

9 Performance Data and Typical Characteristic Curves

Figure 6 through Figure 14 present typical performance results for UCD3138HSFB EVM-029.

9.1 Efficiency

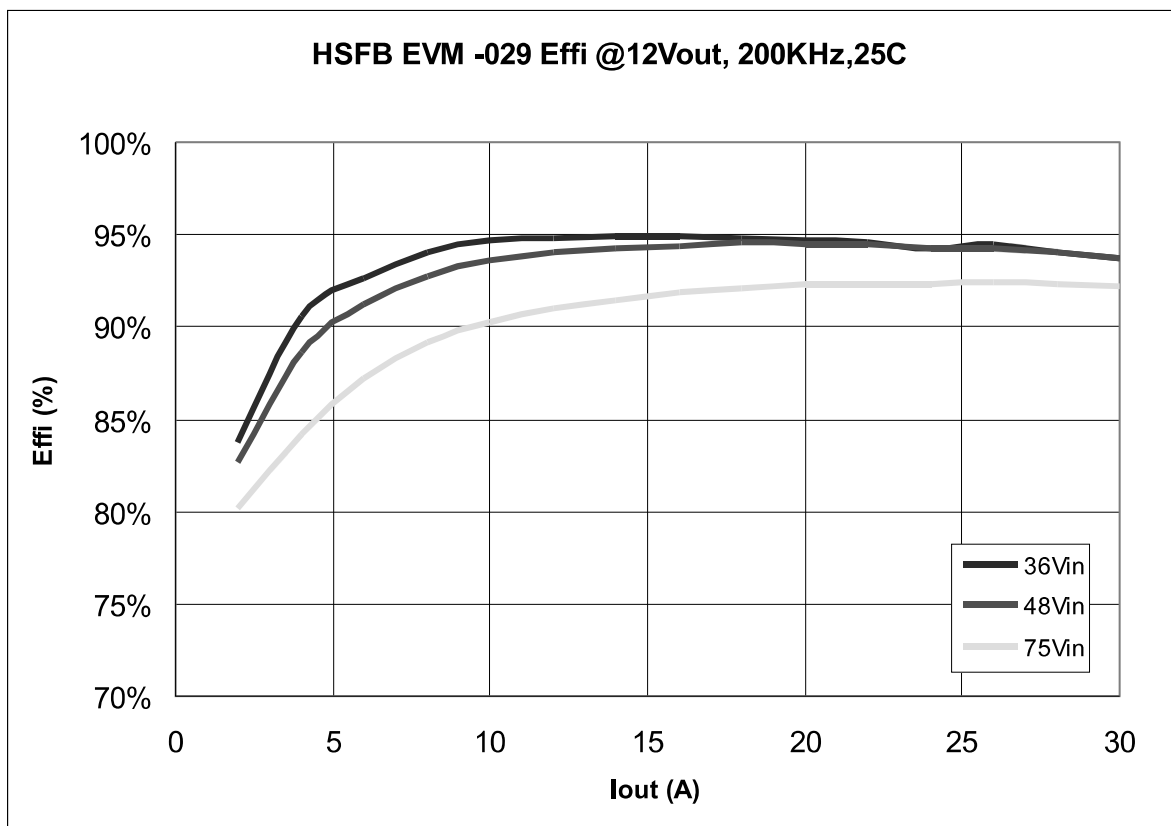


Figure 6. UCD3138HSFB EVM-029 Efficiency

9.2 Load Regulation

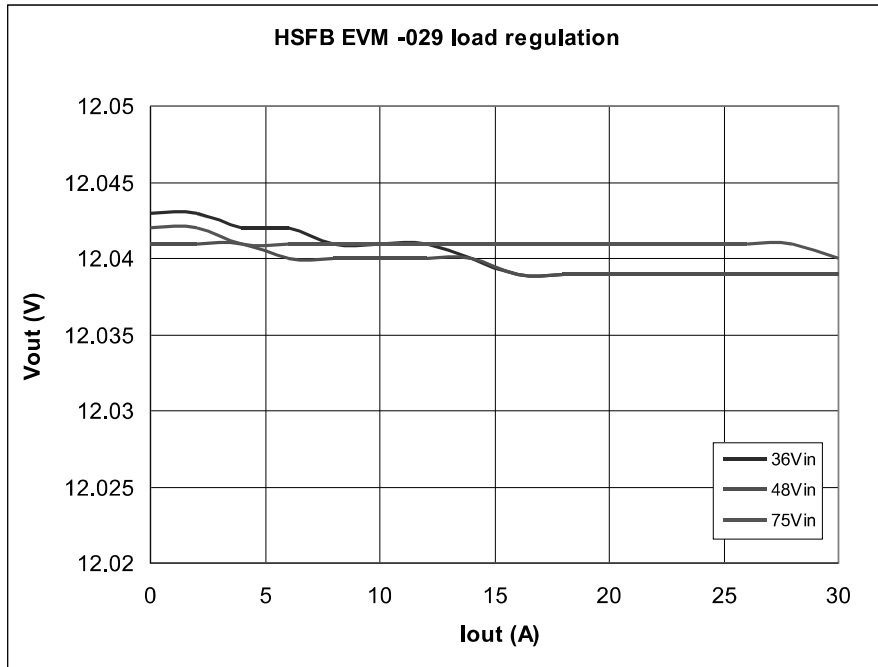


Figure 7. UCD3138HSFB EVM-029 Load Regulation

9.3 Line Regulation

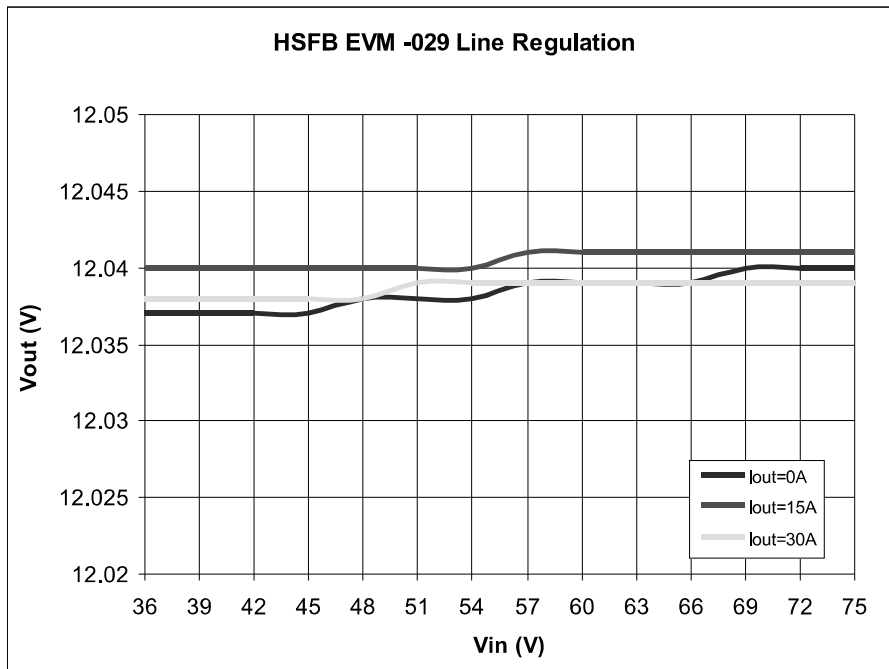


Figure 8. UCD3138HSFB EVM-029 Line Regulation

9.4 Constant Power Constant Current (CPCC)

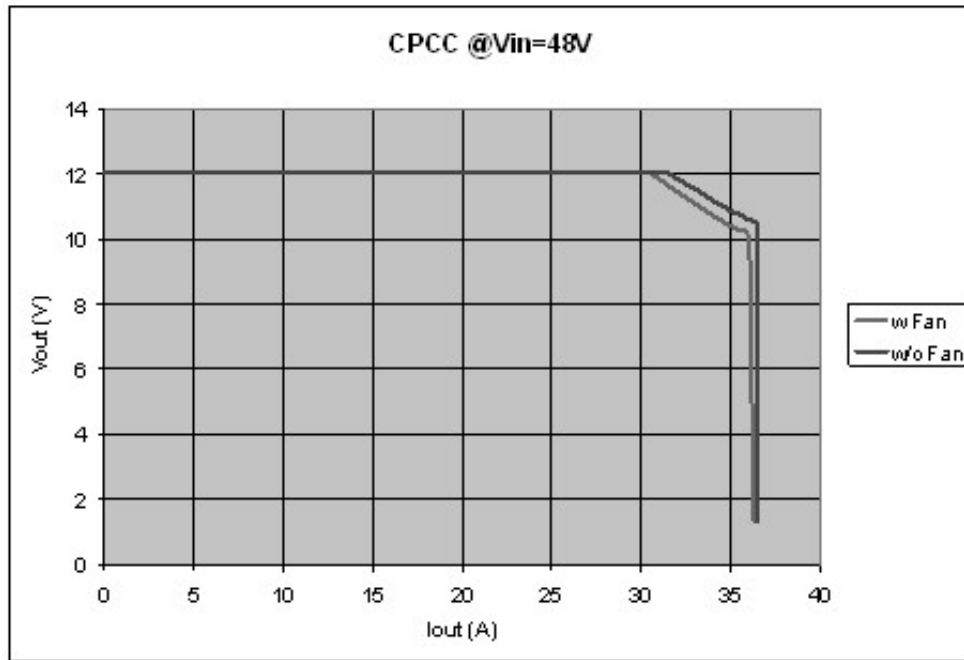


Figure 9. Constant Power Constant Current

9.5 Output Voltage Ripple

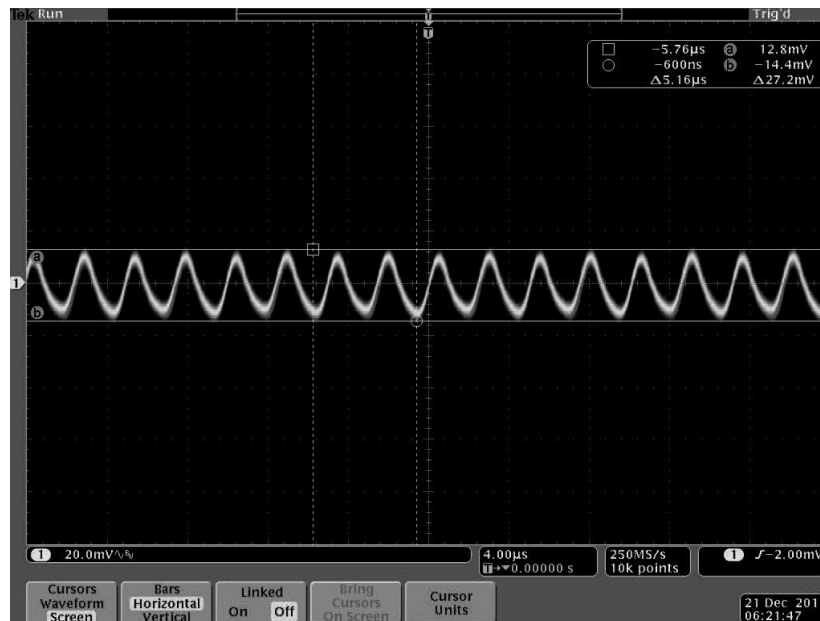


Figure 10. Output Voltage Ripple at 48 V_{DC} and Half Load, 27.2mV

9.6 Output Turn On

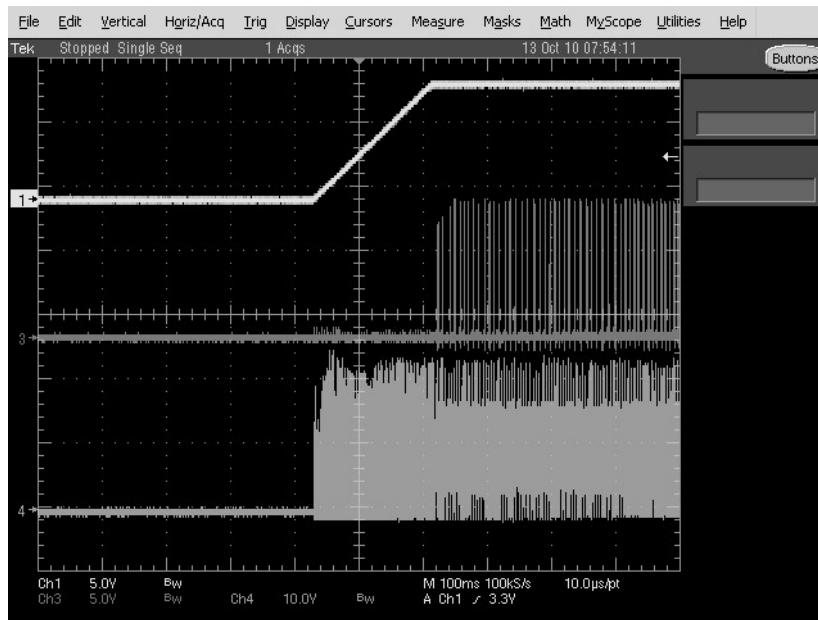


Figure 11. Output Turn On 48 V_{DC} with Load Range (Ch 1 = Vo, Ch 3= DPWM1B, Ch 4 = Vct, load = 1A)

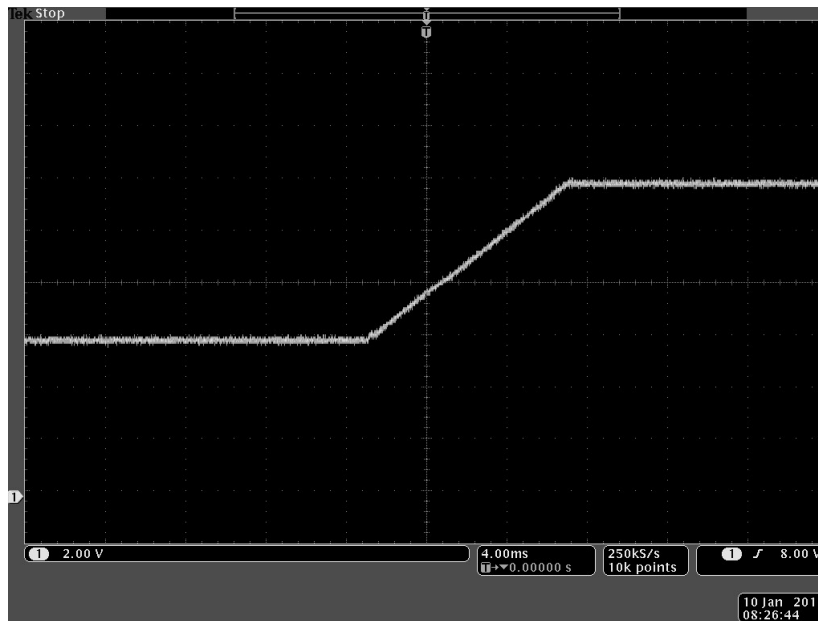


Figure 12. Output Turn On 48 V_{DC} with 6V Prebias

9.7 Bode Plots

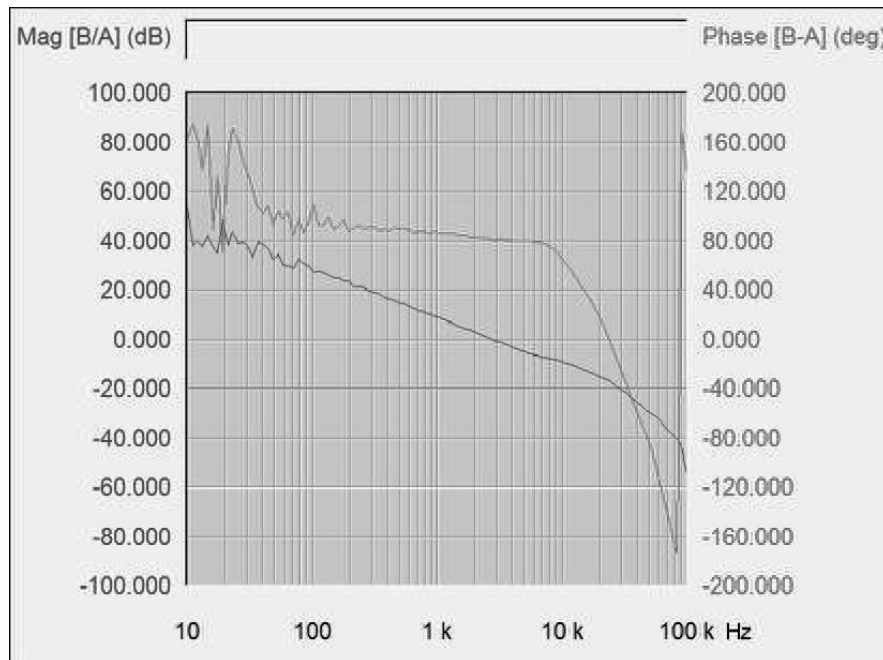


Figure 13. Control Loop Bode Plots at 48 V_{DC} and Half Load

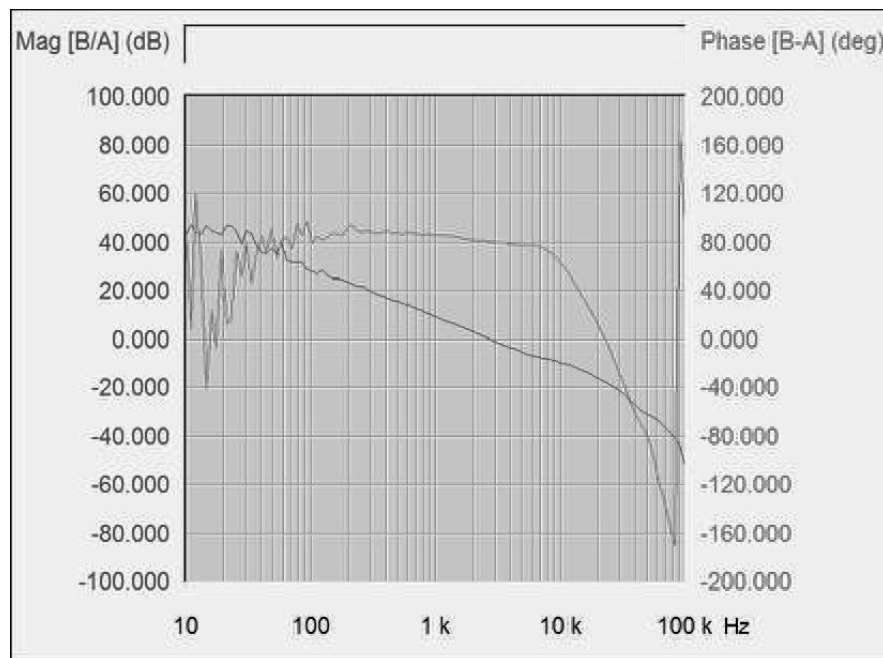


Figure 14. Control Loop Bode Plots at 48 V_{DC} and Full Load