



GE Energy

Functional Testing Specification

Parts & Repair Services
Louisville, KY

LOU-GED-DS3800NCBA

Test Procedure for a DS3800NCBA

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DATE 12/6/2011	DATE	DATE	DATE 12/30/2011

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1. SCOPE

1.1 This is a functional testing procedure for a DS3800NCBA.

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 board's 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 site specific SRA's 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 Connector Box

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6. Testing Process

6.1 Setup

6.1.1 Connect card to DS3800 connector box and connector box to rainbow box.

6.1.2 Remove one side of all components installed in saddle clamps

6.2 Testing Procedure

6.2.1 Verify less than two ohms between the following points (The saddle clamps should be marked with their respective PA pin)

PA80 to Y (80) saddle clamp

PA78 to Y (78) saddle clamp

PA4 to B (4) saddle clamp

PA2 to B (2) saddle clamp

PA56 to R (56) saddle clamp

PA57 to R (57) saddle clamp

PA27 to J (27) saddle clamp

PA28 to J (28) saddle clamp

PA65 to T (65) saddle clamp

PA66 to T (66) saddle clamp

PA59 to S (59) saddle clamp

PA60 to S (60) saddle clamp

PA49 to P (49) saddle clamp

PA50 to P (50) saddle clamp

PA29 to L (29) saddle clamp

PA30 to L (30) saddle clamp

PA17 to H (17) saddle clamp

PA18 to H (18) saddle clamp

PA63 to U (63) saddle clamp

PA64 to U (64) saddle clamp

PA51 to Q (51) saddle clamp

PA52 to Q (52) saddle clamp

PA41 to N (41) saddle clamp

PA42 to N (42) saddle clamp

PA31 to M (31) saddle clamp

PA32 to M (32) saddle clamp

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PA33 to K (33) saddle clamp
PA34 to K (34) saddle clamp
PA11 to G (11) saddle clamp
PA11 to F (11) saddle clamp
PA11 to A (11) saddle clamp
PA16 to G (16) saddle clamp
PA16 to D (16) saddle clamp
PA10 to C (10) saddle clamp
PA12 to D (12) saddle clamp
PA12 to E (12) saddle clamp
PA12 to A (12) saddle clamp
PA14 to C (14) saddle clamp
PA14 to E (14) saddle clamp
PA14 to F (14) saddle clamp
PA68 to V (68) saddle clamp
PA71 to W (71) saddle clamp
PA70 to V (70) saddle clamp
PA70 to W (70) saddle clamp
PA67 to X (67) saddle clamp
PA69 to X (69) saddle clamp

6.2.2 Verify the following (+- 5%)

PA9 to PA21 = 10K ohms
PA9 to PA61 = 20K ohms
PA25 to PA26 = 5K ohms
PA35 to PA37 = 10K ohms
PA38 to PA40 = 20K ohms
PA53 to PA54 = 50K ohms
PA69 to PA9 = 20K ohms
PA5 to PA7 = 56.4K ohms

6.2.3 Set all potentiometers fully CCW

6.2.4 Verify PA9 to PA22 varies from 0 to 10K ohms as RH2 is rotated fully CW

6.2.5 Verify PA9 to PA62 varies from 0 to 20K ohms as RH7 is rotated fully CW

6.2.6 Verify PA26 to PA24 varies from 0 to 5K ohms as RH3 is rotated fully CW

6.2.7 Verify PA35 to PA36 varies from 0 to 10K ohms as RH4 is rotated fully CW

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- 6.2.8** Verify PA38 to PA39 varies from 0 to 20K ohms as RH5 is rotated fully CW
- 6.2.9** Verify PA54 to PA55 varies from 0 to 50K ohms as RH6 is rotated fully CW
- 6.2.10** Verify PA9 to PA72 varies from 0 to 20K ohms as RH8 is rotated fully CW
- 6.2.11** Verify PA7 to PA20 varies from 18.2K to 38.2K ohms as RH1 is rotated fully CW
- 6.2.12** Reinstall any components previously removed after verifying they are not defective

6.3 *TEST COMPLETE *****

7. Notes

7.1 None at this time.

8. Attachments

8.1 None at this time.