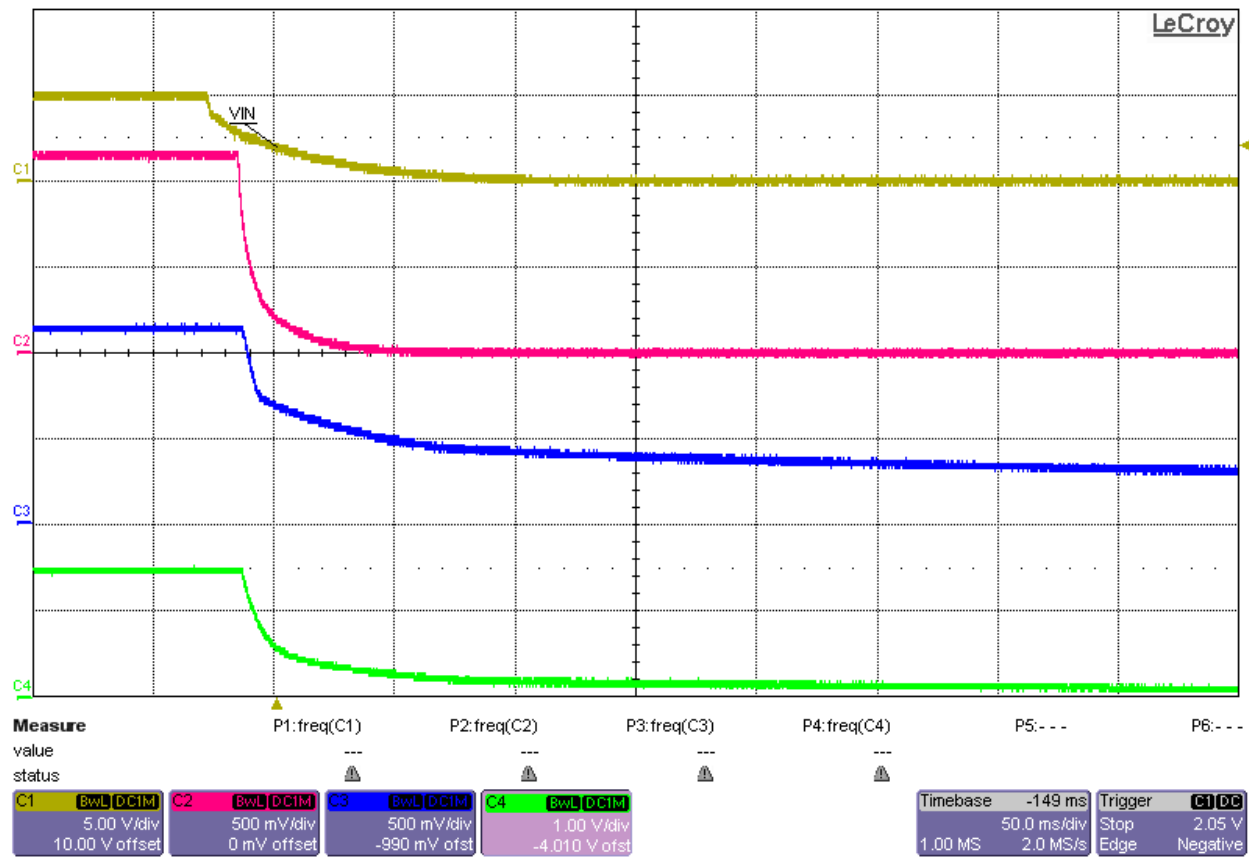
Ch.2: VCC_3.3V = 3.3V

Ch.3: VCC_2.5V = 2.5V

Figure 13. VIN = 5V Startup with No Load

6) Shutdown No Load

The images below shows the shutdown waveforms. The output is not loaded. The input voltage is set to 5V.



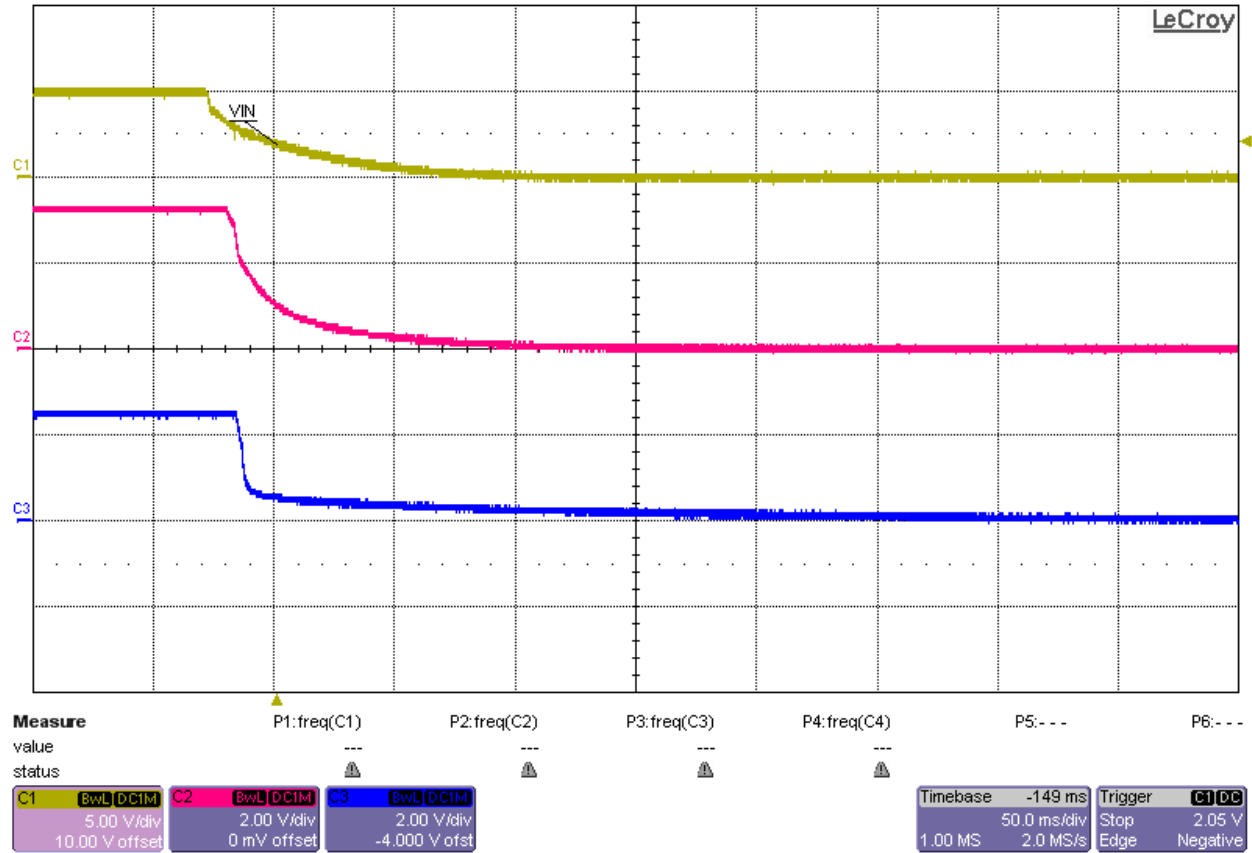
Ch.1: VIN = 5V

Ch.2: VCC_1.15V = 1.15V

Ch.3: VCCLR_1.15V = 1.15V

Ch.4: VCCDDR = 1.5V

Figure 14. VIN = 5V Shutdown with No Load



Ch.1: VIN = 5V

Ch.2: VCC_3.3V = 3.3V

Ch.3: VCC_2.5V = 2.5V

Figure 15. VIN = 5V Shutdown with No Load

7) Output Voltage Ripple

The images below shows the output voltage ripple when load is fully applied. The input voltage is 5V.

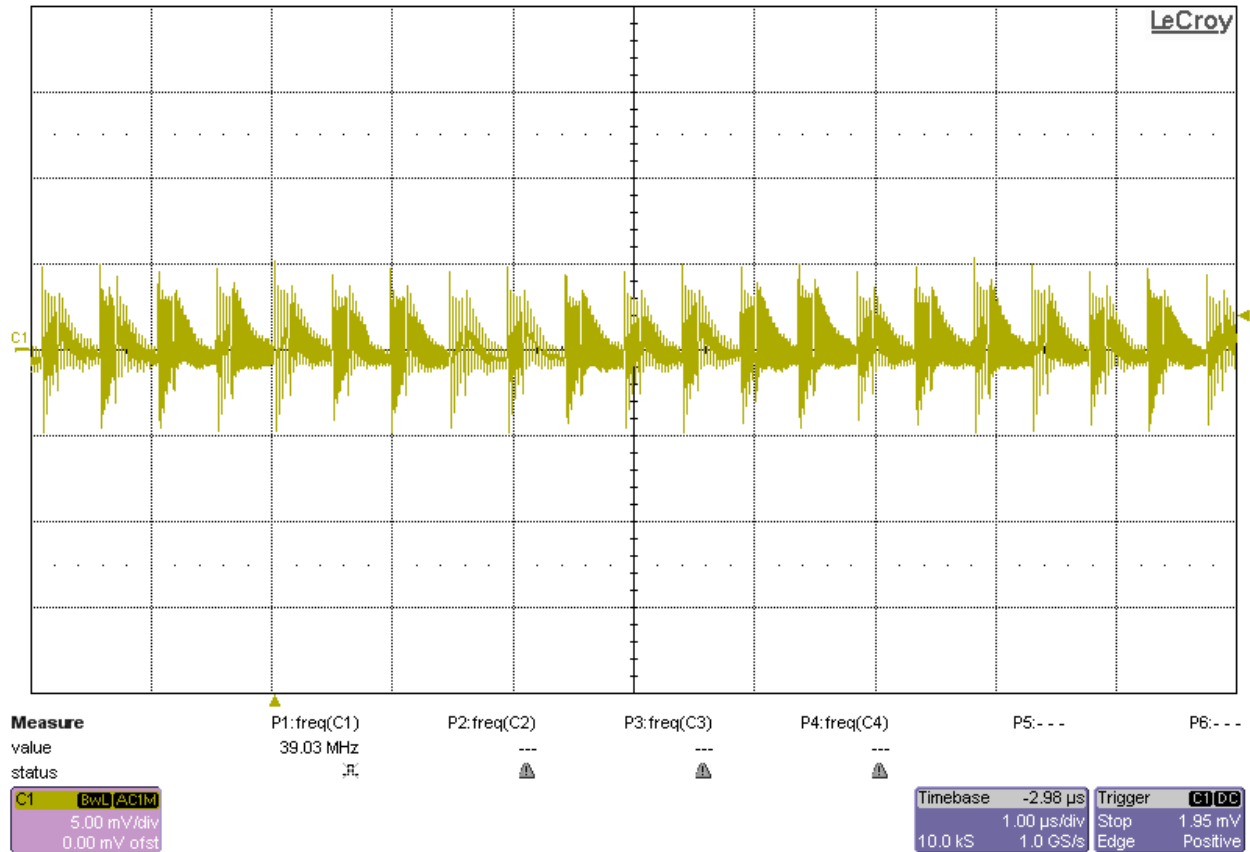


Figure 16. VIN = 5V, VCC_1.15V Output Ripple

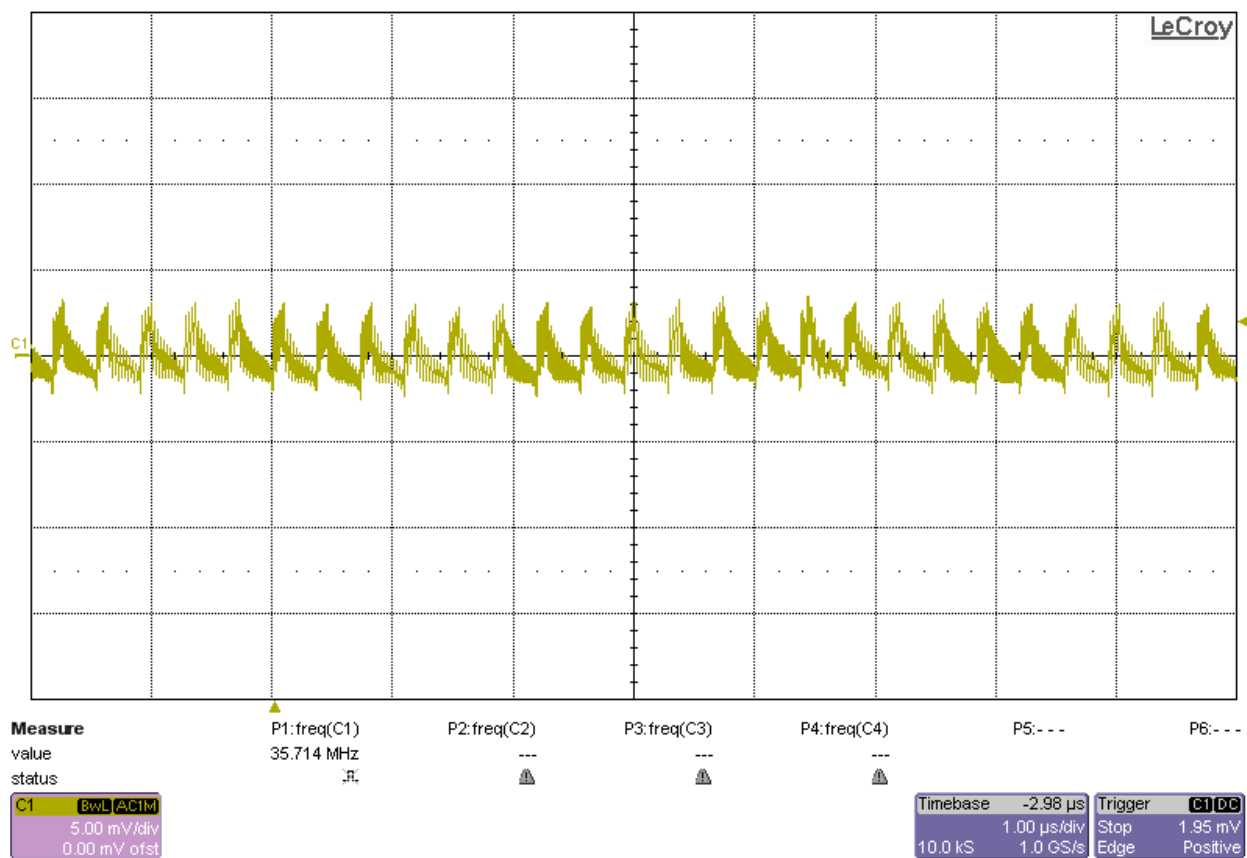


Figure 17. VIN = 5V, VCCLR_1.15V Output Ripple

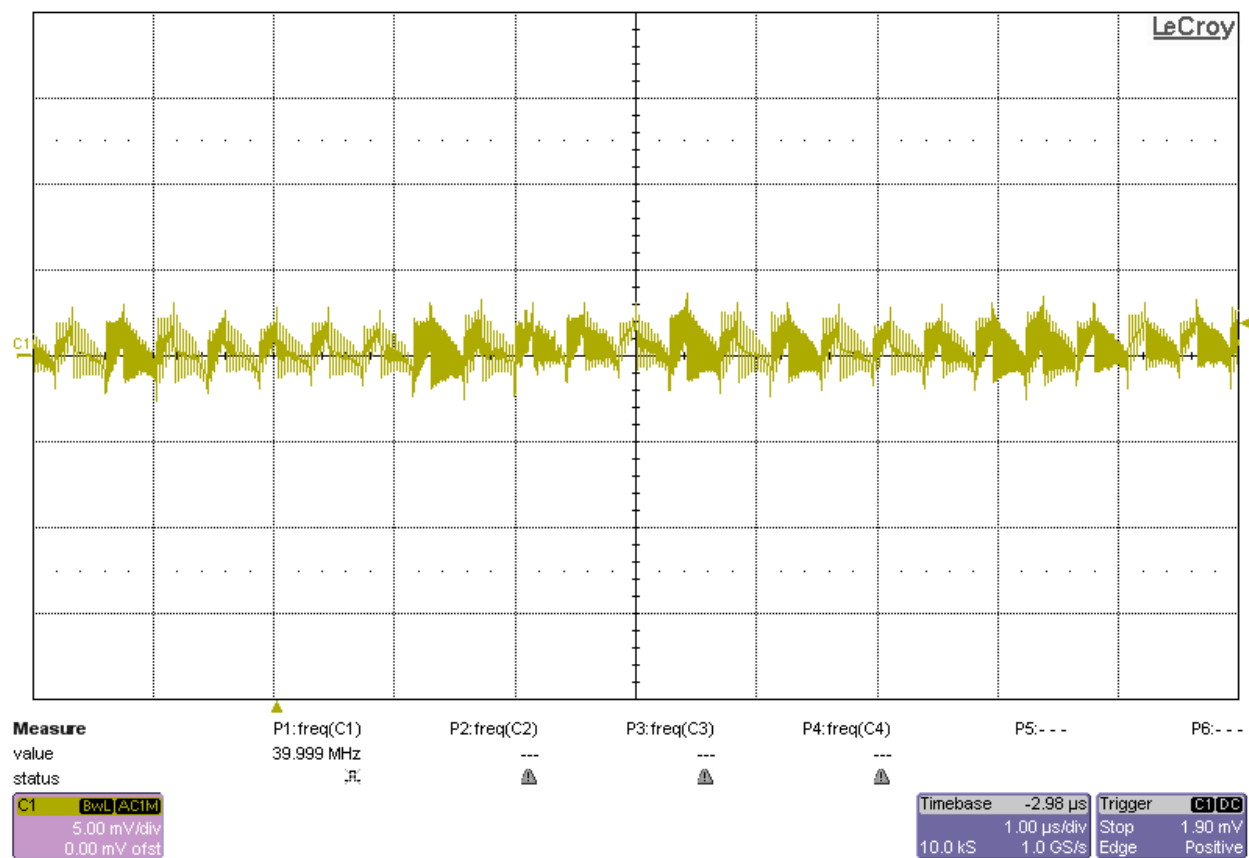


Figure 18. VIN = 5V, VCCDDR_1.5V Output Ripple

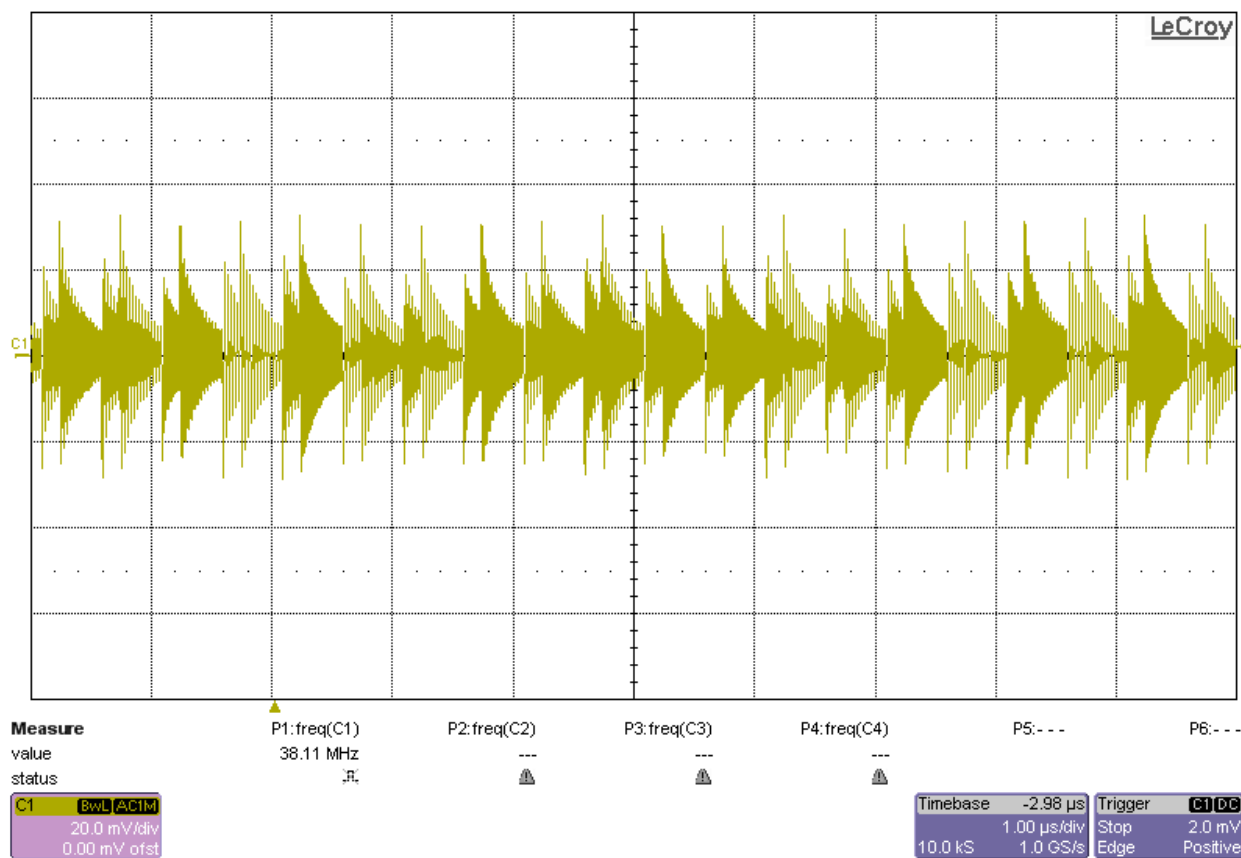


Figure 19. VIN = 5V, VCC_3.3V Output Ripple

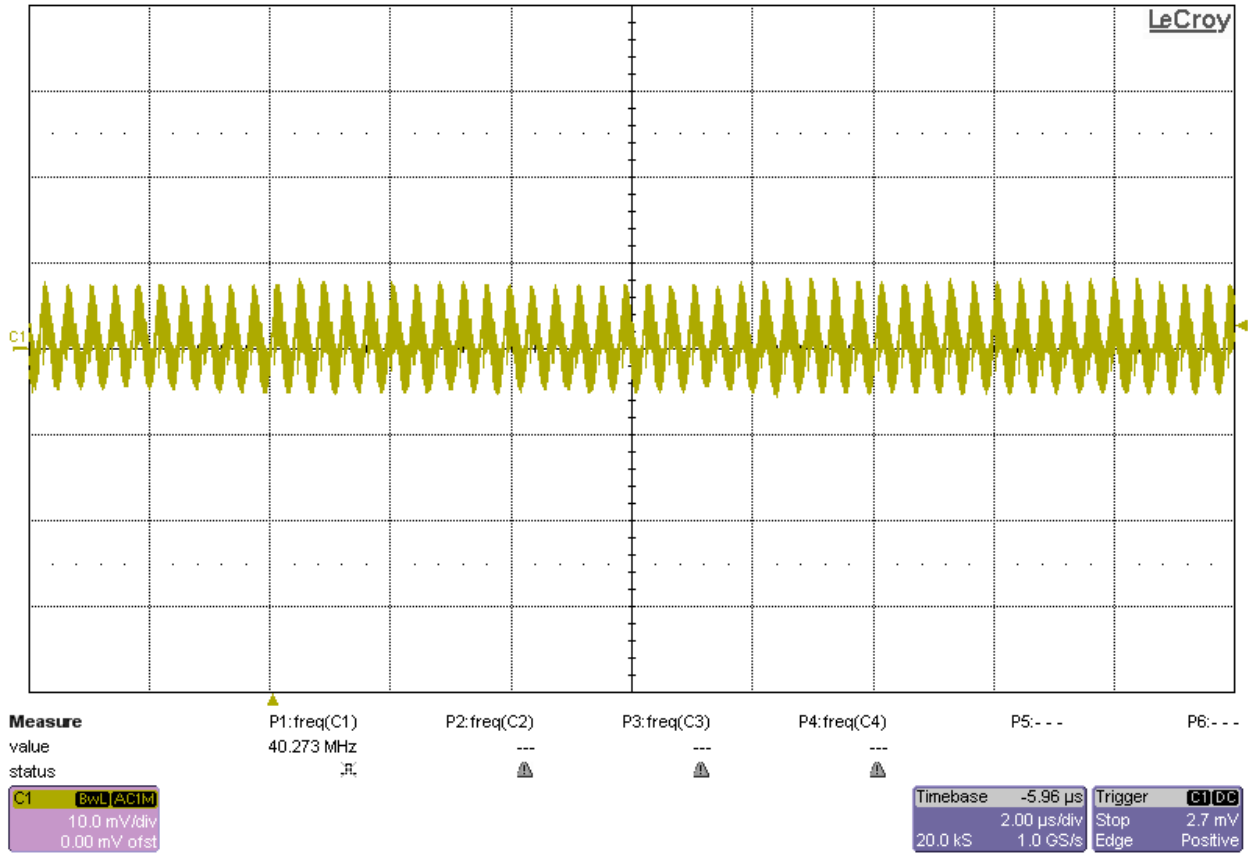


Figure 20. VIN = 5V, VCC_2.5V Output Ripple

8) Load Transients

The transient response of the converters is shown below. The input voltage is 5V. The output current is pulsed from 50% load to full load.

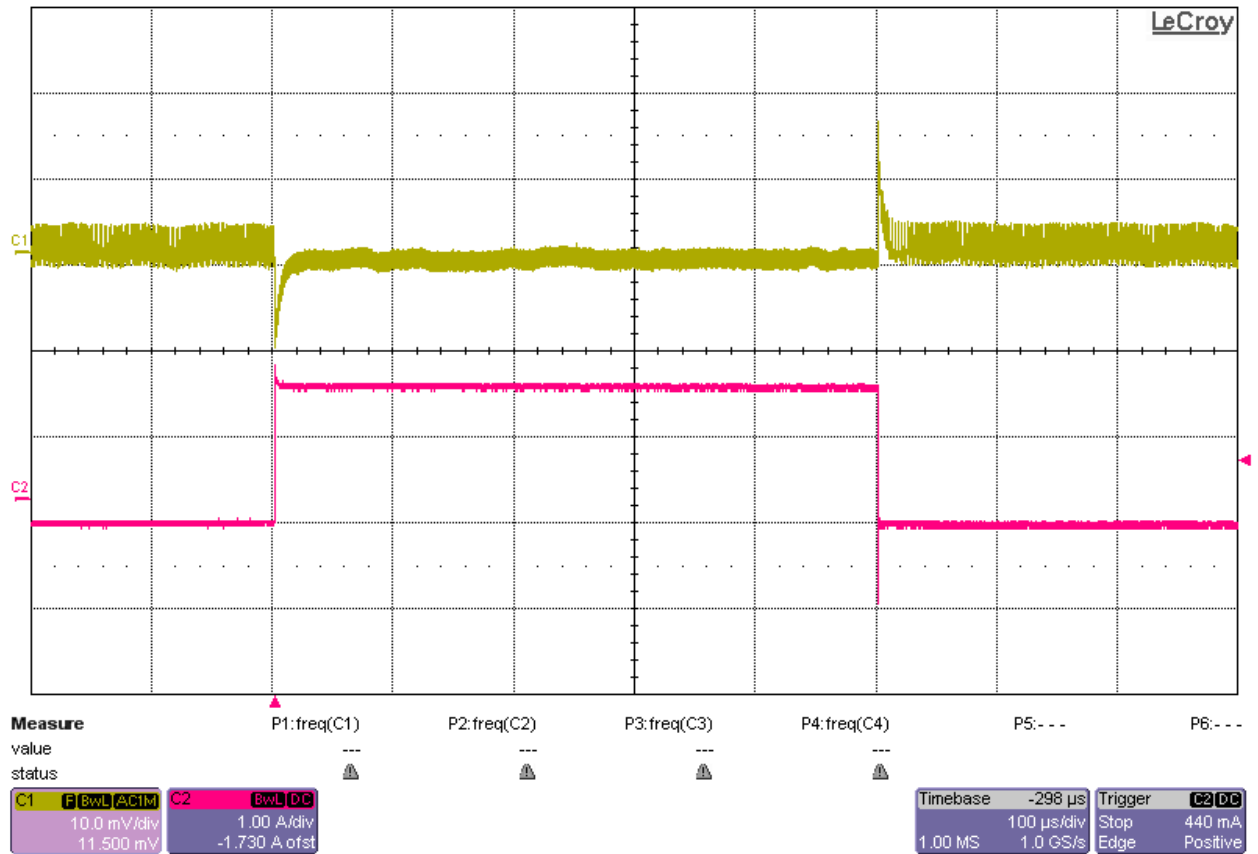


Figure 21. VIN = 5V, VCC_1.15V Load Transient

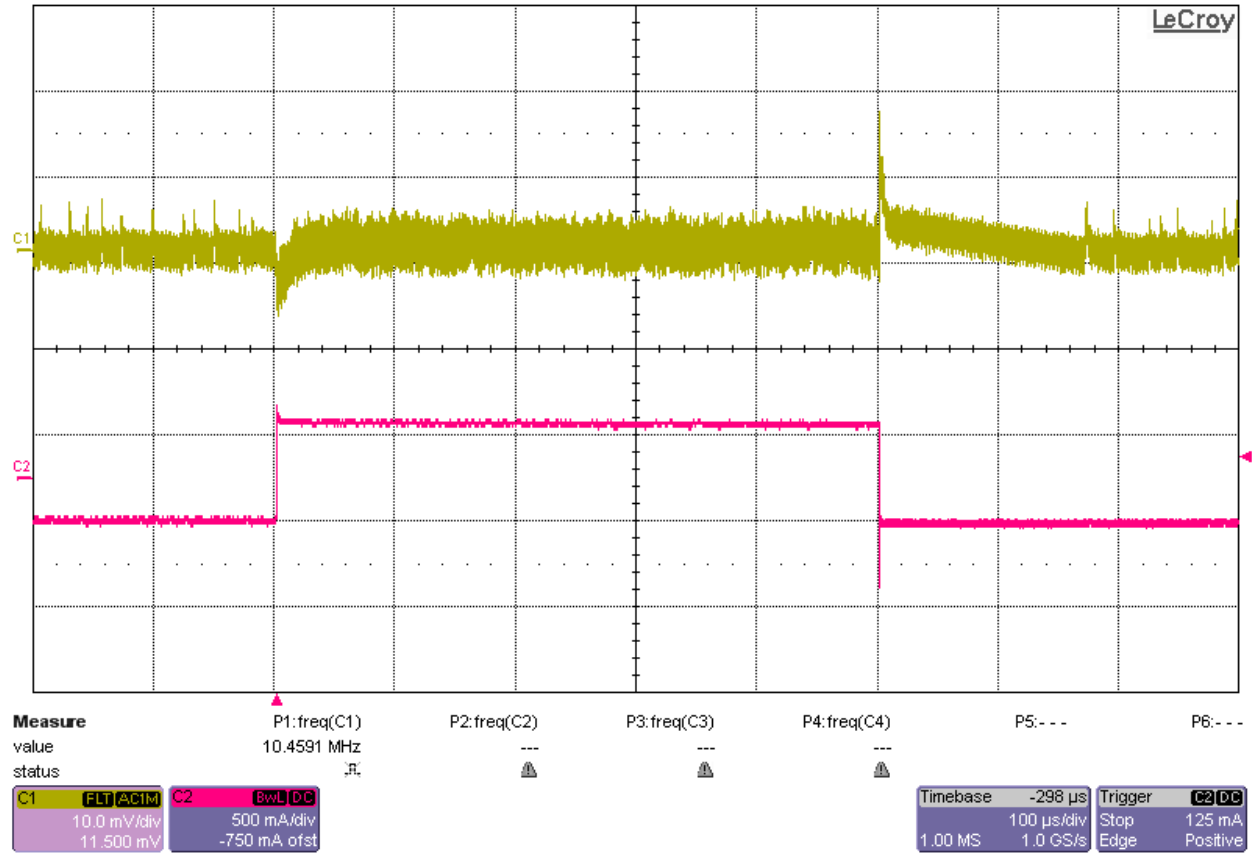


Figure 22. VIN = 5V, VCCLR_1.15V Load Transient

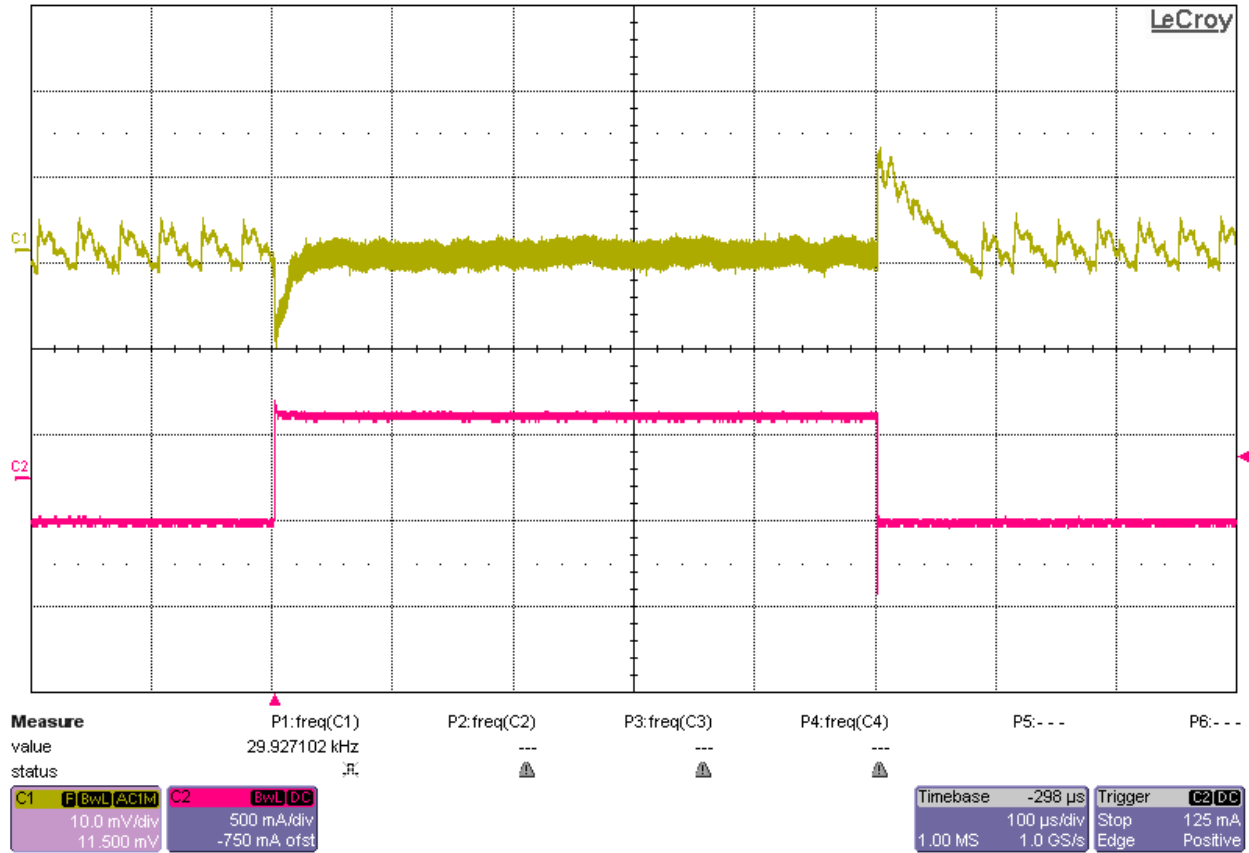


Figure 23. VIN = 5V, VCCDDR_1.5V Load Transient

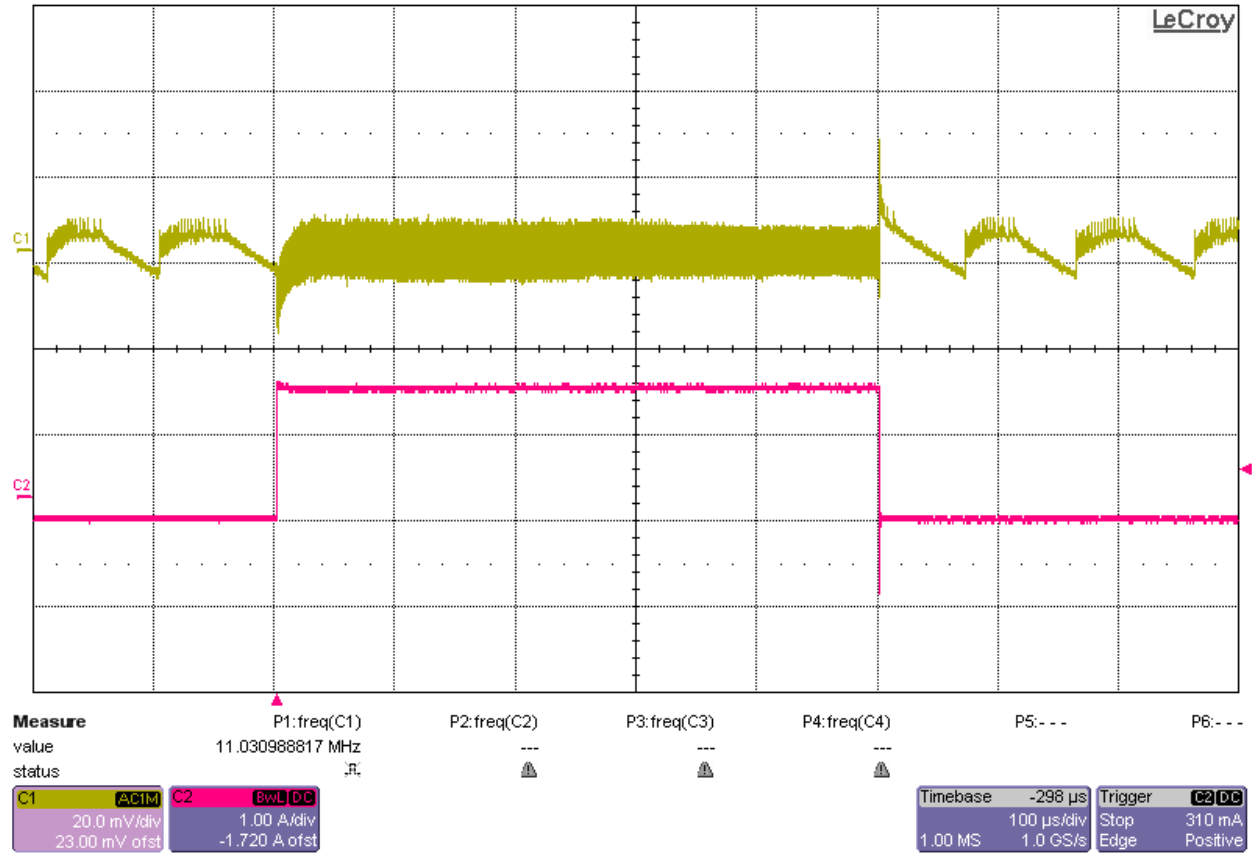


Figure 24. VIN = 5V, VCC_3.3V Load Transient

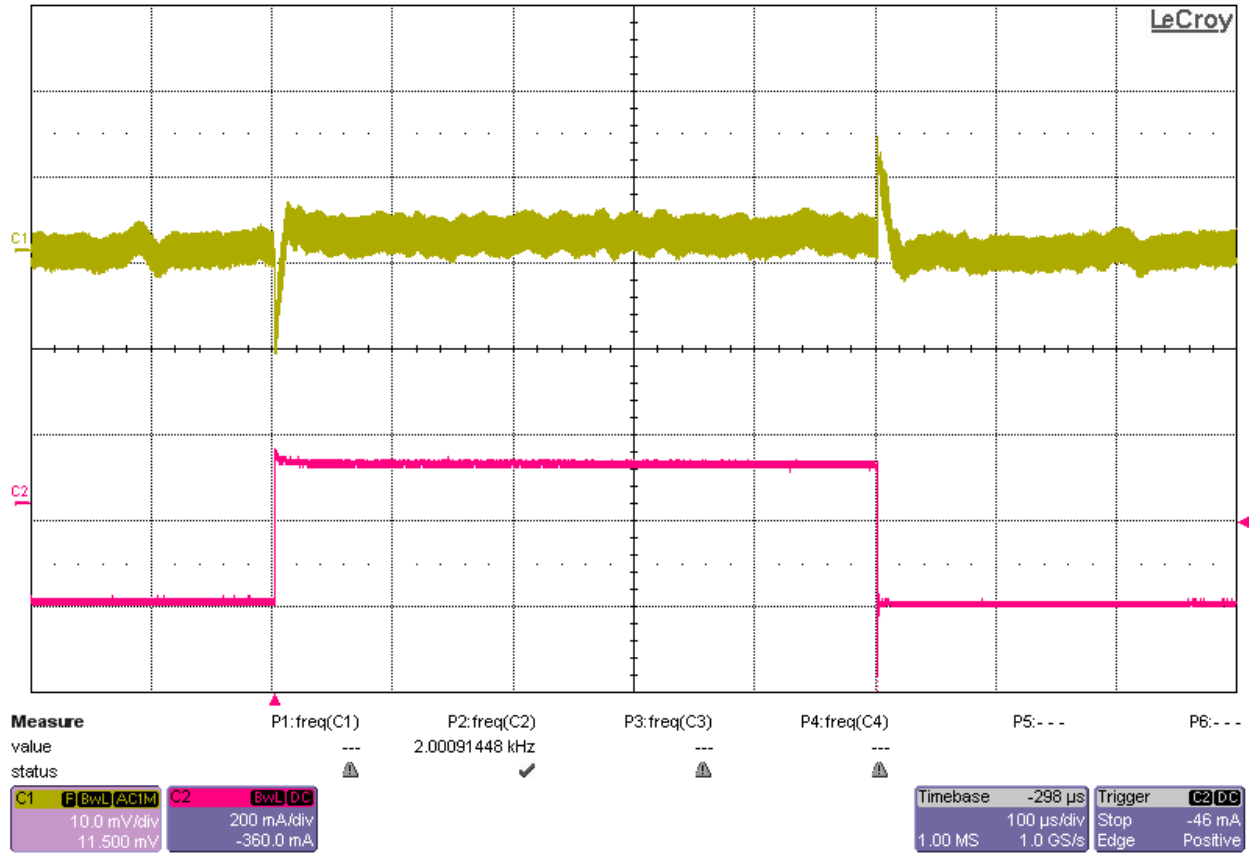


Figure 25. VIN = 5V, VCC_2.5V Load Transient

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