| g GE Energy | **Functional Testing Specification** |
|---|---|
| ***Parts & Repair Services***<br>***Louisville, KY.*** | **LOU-GED-DS3800NDID** |

**Test Procedure for a DS3800NDID card**

**DOCUMENT REVISION STATUS: Determined by the last entry in the "REV" and "DATE" column**

| REV. | DESCRIPTION | SIGNATURE | REV. DATE |
|---|---|---|---|
| A | Initial release | *Jeffrey D. Barton* | *7/11/02* |
| B | Changed Header | C. Wade | 7/25/2008 |
| C | Added asset numbers to section 5. | D. Bush | 8/13/2010 |
| D | Added step 6.1.2. | Cristyn Edlin | 12/4/2012 |
| E | | | |



| PREPARED BY | REVIEWED BY | REVIEWED BY | QUALITY APPROVAL |
|---|---|---|---|
| **Jeffrey D. Barton** | D. Bush | Cristyn Edlin | Robert Durell |
| **DATE** | **DATE** | **DATE** | **DATE** |
| **7/11/02** | 1/13/2010 | 14/4/2012 | 07/22/02 |

**Functional test procedure for a DS3800NDID control card.**

## 1. SCOPE

**1.1** This is a functional testing procedure for a Digital Siltron Control card.

## 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 or cracked
**4.2.1.2** Terminal strips / connectors broken or cracked
**4.2.1.3** Loose wires
**4.2.1.4** Components visually damaged
**4.2.1.5** Capacitors leaking
**4.2.1.6** Solder joints damaged or cold
**4.2.1.7** Circuit board burned or de-laminated
**4.2.1.8** Printed wire runs 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 | H033779 | ATE Test Fixture for DS3800NDID Board |
| 1 | | ATE Test Rack with #27 Personality Card |
| 1 | H188587 | ATE Test Fixture DS3800DDIB Card |
| 1 | H033700 | Digital Siltron Test Drive |
| 1 | | Digital Siltron Test Drive DS3800DDIB Card |

## 6. TESTING PROCESS

### 6.1 Setup

**6.1.1** Inspect surface mounted diodes on U78 hybrid card for cold solder joints, you may find hairline cracks in the solder joints.

**6.1.2** Ensure that U22 – 24 are NEC-D71055C and U52 – 54 are NEC-D71054-10. If they are not, replaced them.

### 6.2 Testing Procedure

#### 6.2.1 ATE Test

**6.2.1.1** Run the DS3800NDID test on the ATE.

#### 6.2.2 Drive Test

**6.2.2.1** Install DS3800DDIB drive test daughter card on UUT.

**6.2.2.2** Install UUT in Digital Siltron Drive.

**6.2.2.3** Power up test drive.

**6.2.2.4** Verify unit goes thru self-diag. cycles by watching LED's sequence and all IMOK LEDS illuminate on both drive boards.

**6.2.2.5** After sequence of self diag. completes, watch center meter (AMATURE VOLTAGE), located at top of drive unit, it will cycle from meter center to the right 6 times, then from center meter to the left 6 times.

**6.2.2.6** During motor startup, left meter (FIELD AMPS), at top of drive will move to the right at 100% then drop to 70%, showing drive is in energy saving mode.

**6.2.2.7** Let drive run for a 4hr. burn-in.

**6.2.2.8** If drive continues to operate after burn-in test, all test passed and UUT is ready for completion.

**6.2.2.9** Remove UUT and remove all test firmware and reinstall test firmware back in to drive test board.

**6.2.2.10** Install complete drive test board back into drive unit.

***6.3 ***TEST COMPLETE ******

## 7. Notes

**7.1** None at this time.

## 8. Attachments

**8.1** None at this time