ON Semiconductor

Test Procedure for the NCP5252 Evaluation Board

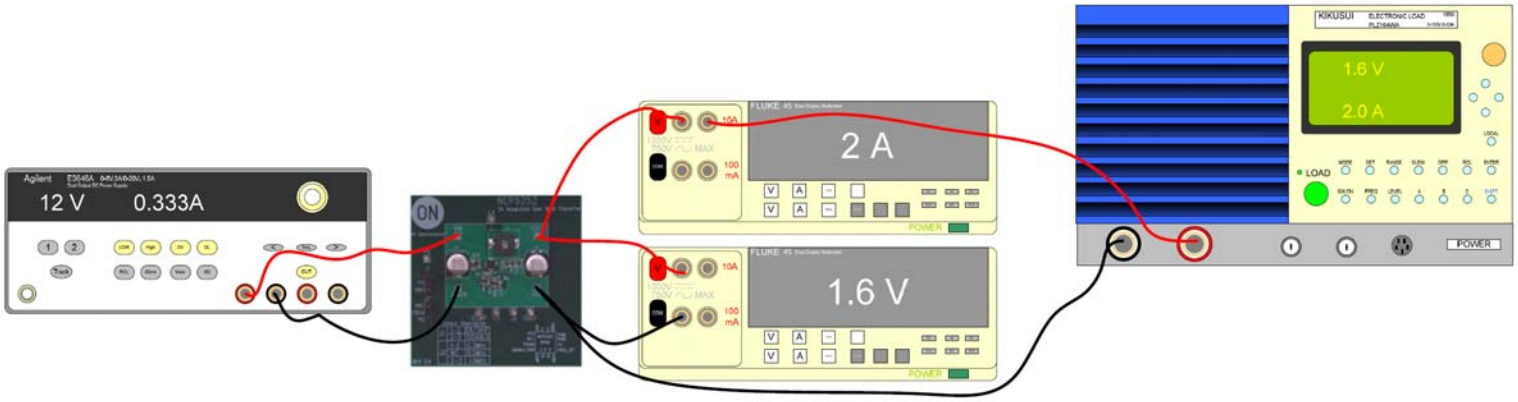

Figure 1: Test Setup

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

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Test Procedure:

1. Connect the test setup as shown in Figure 1.
2. Apply an input voltage, V_{IN} = 4.5-13.2 Vdc
3. Check that V_{OUT} = 1.20Vdc ±5%
4. Ensure the power good pin goes high after the output voltage is in range
5. Set frequency jumpers to desired frequency
    a. Jumper J2-1 to J2-2 to pull the frequency set pin to ground producing a switching frequency of 330 kHz
    b. Do not install jumpers and the frequency set pin will float producing a switching frequency of 500 kHz
    c. Jumper J2-2 to J2-3 to pull the frequency set pin to a regulated 5V producing a switching frequency of 1 MHz
6. Set I_{OUT} to desired level 0 A- 2 A
7. Check that V_{OUT} = 1.20 Vdc±5%
8. Jumper J1-2 to J1-3 to disable the part
9. Remove Jumper J1-2 to J1-3 to enable the part
10. Check that V_{OUT} = 1.20 Vdc±5%
11. Set I_{OUT} to check current trip desired level 2 A- 3.5 A
    a. Ensure output voltage falls at the current limit point
12. Set I_{OUT} to 0A
13. Check that V_{OUT} = 1.20 Vdc±5%
14. Turn off the load
15. Turn off V_{IN}
16. End of the test

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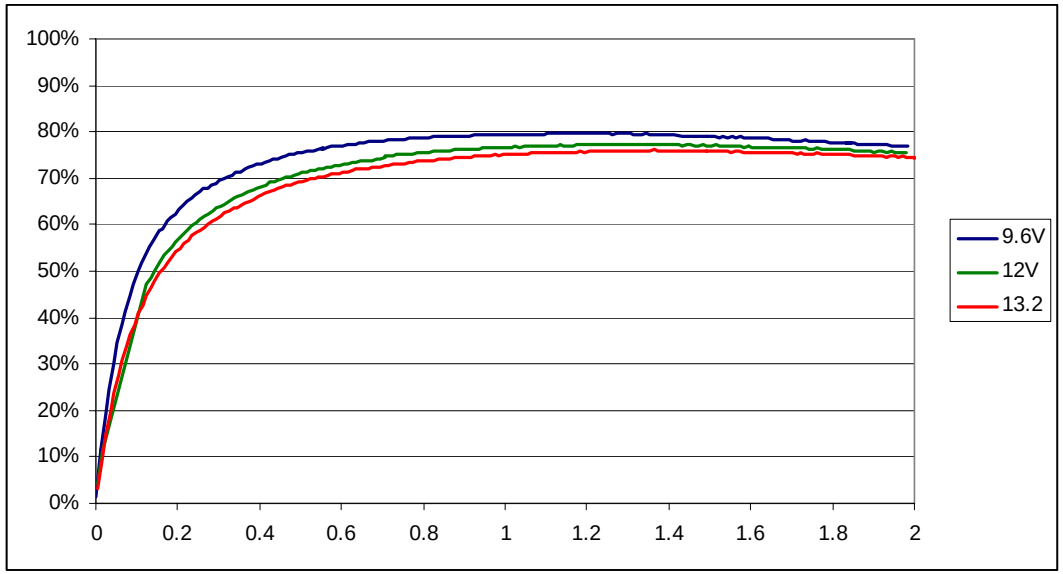

Figure 1: NCP5252 Efficiency at 9.6V-13.2V with a 1.18V Output Voltage at 25 C^{o} Ambient

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