| g GE Energy | **Functional Testing Specification** |
|---|---|
| ***Parts & Repair Services***<br>***Louisville, KY*** | **7556D10Gx** |

**Test Procedure for a**

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

| REV. | DESCRIPTION | SIGNATURE | REV. DATE |
|---|---|---|---|
| A | Initial release | Scott Cash | 11-14-2017 |
| B | | | |
| C | | | |



| PREPARED BY | REVIEWED BY | REVIEWED BY | QUALITY APPROVAL |
|---|---|---|---|
| Scott Cash | | | |
| **DATE** | **DATE** | **DATE** | **DATE** |
| 11-2-2017 | | | |

## 1. SCOPE

**1.1** This is a functional testing procedure for a 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**

## 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 | | Appropriate connector breakout box for 125xxx boards |
| 2 | | Dual Tenma Power supply or similar |
| 1 | | Switch box for connections to breakout box |
| | | |
| | | |

## 6. TESTING PROCESS

### 6.1 Setup G1 procedure is section 6.2 and G2 is 6.3.

### 6.2 Testing Procedure G1

**6.2.1** Connect PS1 +30 to pin 17.

**6.2.2** Connect PS1 -22 to pin 21.

**6.2.3** Connect common to pin 19.

**6.2.4** Plug card into Breakout box.

**6.2.5** Turn R2 and R4 full CW.

**6.2.6** Connect 50K ohm load from pint 25 to common.

**6.2.7** Verify +15 Vdc +/- .8v on the positive leg of C1 to common.

**6.2.8** Verify -15 Vdc +/- .8v on the negative leg of C2 to common.

**6.2.9** Connect PS2 to Pin39 and common to Pin19.

**6.2.10** With Pin 39 still at 0 Vdc verify 0 Vdc +/- 25 mv at TP3.

**6.2.11** Apply 2 Vdc to Pin 39 and verify (-7.8 to -8.2 Vdc) at Pin25, TP2 and TP3.

**6.2.12** Apply -2 Vdc to Pin 39 and verify (7.8 to 8.2 Vdc) at Pin25.

**6.2.13** Turn R4 full CCW and verify (2.5 to 2.9 Vdc) at Pin 25.

**6.2.14** Apply 2 Vdc to Pin 39 and verify (-7.3 to -7.7 Vdc) at Pin25.

**6.2.15** Turn R2 full CCW and verify (-1.4 to -1.8 Vdc) at TP3.

**6.2.16** Verify (-.9 to -1.3 Vdc) at Pin 25.

**6.2.17** Apply -2 Vdc to Ping 39 and verify (.33 to .73 Vdc) at Pin 25.

**6.2.18** G1 Test complete

**6.3** Test Procedure G2,

**6.3.1** Connect PS1 +30 to pin 17.

**6.3.2** Connect PS1 -22 to pin 21.

**6.3.3** Connect common to pin 19.

**6.3.4** Plug card into Breakout box.

**6.3.5** Turn R2 and R4 full CW.

**6.3.6** Connect 50K ohm load from pint 25 to common.

**6.3.7** Verify +15 Vdc +/- .8v on the positive leg of C1 to common.

**6.3.8** Verify -15 Vdc +/- .8v on the negative leg of C2 to common.

**6.3.9** Connect PS2 to Pin39 and common to Pin19.

**6.3.10** With Pin 39 still at 0 Vdc verify 0 Vdc +/- 25 mv at TP3.

**6.3.11** Apply 2 Vdc to Pin 39 and verify (-7.8 to -8.2 Vdc) at Pin25 and TP3.

**6.3.12** Apply -2 Vdc to Pin 39 and verify (7.8 to 8.2 Vdc) at Pin25.

**6.3.13** Turn R4 full CCW and verify (7.3 to 7.7 Vdc) at Pin 25.

**6.3.14** Apply 2 Vdc to Pin 39 and verify (-2.5 to -2.9 Vdc) at Pin25.

**6.3.15** Turn R2 full CCW and verify (-1.4 to -1.8 Vdc) at TP3.

**6.3.16** Verify (-.33 to -.73 Vdc) at Pin 25.

**6.3.17** Apply -2 Vdc to Ping 39 and verify (.9 to 1.3 Vdc) at Pin 25.

**6.3.18** G2 test complete.

- ******TEST COMPLETE ******

Section 7