Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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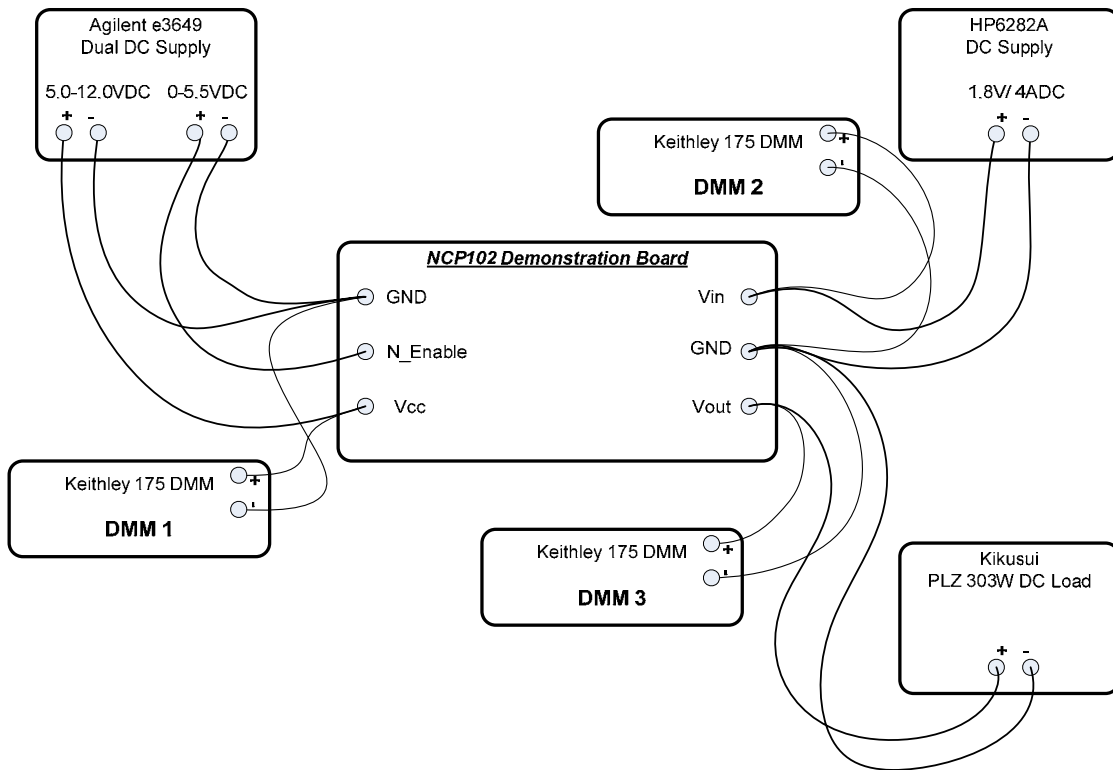
ON Semiconductor®

NCP102 Demonstration Board Test Procedure

Figure 1 Test Setup

Required Equipment:

1. **3 DC Power Supplies:**
   a. "Vin supply" possessing a minimum voltage rating of 5 VDC and minimum current rating of 4 ADC; for example, HP 6282A.
   b. "Vcc supply" possessing a minimum voltage rating of 15 VDC and minimum current rating of 1 ADC; for example, ½ Agilent e3649A dual supply.
   c. "N_Enable supply" possessing a minimum voltage rating of 5.5 VDC and minimum current rating of 0.1 ADC; for example, ½ Agilent e3649A dual supply.

2. **3 Auto-ranging Digital Multimeters (DMMs):** each possessing a minimum voltage rating of 20 VDC and minimum current rating of 2ADC; for example, Keithley 175.

3. **1 Electronic Load:** possessing a current display and minimum current capability of 4 ADC; for example, Kikusui PLZ303W.

Test Procedure:

Establish Setup

1. Connect the NCP102 Demonstration Board as shown in Figure 1.
2. Adjust the N_Enable supply to 4.5VDC while observing the indicator on the supply.

Note: for measurement accuracy, the DMMs must be connected to the Demonstration Board terminals and not the DC supply or load terminals. This is particularly true for DMM 2 and DMM 3.

3. Connect DMM 1 to Vcc and configure as a voltmeter. Set DMM 1for auto-range.
4. Connect DMM 2 to Vin and configure as a voltmeter. Set DMM 2 for auto-range.
5. Connect DMM 3 to Vout and configure as a voltmeter. Set DMM 3 for auto-range.

6. Adjust the Vcc supply to 5.0VDC while observing DMM 1 (not the indicator on the DC supply).
7. Adjust the Vin supply to 1.800VDC while observing DMM 2 (not the indicator on the DC supply).
8. Disable the electronic load so that it is neither sinking nor sourcing current.

No-Load Regulation and Enable Function

1. Verify that Vout (DMM 3) equals zero VDC.
2. Temporarily disconnect the banana cable connected to "N_Enable", or reduce the "N_Enable" supply to zero Volts.
3. Verify that Vin (DMM 2) equals 1.800VDC, +/- 2% (1.764VDC to 1.836VDC).
4. Readjust the Vin supply if necessary.
5. Verify that Vout (DMM 3) equals 1.200VDC, +/- 2% (1.176VDC to 1.224VDC).
6. Reconnect the banana cable to "N_Enable", or adjust the "N_Enable" supply output to 4.5VDC.
7. If Vcc= 12.0VDC (DMM 1), go to *Full-Load Regulation and Enable Function*, below.
8. Adjust the Vcc supply to 12.0VDC, as indicated on DMM 1.
9. Repeat steps 1 through 7 of this section.

Full-Load Regulation and Enable Function

1. While observing the front panel indicator on the electronic load, adjust it to sink 3.5ADC from the demonstration board Vout terminal.
2. Enable the electronic load.
3. Verify that Vout (DMM 3) equals zero VDC.
4. Temporarily disconnect the banana cable connected to "N_Enable", or reduce the "N_Enable" supply to zero Volts.
5. Verify that Vin (DMM 2) equals 1.800VDC, +/- 2% (1.764VDC to 1.836VDC).
6. Readjust the Vin supply if necessary.
7. Verify that Vout (DMM 3) equals 1.200VDC, +/- 2% (1.176VDC to 1.224VDC).
8. Reconnect the banana cable to "N_Enable", or adjust the "N_Enable" supply output to 4.5VDC.

9. If Vcc= 5.0VDC (DMM 1), go to Step 12.
10. Adjust the Vcc supply to 5.0VDC, as indicated on DMM 1.
11. Repeat steps 1 through 9 of this section.
12. Verify that Vout (DMM 3) equals zero VDC.
13. Test complete.

Revision History			
Revision	Release Date	Changes	Responsible
1		Original Release	Mike Stimbert