Test Procedure for a DS3800NVIA

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DATE 10/30/09	DATE	DATE	DATE 10/30/2009

1. **SCOPE**

   1.1   This is a functional testing procedure for a DS3800NVIA.

2. **STANDARDS OF QUALITY**

   2.1   Refer to the current revision of the IPC-A-610 standard for workmanship standards.

3. **APPLICABLE DOCUMENTS**

   3.1   The following document(s) shall form part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue shall apply.
   >   **3.1.1**   Check Electronic folder for more information

4. **ENGINEERING REQUIREMENTS**

   4.1   Equipment Cleaning
   >   **4.1.1**   Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to the local documented procedures for cleaning guidelines.

   4.2   Equipment Inspection
   >   **4.2.1**   Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:
   >   >   **4.2.1.1**   Wires - broken, cracked, or loosely connected
   >   >   **4.2.1.2**   Terminal strips / connectors - broken or cracked
   >   >   **4.2.1.3**   Components - visually damaged
   >   >   **4.2.1.4**   Capacitors - bloated or leaking
   >   >   **4.2.1.5**   Solder joints - damaged or cold
   >   >   **4.2.1.6**   Circuit board - burned or de-laminated
   >   >   **4.2.1.7**   Printed wire runs / Traces - burned or damaged

5. **EQUIPMENT REQUIRED**

   5.1   The following equipment is required to perform the process requirements. Equipment may be substituted provided that all accuracy's and test ratios are equivalent or better.

Qty	Reference #	Description
1		Fluke 87 DMM (or Equivalent)
1		Rainbow Box
1		DS3800 Power Supply
1		DS3800 Connector Box
1		Tenma Dual Power Supply
1		Resistor Assembly for NVIA

6. TESTING PROCESS

6.1 Setup

6.1.1 Connect PA1-PA9

6.1.2 Connect resistor assembly per labels to emulate daughter card. (Actual daughter card will not allow this test to operate properly).

6.2 Testing Procedure

6.2.1 Apply power to UUT

6.2.2 Connect PA24-PA21-PA1

6.2.3 Verify TA26, PA20, and PA17 = 0VDC

6.2.4 Remove connections at PA24 and PA21

6.2.5 Set dual power supply for –1VDC and +1VDC

6.2.6 Apply –1VDC to PA24 and +1VDC to PA21

6.2.7 Verify TA26 = 4.6VDC

6.2.8 Verify PA20 and PA17 = -6.3VDC

6.2.9 Remove connections from PA24 and PA21

6.2.10 Connect PA21-PA1

6.2.11 Apply –1VDC to PA23

6.2.12 Verify TA26 = 2.3VDC

6.2.13 Verify IMOK LED is illuminated

6.2.14 Connect PA21 and PA20 to PA1

6.2.15 Remove PA23

6.2.16 Apply 6.4VDC to PA24

6.2.17 Verify IMOK LED is not illuminated

6.2.18 Remove voltage at PA24

6.2.19 Verify IMOK LED illuminates

6.2.20 Disconnect PA20 from PA1

6.2.21 Apply 4.7VDC to PA24

6.2.22 Verify IMOK LED is not illuminated

6.2.23 Remove 4.7VDC at PA24

6.2.24 Verify IMOK LED illuminates

6.2.25 Remove all connections from rainbow box **except** PA1 to PA9 connection

6.2.26 Connect PA30 and PA27 to PA1

6.2.27 Verify TA19 and TA22 = 0VDC

6.2.28 Apply –1VDC to PA30 and +1VDC to PA27

6.2.29 Verify TA19 = -1.0VDC

6.2.30 Verify TA22 = 1.0VDC

6.2.31 Verify PA22 = 0VDC

6.2.32 Verify PA19 = 2VDC

6.2.33 Verify PA2 = 0VDC

6.2.34 Connect PA27 to PA1

6.2.35 Apply +1VDC to PA30

6.2.36 Verify PA22 = -1VDC

6.2.37 Verify PA19 = 1VDC

6.2.38 Verify PA2 = 1.6VDC

6.2.39 Connect PA30 to PA1

6.2.40 Apply 1.0VDC to PA29

6.2.41 Verify TA19 = -1VDC

6.2.42 Move connection from PA29 to PA25

6.2.43 Verify TA22 = -1VDC

6.2.44 Apply 2VDC to PA27

6.2.45 Verify PGND LED illuminates

6.2.46 Verify PA72 = H

6.2.47 Verify PA60 = H

6.2.48 Verify PA4 = -2VDC

6.2.49 Remove 2VDC from PA27

6.2.50 Toggle SW1

6.2.51 Verify PGND LED turns off

6.2.52 Reapply 2VDC to PA27 then remove after PGND LED illuminates

6.2.53 Momentarily connect PA68 to PA1

6.2.54 Verify PGND LED turns off

6.2.55 Apply 2VDC to PA30

6.2.56 Verify NGND LED illuminates

6.2.57 Verify PA58 = L

6.2.58 Verify PA66 = H

6.2.59 Verify PA60 = H

6.2.60 Verify PA4 = -2VDC

6.2.61 Remove 2VDC from PA30

6.2.62 Toggle SW1

6.2.63 Verify NGND LED turns off

6.2.64 Reapply 2VDC to PA30 then remove after NGND LED illuminates

6.2.65 Momentarily connect PA68 to PA1

6.2.66 Verify NGND LED turns off

6.2.67 Apply 5VDC to PA52

6.2.68 Verify 0V LED illuminates

6.2.69 Verify PA62 = H

6.2.70 Toggle SW3 and verify PA56 = L when switch is closed

6.2.71 Verify 0V LED turns off

6.2.72 Verify PA62 = L

6.2.73 Apply 5VDC to PA52

6.2.74 Decrease 5VDC at PA52 to 4VDC

6.2.75 Verify 0V LED illuminates

6.2.76 Verify PA62 = H

6.2.77 Remove 4VDC from PA52

6.2.78 Toggle SW3

6.2.79 Verify 0V LED turns off

6.2.80 Verify PA62 = L

6.2.81 Connect PA26 to PA1

6.2.82 Verify ZV LED illuminates

6.2.83 Verify PA76 = H

6.2.84 Remove connection from PA26

6.2.85 Verify ZV LED turns off

6.2.86 Verify PA76 = L

6.3 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time.

8. ATTACHMENTS

8.1 None at this time.