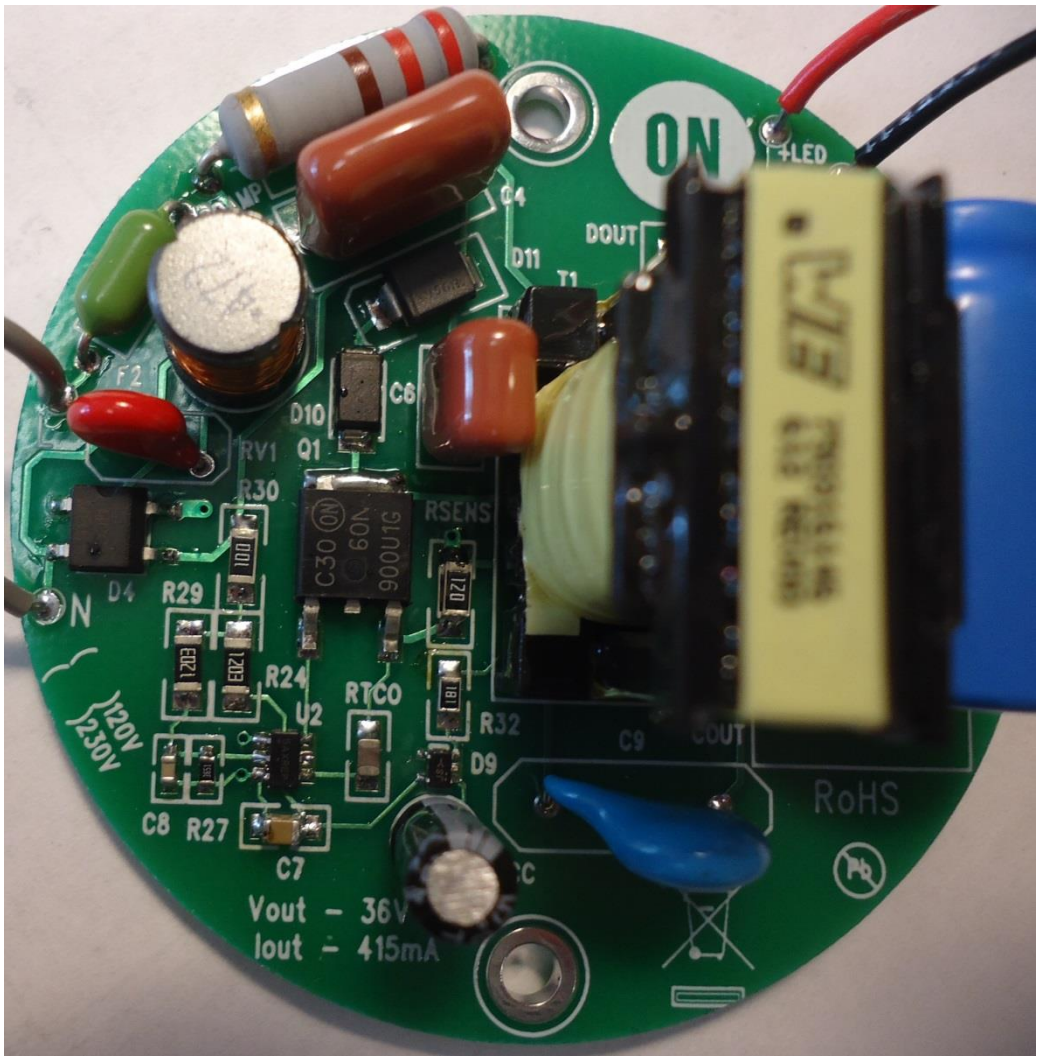
ON Semiconductor®

Test Procedure for the NCL30073LED1GEVB Evaluation Board

ECA Pictures



Top View

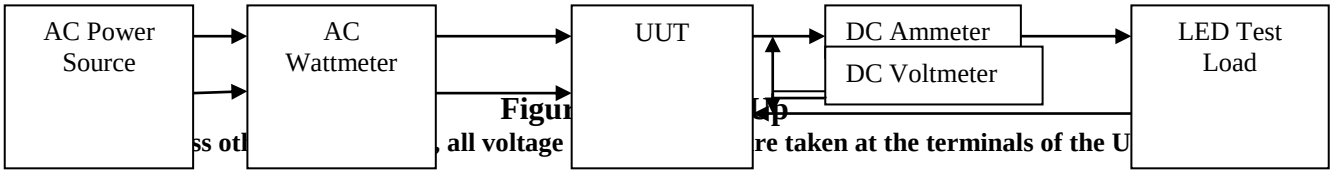
Test Procedure

Equipment Needed

AC Source – 90 to 140 V ac 60 Hz Minimum 100 W capability
AC Wattmeter – 100 W Minimum, True RMS Input Voltage, Current, Power Factor, and THD 0.2% accuracy or better
DC Voltmeter – 300 V dc minimum 0.1% accuracy or better
DC Ammeter – 1 A dc minimum 0.1% accuracy or better
LED Load – 30 V – 36 V @ 415m A

Test Connections

1. Connect the LED Load to the red(+) and black(-) leads through the ammeter shown in Figure 7. Caution: Observe the correct polarity or the load may be damaged.
2. Connect the AC power to the input of the AC wattmeter shown in Figure 5. Connect the white leads to the output of the AC wattmeter
3. Connect the DC voltmeter as shown in Figure 5.



Figur Up
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Functional Test Procedure

1. Set the LED Load for 36V output.
2. Set the input power to 120 V 60 Hz. Caution: Do not touch the ECA once it is energized because there are hazardous voltages present.

Regulation

120 V / Max Load

	Output Current	Output Power	Power Factor	THD
108V				
120V				
132V				

Efficiency = $\frac{Vout \times Iout}{Pin}$ **× 100%**

Test Data

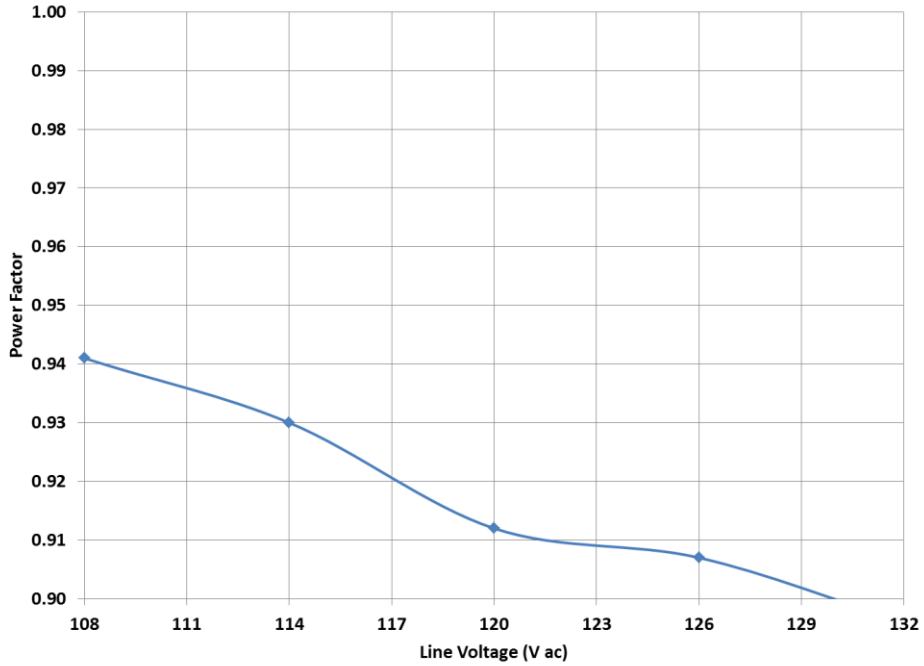

Figure 6. Power Factor over Line

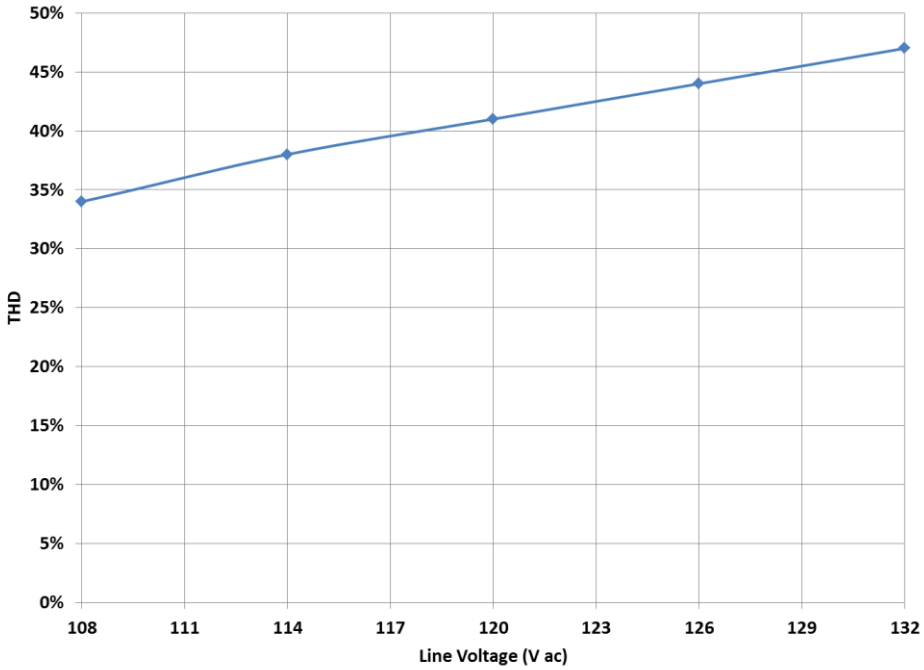

Figure 7. THD over Line

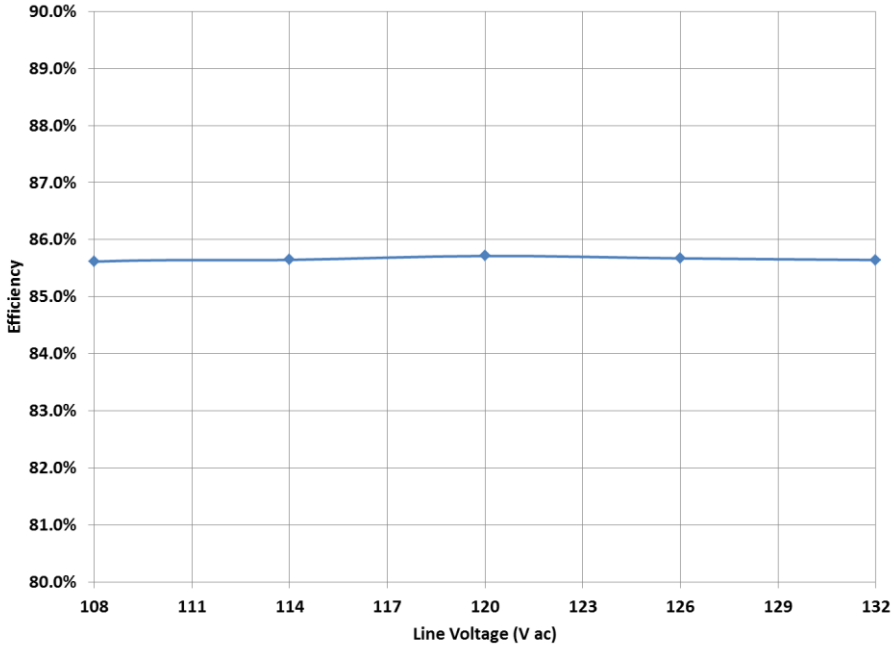

Figure 8. Efficiency

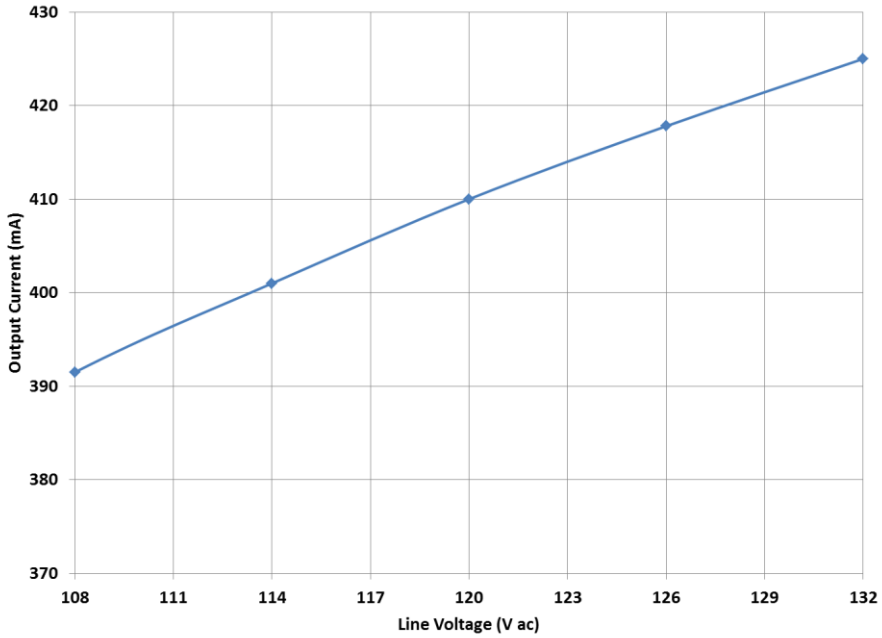

Figure 9. Regulation over Line