g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**786E264G2**

Test Procedure for a

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

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Scott Cash			
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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

6.1.1 Setup board connection per diagram in section 6.3. You can substitute a power supply for the trim pot setup to pin 38. Make sure all supplies have commons connected.

6.2 Testing Procedure G1

6.2.1 Power up board and turn R23 and R15 full CW. Verify 4.6 Vdc +/- .4 at Pin 2.

6.2.2 Apply a negative voltage to pin 38 until pin 12 goes low. Then adjust back toward positive till pin 12 just goes high again (approx. 25 Vdc).

6.2.3 Enable switch 5 and verify pin 12 goes low. Turn off switch 5.

6.2.4 Enable switch 4 and verify pin 12 goes low. Turn off switch 4.

6.2.5 Enable switch 1and verify pin 14 goes high.

6.2.6 Enable switch 2 and turn off switch 1. Verify pin 14 latched high.

6.2.7 Turn off switch 2 and verify pin 14 goes low.

6.2.8 Enable switch 3.

6.2.9 Adjust R66 to full CW and verify 17 Vdc +/- 2 Vdc at pin 35.

6.2.10 Turn R66 full CCW and verify 3 Vdc +/- 1 Vdc at pin 35.

6.2.11 While monitoring pin 12 turn off switch 3. Pin 12 should go low momentarily.

6.2.12 While monitoring pin 40 adjust R62 from full CW to full CCW and verify adjustment range from 0 Vdc to 15 Vdc +/- 1 Vdc. Then leave R62 set at 7.5 Vdc.

6.2.13 With all switches off measure pin 41 and verify -7 Vdc +/- .7 Vdc.

6.2.14 Enable switch 1 and verify pin 41 goes to +7 Vcd +/- .7 Vdc.

6.2.15 Turn off switch 1.

6.2.16 Enable switch 5 and verify pin 12 goes low.

6.2.17 Turn off switch 5.

6.2.18 Enable switch 6 for at least 30 while verifying pin 12 goes low. Verify it take 15-20 seconds for pin 12 to go high again after turning off switch 6.

6.2.19 Enable switch 4 verifying pin 12 goes low. Now enable switch 1 and verify pin 12 goes high again. Turn off switch 4 and switch 1 verifying pin 12 stays high.

6.2.20 R23 should already be full CW, verify 4.6 Vdc +/- .4 Vdc at pin 2. Adjust R23 full CCW 0 Vdc at pin 2.

6.2.21 Return R23 to full CW.

6.2.22 Enable switch 1 verifying 4.6 Vdc +/- .4 Vdc at pin 2. Adjust R15 to full CCW and verify 1.3 Vdc +/- .1 Vdc at pin 2.

6.2.23 Return R23 and R15 to full CW.

6.2.24 With all switches, off verify 2.5 Vdc +/- .2 Vdc at pin 8 and pin 10.

6.2.25 Enable switch 1 and verify 1.6 Vdc +/- .2 Vdc at pin 8 and pin 10.

6.2.26 Turn off all switches.

6.2.27 Test Complete

6.3 Wiring