g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-118D1321G2**

Test Procedure for a 118D1321G0002 Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Glenn Chandler	3/28/2014
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DATE: 3/28/2014	**DATE:**	**DATE**	**DATE** 3/28/2014

1. SCOPE

1.1 This is a functional testing procedure for the 118D1321G0002 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 board's 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, 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		Fluke 87 DMM (or Equivalent)
2		0-30v Power Supplies
1		715 Calibrator used as current source or equivalent
1		2K ohm, 1% resistor
1		20K ohm, 1% resistor
1		10K ohm, 1% resistor

6. TESTING PROCESS

6.1 Testing Procedure

6.1.1 Connect a 2K ohm +/- 1% resistor from pin 22 to common.

6.1.2 Connect a 20K ohm +/- 1% resistor from pin 15 to pin 18.

6.1.3 Connect a 10K ohm +/- 1% resistor from pin 27 to pin 19.

6.1.4 Apply +22vdc +/- 2mv to pin 37.

6.1.5 Apply -22vdc +/- 2mv to pin 41.

6.1.6 Connect commons to pin 39.

6.1.7 Verify +15.7vdc +/- 1vdc at test point TP1.

6.1.8 Verify -15.7vdc +/- 1vdc at test point TP2.

6.1.9 Connect TP5 and Pin 30 to common.

6.1.10 Adjust VR50 for 0vdc +/- 1mv at pin 22.

6.1.11 Adjust VR51 for 0vdc +/- 1mv at pin 27.

6.1.12 Remove ground from TP5 and adjust VR3 for 1vdc +/- 10mv at TP5.

6.1.13 Adjust VR2 full CCW and verify 1.4vdc +/- 35mv at TP4.

6.1.14 Adjust VR2 full CW and verify 2.4vdc +/- 100mv at TP4.

6.1.15 Adjust VR3 full CW and verify 0vdc +/- 4mv at TP5.

6.1.16 Adjust VR3 full CCW and verify 2.54vdc +/-.18vdc at TP5.

6.1.17 Remove ground from pin 30 and apply -4ma to pin 30.

6.1.18 Adjust VR3 for 0vdc at TP4.

6.1.19 Apply -12ma to pin 30 and adjust VR2 for 5.0vdc at TP4.

6.1.20 Use the table in figure 1 and verify output volts at TP4.

6.1.21 Apply -20ma to pin 30.

6.1.22 Turn VR1 full CCW and verify +5vdc +/- .5vdc at pin 15.

6.1.23 Adjust VR1 full CW and verify 10vdc +/- 1vdc at pin 15.

Pin 30 ma	TP4 volts	Tolerance +/-
-4	0	2.4mv
-8	2.5	4.8mv
-12	5	7.2mv
-16	7.5	9.6mv
-20	10	12mv

Table 1

6.2 Post Testing Burn-in **Required** **_X__ Yes** **___ No**

Note: All MARK I, II, & III Turbine related cards require a post testing burn-in of 100 hours.

6.2.1 Apply BUS or Operational power to the card for a period of 100 hours.

6.2.2 Re-test card while warm using the above procedure.

6.3 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time

8. ATTACHMENTS

8.1 None at this time.