

**24V/100mA, Iso-BUCK**  
**DC-DC Converter Using MAX17681A**  
**MAXREFDES1170**

## **Design Verification Testing**

### **Introduction**

The MAXREFDES1170 is a 24V/100mA iso-buck DC-DC converter using the MAX17681A. 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:

- AC-DC Power Supply: TPR6410D
- Electronic Load: IT8511A
- Oscilloscope: DS2024
- Multi-meters: 2000 Multi-meter

### **Tests Conducted**

The tests listed below were completed on the MAXREFDES1170 and the results follow:

- 1) Efficiency vs Load Current
- 2) Output Voltage vs Load Current
- 3) Output Voltage Ripple
- 4) Load Step Response

## Test Results

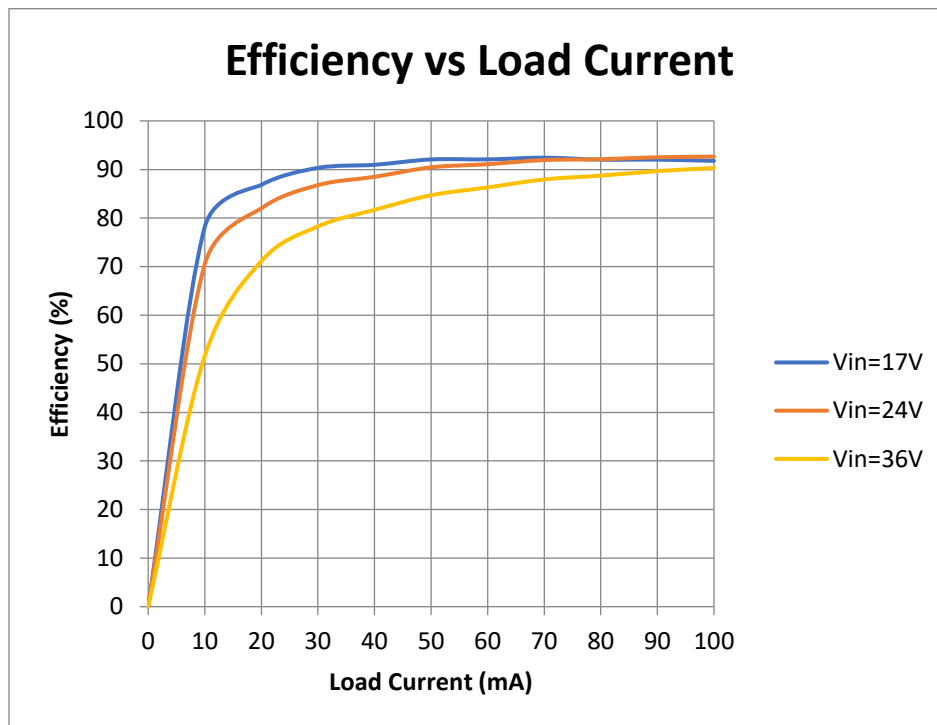


Figure 1. Efficiency curve vs load current.

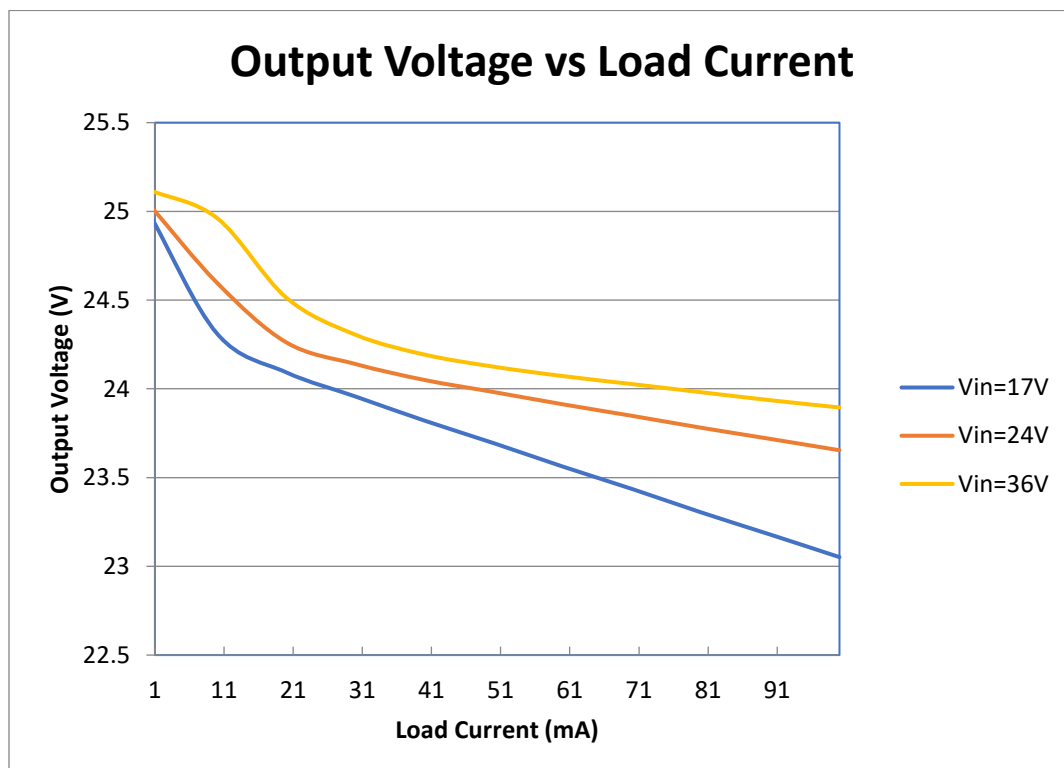


Figure 2. Output voltage vs load current.

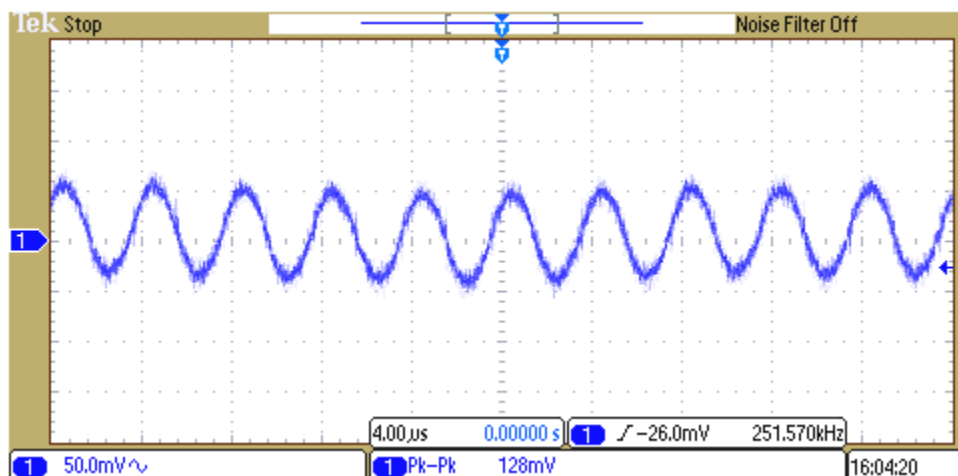


Figure 3. Output voltage ripple (24V input voltage, 24V output voltage and 100mA load).

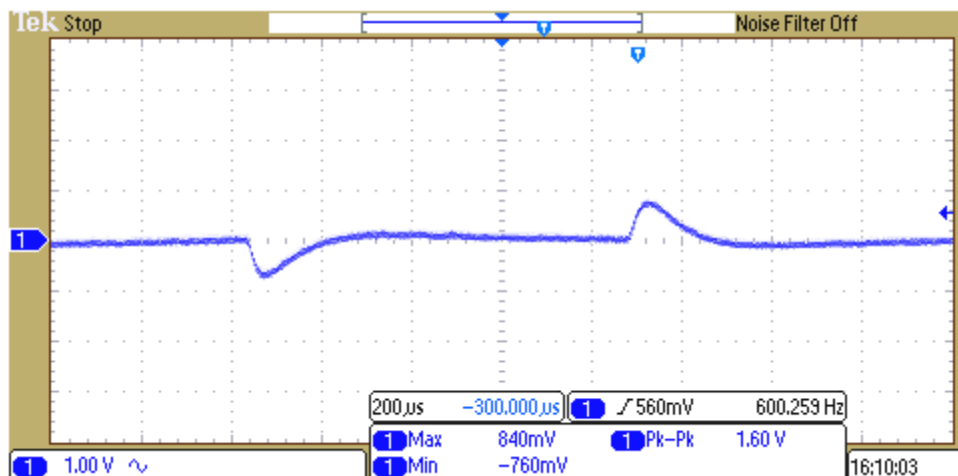


Figure 4. Load step response (load current from 50mA to 100mA).

©2018 by Maxim Integrated Products, Inc. All rights reserved. Information in this publication concerning the devices, applications, or technology described is intended to suggest possible uses and may be superseded. MAXIM INTEGRATED PRODUCTS, INC. DOES NOT ASSUME LIABILITY FOR OR PROVIDE A REPRESENTATION OF ACCURACY OF THE INFORMATION, DEVICES, OR TECHNOLOGY DESCRIBED IN THIS DOCUMENT. MAXIM ALSO DOES NOT ASSUME LIABILITY FOR INTELLECTUAL PROPERTY INFRINGEMENT RELATED IN ANY MANNER TO USE OF INFORMATION, DEVICES, OR TECHNOLOGY DESCRIBED HEREIN OR OTHERWISE. The information contained within this document has been verified according to the general principles of electrical and mechanical engineering or registered trademarks of Maxim Integrated Products, Inc. All other product or service names are the property of their respective owners.