

Test Procedure for the NCP3121QPBACKGEVB - NCP3121 3A BUCK DEMO BD

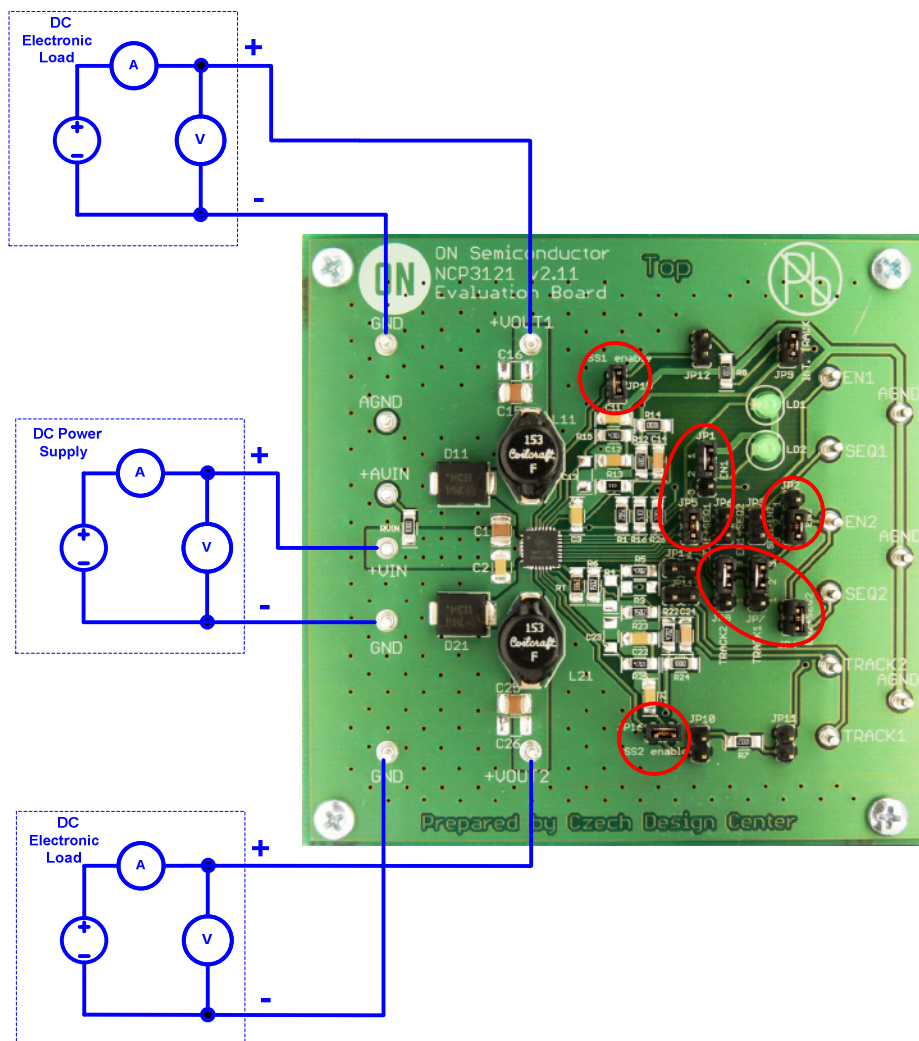


Figure 1. Test Setup

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

Required Equipment:

Current limited DC Power Supply (e.g. AGILENT 6653A) ... 1pc
 DC Volt-Meter able to measure up to 15 V DC (e.g. KEITHLEY 2000) ... 3pcs
 DC Amp-Meter able to measure up to 2 A DC (e.g. KEITHLEY 2000) ... 3pcs
 DC Electronic Load (e.g. AGILENT 6060B) ... 2pcs

**Test Procedure:**

1. Make sure, if the red ringed jumpers - Figure 1 - are placed.
2. Connect the test setup as shown in Figure 1.
3. Disable loads = 0 A.
4. Apply an input voltage, $V_{in} = 12\text{V DC}$.
5. Check, if $V_{out1} = 5\text{ V DC}$, $V_{out2} = 3.3\text{ V DC}$.
6. Enable loads up to 3A.
7. Check, if $V_{out1} = 5\text{ V DC}$, $V_{out2} = 3.3\text{ V DC}$.
8. If yes, test passed successfully.
9. Power down the load.
10. Power down V_{in} .
11. End of test.



Configuration of Jumpers

- JP1** – Enable/ Disable 1-st Channel (pins 2-3 enabling, 1-2 disabling the channel 1)
- JP2** - Enable/ Disable 2-nd Channel (pins 2-3 enabling, 1-2 disabling the channel 2)
- JP3** - SEQ1 + EN2
- JP4** - EN2 + SEQ2
- JP5** - EN1 + SEQ1
- JP6** - EN1 + SEQ2
- JP7** - Tracking 1 ref. level - must connect pins 2-3 for normal operation
- JP8** - Tracking 2 ref. level - must connect pins 2-3 for normal operation, connect 1-2 for Tracking function, see the configuration table
- JP9** - Internal Tracking 2 Enable
- JP10** - Internal enable 1 of Master voltage Soft start 2
- JP11** - Internal enable 2 of Master voltage Soft start 2
- JP12** - External enable of Master voltage Soft start 1
- JP13** - External enable of Master voltage Soft start 2
- JP14** - Track1 + Track2
- JP15** - Soft start 1 capacitor enable
- JP16** - Soft start 2 capacitor enable

Configurations Table

JP1	JP2	JP3	JP4	JP5	JP6	JP7	JP8	JP9	JP10	JP11	JP12	JP13	JP14	JP15	JP16
Normal Operation – Enable from Vin															
2-3	2-3	-	1-2	1-2	-	2-3	2-3	-	-	-	-	-	-	1-2	1-2
Enables are driven from an external sources															
-	-	-	1-2	1-2	-	2-3	2-3	-	-	-	-	-	-	1-2	1-2
Enable 1 is driven form Vin, channel 2 is disabled															
2-3	1-2	-	1-2	1-2	-	2-3	2-3	-	-	-	-	-	-	1-2	1-2
Sequential Sequencing – Enable from Vin															
2-3	2-3	1-2	-	-	1-2	2-3	2-3	-	-	-	-	-	-	1-2	1-2
Enable1 is driven from an external source, Enable2 is a SLAVE of Enable1															
-	-	1-2	-	-	1-2	2-3	2-3	-	-	-	-	-	-	1-2	1-2
Internal Tracking – Ch1 is master, ch2 slave; Enable from Vin															
2-3	2-3	-	1-2	1-2	1-2	2-3	1-2	1-2	1-2	1-2	-	-	-	1-2	-
Enable1 is driven from external source, Enable2 is connected with Enable1															
-	-	-	1-2	1-2	1-2	2-3	1-2	1-2	1-2	1-2	-	-	-	1-2	-