



ON Semiconductor

Test Procedure for the NCP3170 Evaluation Board

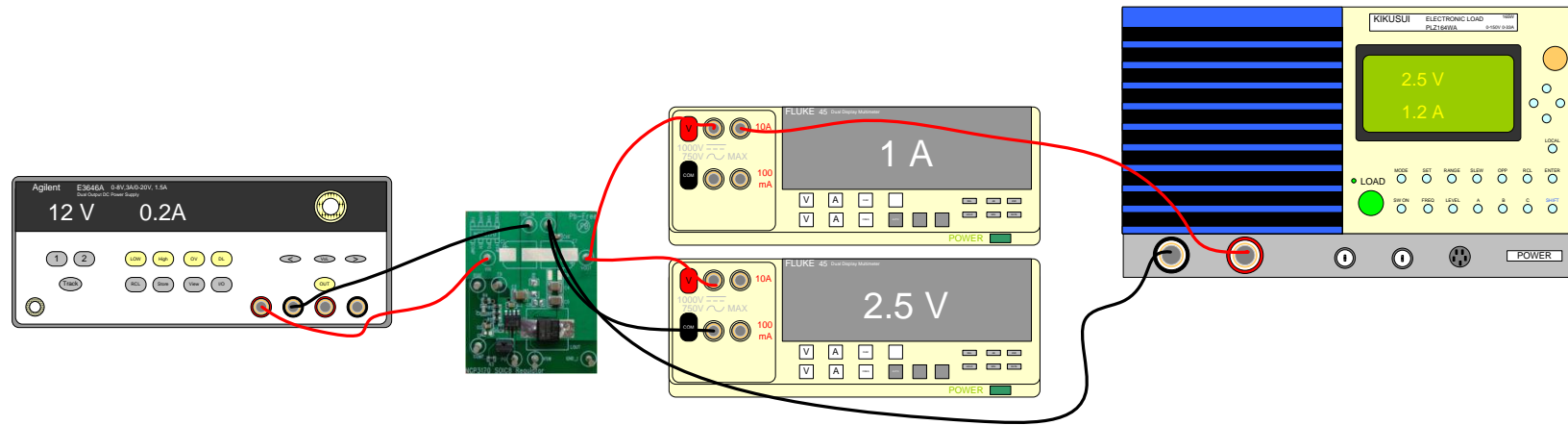


Figure 1: Test Setup

The following steps describe the test procedure for all these boards:

Suggested Equipment:

Current limited DC Power Supply (e.g. AGILENT 6645A)	1pc
DC Volt-Meter able to measure up to 60 V DC (e.g. KEITHLEY 2000)	2pcs
DC Amp-Meter able to measure up to 2 A DC (e.g. KEITHLEY 2000)	1pc
DC Amp-Meter able to measure up to 5 A DC (e.g. FLUKE 89 IV).....	1pc
DC Electronic Load (e.g. AGILENT 6060B)	1pc

Test Procedure:

1. Connect the test setup as shown in Figure 1.
2. Apply an input voltage, $V_{IN} = 5.0-18 \text{ Vdc}$
3. Apply $I_{OUT}(\text{load}) = 0 \text{ A}$
4. Ensure the EN SIP Header is not shorted
5. Check that $V_{OUT} = 0 \text{ V Vdc}$
6. Short EN SIP Header with provided jumper
7. Observe Soft and PG signal proper behavior as shown in Figure 2
8. Check that $V_{OUT} = 3.3 \pm 5\% \text{ Vdc}$
9. Set I_{OUT} to desired level 0 A- 3 A and measure voltage and current the efficiency should be similar to that shown in Figure 3 and 4
10. Check that $V_{OUT} = 3.3 \pm 5\% \text{ Vdc}$ under desired operating condition
11. Turn off the load
12. Turn off V_{IN}
13. End of the test
- 14.

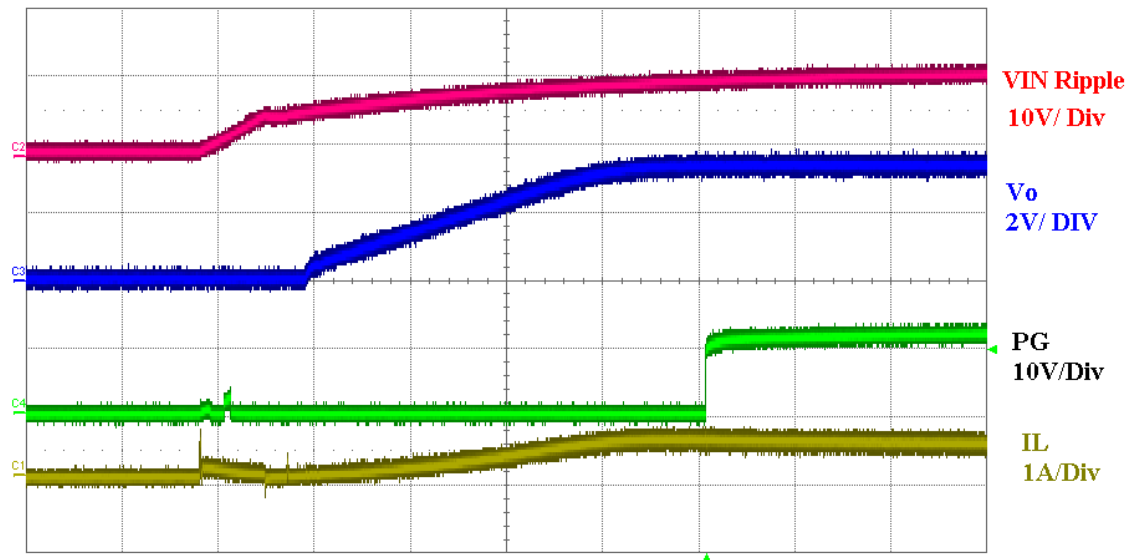


Figure 2: NCP3170 Startup and Regulation with PG Indication

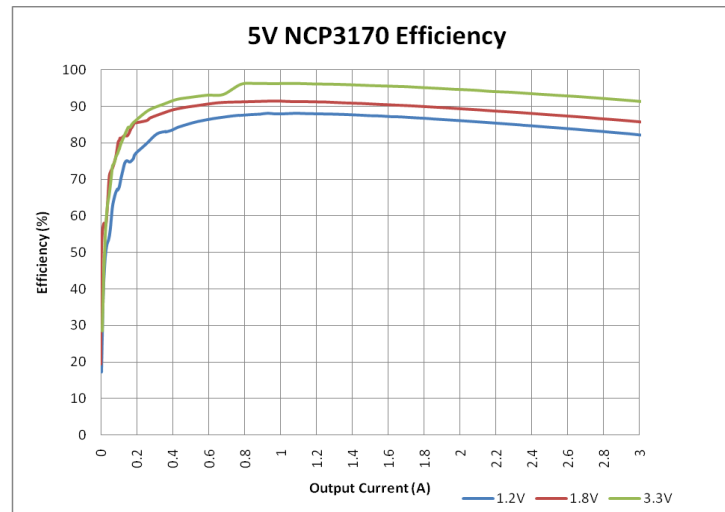


Figure 3: NCP3170 Efficiency at 5V Input and 1.2V, 1.8V, and 3.3V Output

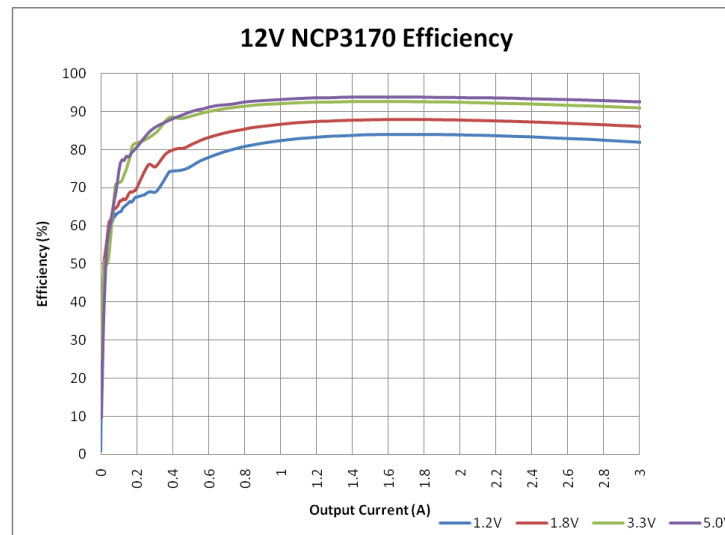


Figure 2: NCP3170 Efficiency at 12V Input and 1.2V, 1.8V, and 3.3V Output