

3.5W 5V Offline Flyback Converter Using the MAX17595

MAXREFDES1183

Design Verification Testing

Introduction

The MAXREFDES1183 is a 5V/700mA synchronous flyback converter using the MAX17595. The reference design was subjected to design verification testing and the specification has been validated in laboratory conditions at an ambient temperature of +25°C.

Test Equipment Used

The following equipment was used for design verification:

- B+K Precision® 9801 AC Power Source 300VA
- B+K Precision 8610 120V/120A/750W DC Electronic Load
- Tektronix® MDO3024 Oscilloscope
- Fluke® 87 Digital Multimeter
- Leads

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Tektronix is a registered trademark and registered service mark of Tektronix, Inc.

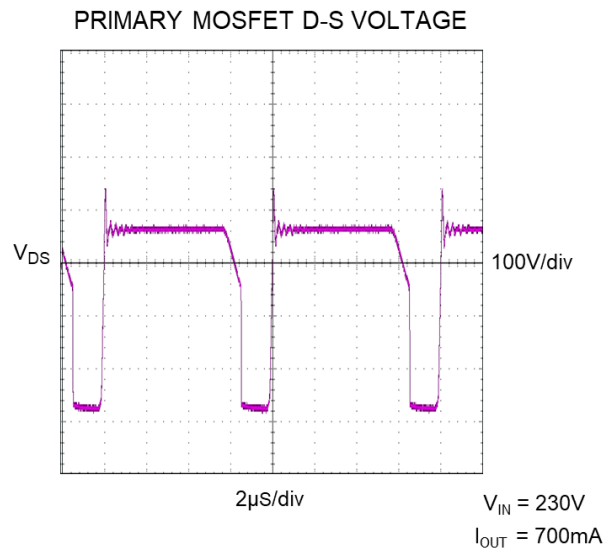
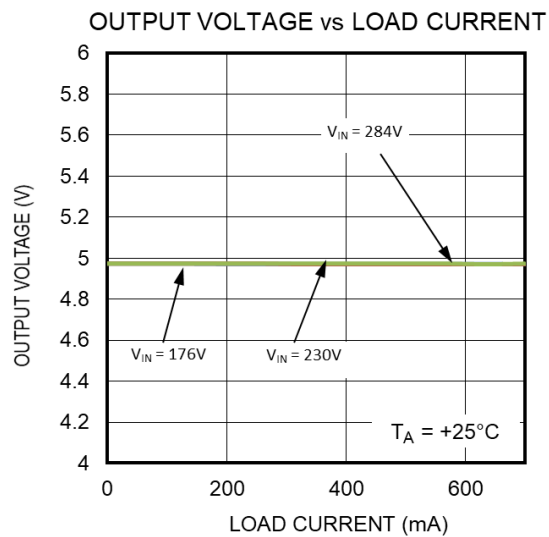
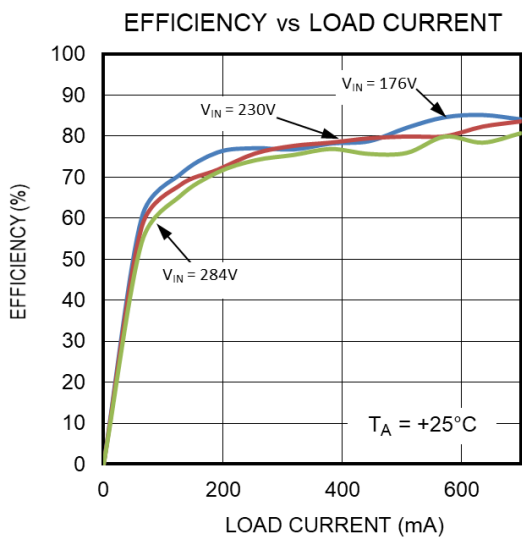
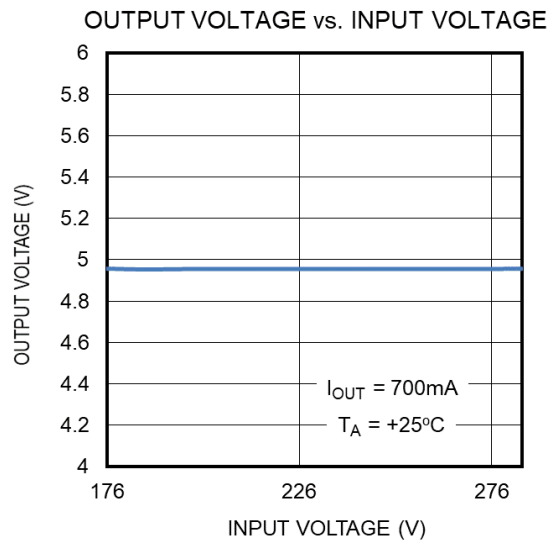
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Tests Conducted

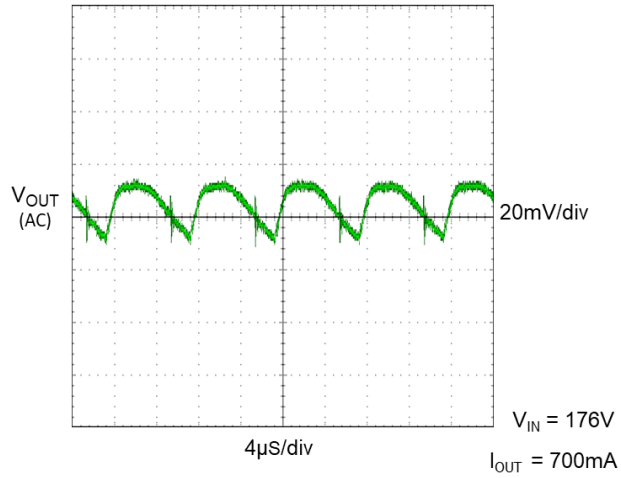
The tests listed below were completed on the MAXREFDES1183 and the results follow:

1. Output Voltage versus Input Voltage
2. Efficiency versus Load Current
3. Output Voltage versus Load Current
4. Primary MOSFET V_{DS}
5. Output Voltage Ripple at 176V_{AC}
6. Output Voltage Ripple at 230V_{AC}
7. Output Voltage Ripple at 284V_{AC}
8. Output Voltage Response to Transient Load at 176V_{AC}, 350mA to 625mA
9. Output Voltage Response to Transient Load at 230V_{AC}, 350mA to 625mA
10. Output Voltage Response to Transient Load at 284V_{AC}, 350mA to 625mA

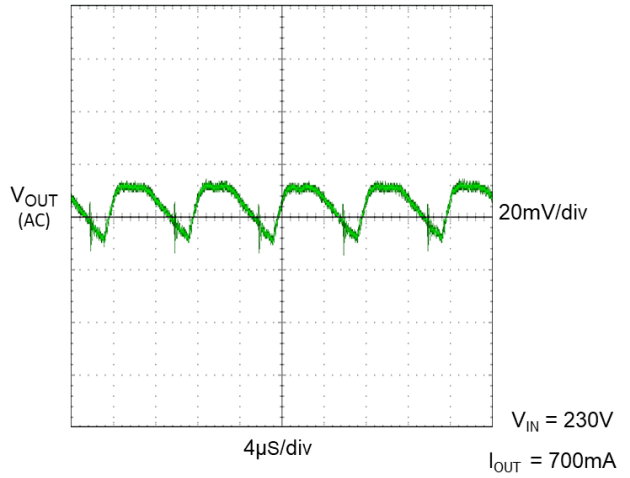
Test Results



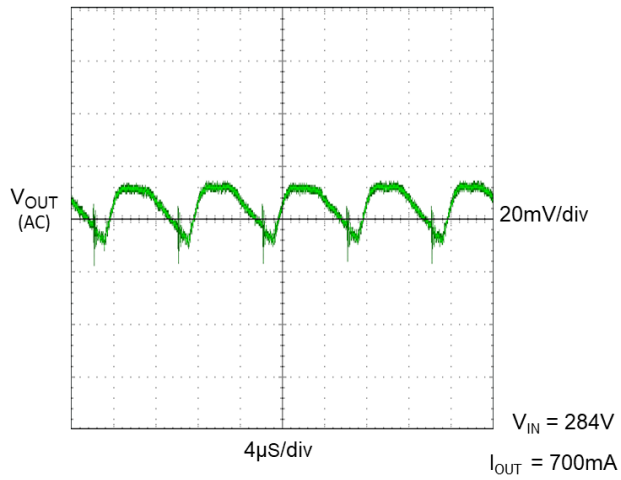
OUTPUT VOLTAGE RIPPLE



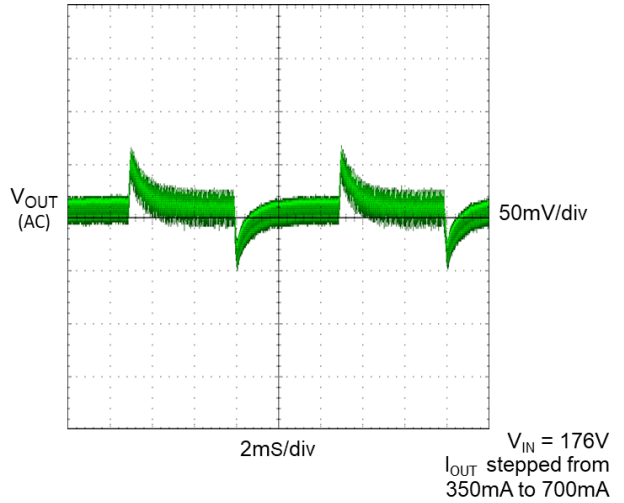
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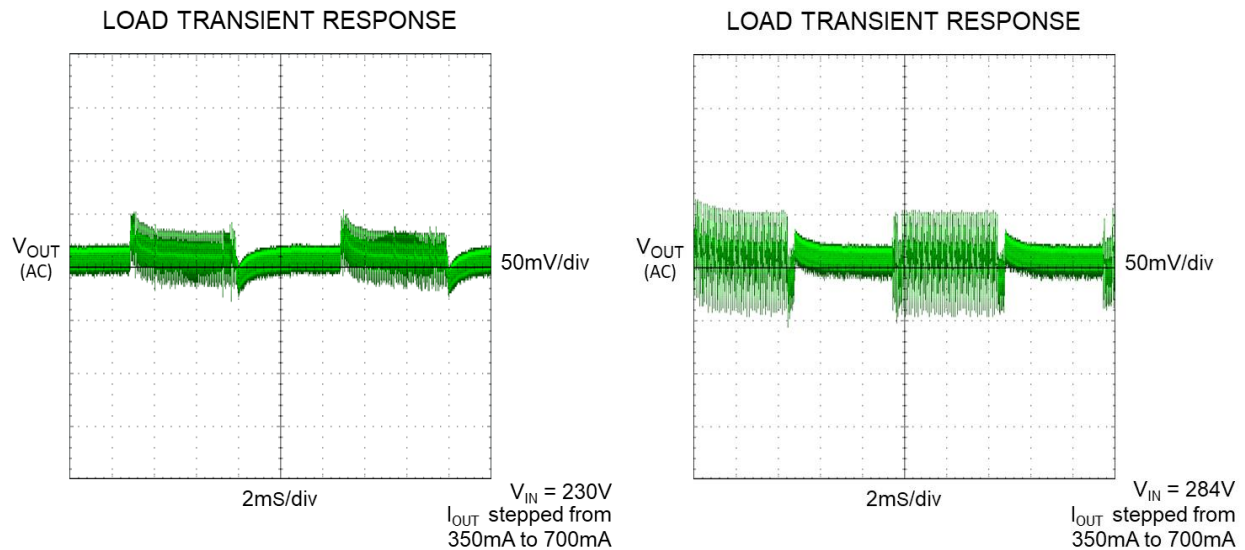


OUTPUT VOLTAGE RIPPLE



LOAD TRANSIENT RESPONSE





Trademarks

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