| g GE Energy | **Functional Testing Specification** |
|---|---|
| ***Parts & Repair Services***<br>***Louisville, KY*** | **LOU-GED-148D2635G1** |

**Test Procedure for a 148D2635G1 board**

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

| REV. | DESCRIPTION | SIGNATURE | REV. DATE |
|---|---|---|---|
| A | Initial release. Transferred from paper to electronic form. | J. Archibald | 10/20/2011 |
| B | | | |
| C | | | |
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| PREPARED BY | REVIEWED BY | REVIEWED BY | QUALITY APPROVAL |
|---|---|---|---|
| J. Archibald | | | Charlie Wade |
| **DATE** | **DATE** | **DATE** | **DATE** |
| 10/20/2011 | | | 10/20/2011 |

## 1. SCOPE

**1.1** This is a functional testing procedure for a 148D2635G1 printed circuit board.

## 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 |
|---|---|---|
| 2 | | 30VDC Power Supplies |
| 1 | | Fluke 85 or equivalent |
| | | |

**6. Modifications/Upgrades**

**6.1** Check Orange Book for any modifications or upgrades.

**7. Testing Process**

**7.1 Testing Procedure**

**7.1.1** Apply +30VDC to pin-17, Common to Pin-19, and -22VDC to Pin-21.

**7.1.2** TP6 should read +12.7VDC +-10%.

**7.1.3** TP7 should read -12.7VDC +-10%.

**7.1.4** TP5 should adjust from 0VDC to +7VDC with R5, (R6 must be fully CCW), set TP5 for +3.0VDC

**7.1.5** TP2 should adjust from 0VDC to +20VDC with R2, set TP2 for +10VDC.

**7.1.6** Connect TP1 to Common. The voltage at Pin-12 should adjust from -0.4VDC to -3.6VDC with R3.

**7.1.7** Turn power supplies off.

**7.1.8** Make the following resistance checks;

**7.1.8.1** Remove all other connections and voltages.

**7.1.8.2** Pin-20 to Pin-36 = 20K +-5% ohms.

**7.1.8.3** Pin 3 to Pin-20 = 100K ohms (R1 fully CCW)

**7.1.8.4** Pin 3 to Pin-20 = 1.1M ohms (R1 fully CCW)

***7.2 ***TEST COMPLETE ******

**7.3 Post Testing Burn-in Required _X_ Yes ___ No**

**Note: All Turbine cards should be subjected to a 100 hour power soak.**

**8. Notes**

**8.1** None at this time.

**9. Attachments**

**9.1** None at this time.