



Test Procedure for the NCC7708 Evaluation Board

Terminology

- Target PCB – PCB with NCV7708A to be tested
- Test Fixture – mates with target and computer
- GUI – Graphical User Interface software for the NCV7708A

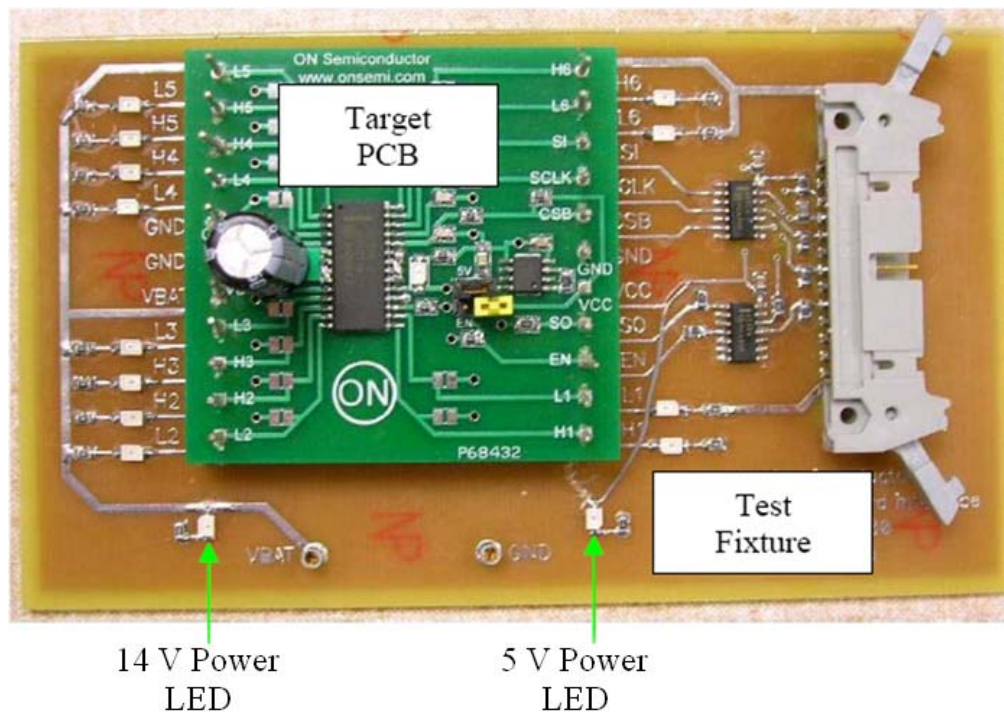


Figure 1: Test Setup

Test Procedure

1. Assemble target PCB with test pins on the bottom to mate with test fixture – don't trim the pins at the top, you'll need to connect your instruments to them.
2. Remove the "EN" jumper block from the target.
3. Mate the target with the test fixture.
4. Connect the fixture to a computer' parallel port – desktop PC is preferred over laptop PC.
5. Connect a 14 V power supply to the test fixture and turn it on.
6. Check that both the 14V and 5V power LEDs on the fixture are illuminated.
7. Launch the NCV7708 GUI on the computer.
8. Connect a scope or DVM to the "EN" test pin and GND on the target – set the scope for 5 V/div vertical, 50 us/div horizontal, auto trigger.
9. Check that the "EN" signal level is ~ 0 V – logic low.
10. Left-click the "Enable/Disable" button in the GUI.
11. Check that the "EN" signal level is ~ 5 V – logic high – proceed to step 14 if OK.



12. If the “EN” signal did not change states in step 11, trace the signal path as shown in the interface schematic (last page) back to U2 pin 11 and to the connector on the test fixture.
13. If the “EN” signal functions at the connector, then U2 on the fixture is damaged.
14. Connect a scope to the target as follows: CH1 to “CSB” test pin, CH2 to “SCLK”, CH3 to “SI”, CH4 to “SO” (and GND on the target) – set the scope channels for 5 V/div vertical, 50 us/div horizontal, normal trigger, trigger source CH1, falling edge, 2.5 V trigger level – set the trigger position to 10% horizontal, set horizontal position to 50%.
15. Left-click the “Drivers On” button in the GUI then the “Trigger Loop” button – you should see a response like the one below:

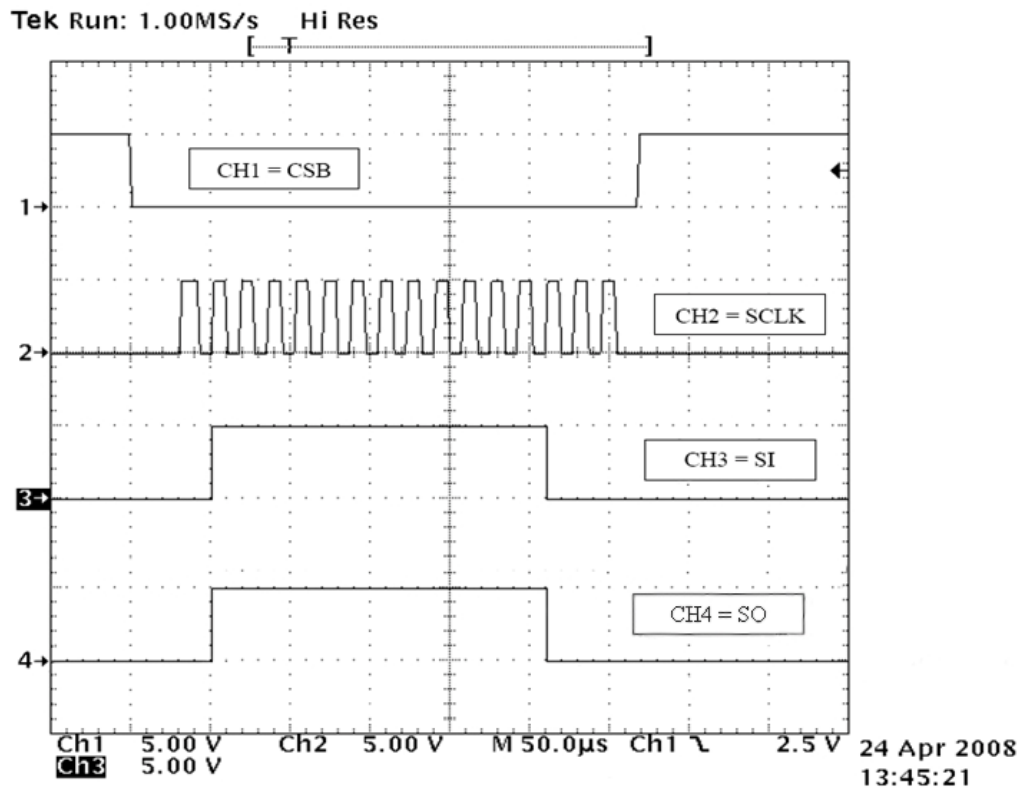


Figure 2: Oscilloscope Output

16. If the response is OK, the board is working properly.

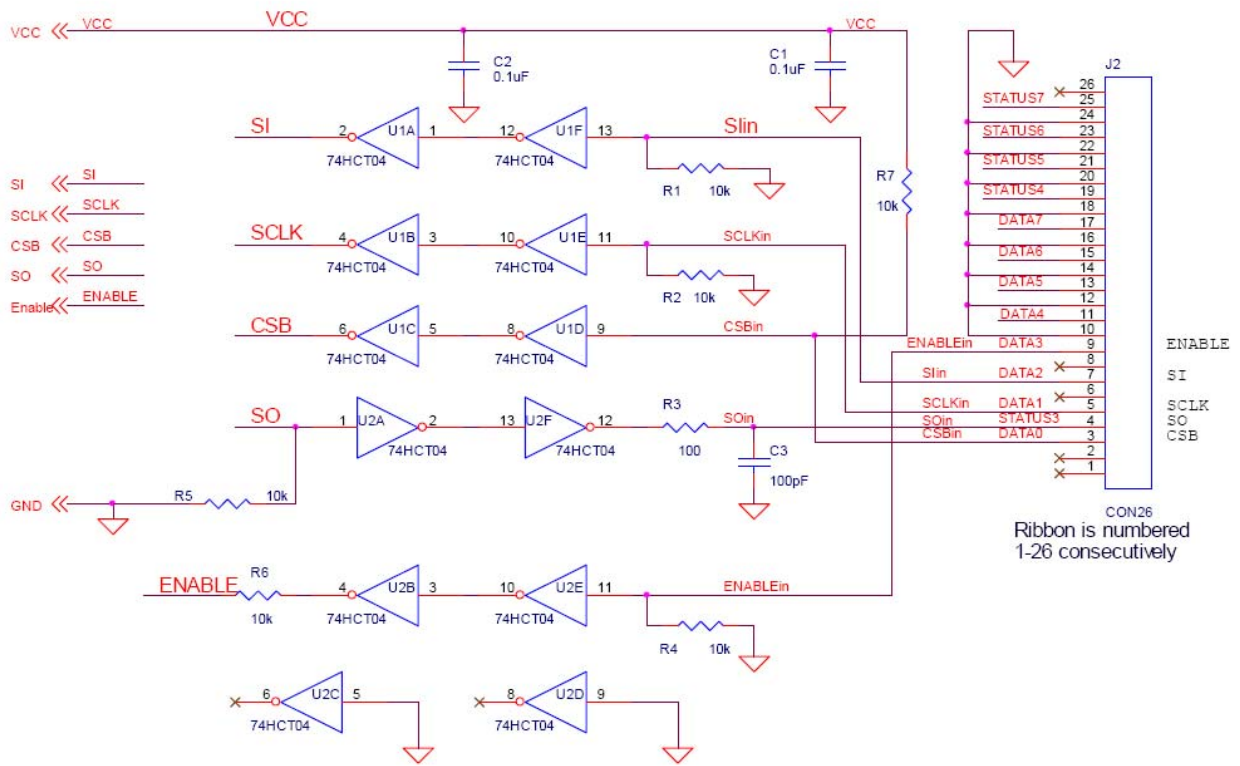


Figure 3: Test Fixture Schematic