g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DS200FHVAG1**

Test Procedure for a High Voltage Gate Interface Board

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Darren Johnson	7/7/2009
B	Revised to note the difference between G1 and G2.	Cristyn Edlin	7/15/2010
C			
D			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Darren Johnson	Cristyn Edlin		Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
July 7, 2009	7/15/2010		8/3/2010

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** Check boards electronic folder for more information.
- **3.1.2** GEI-100224

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		Variable DC source
3		Multimeter

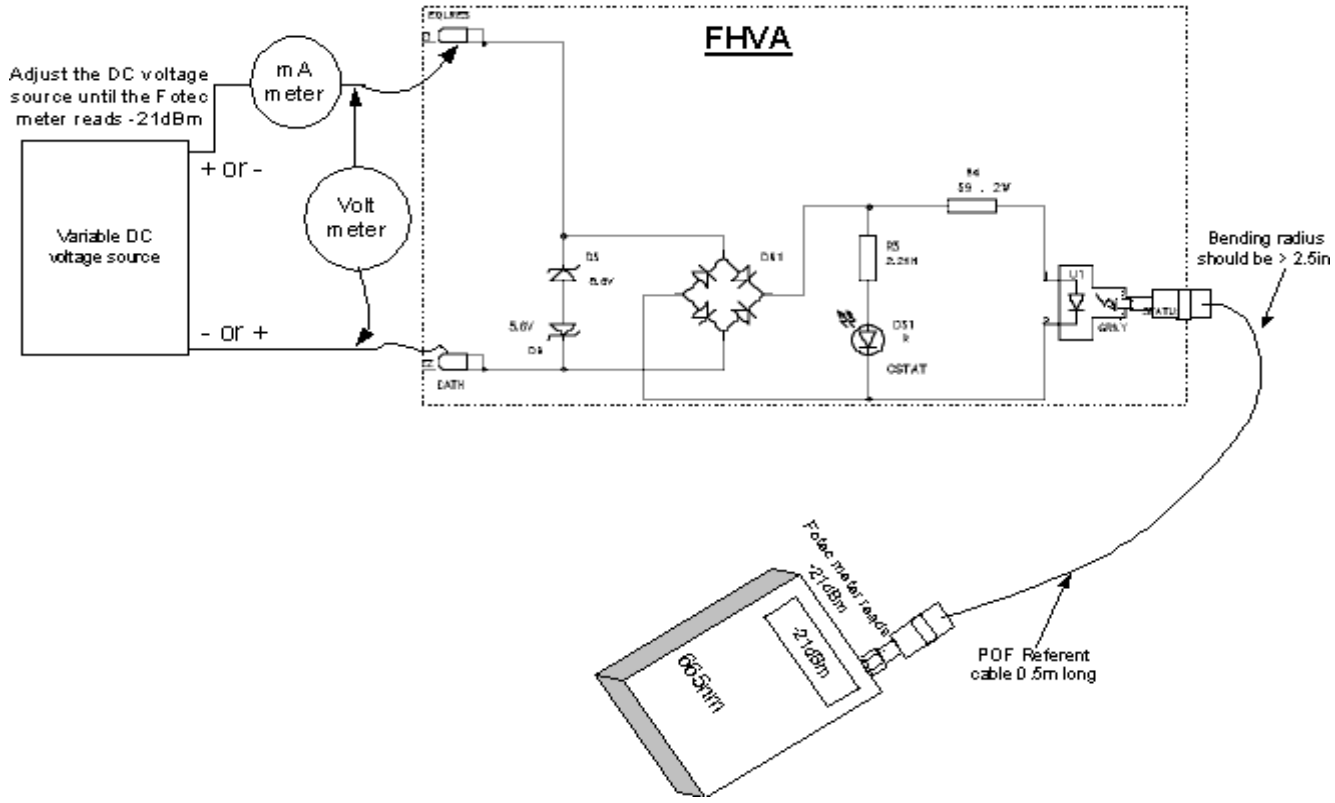

Diagram 1

6. TESTING PROCESS

6.1 Setup

6.1.1 Setup according to diagram #1. At the present time we do not have a meter available to measure the output at U1.

6.2 Testing Procedure

6.2.1 Use a multimeter to measure coil T1, it should be approximately 0.5 ohms.

6.2.2 Use a multimeter to measure diodes D1 thru D4, they should read .475 vdc.

6.2.3 Setup according to Diagram #1.

6.2.4 Place current meter in series with the positive side of the variable D.C. supply.

6.2.5 Place voltage meter in parallel with the variable D.C. supply.

6.2.6 The technician will be taking readings using both 3.0 and 6.2vdc as input voltages.

6.2.7 Voltages will be measured across R3 and R4, per table 1.

6.2.8 DN1 output voltage will be measured from + and - (located on the board and body of DN1), per table 1.

6.2.9 While performing the above task please take notice of illumination levels concerning LEDs Status and C Stat.

Table 1

	Input Current	R3 Voltage (DC)	R4 Voltage (DC)	DN1 Output (DC)	U1 Current (ma)	DS1 (ma)	Status	C Stat
3.0vdc	4.04ma	0.175	0.15	1.71	3.846	0.079	Dim	Dim
6.2vdc	79.6ma	2.806	2.871	4.53	73.615	1.270	Bright	Bright
3.0vdc	3.34ma	0.156	0.126	1.69	3.231	0.071	Dim	Dim
6.2vdc	75.5ma	2.843	2.873	4.53	73.667	1.286	Bright	Bright
3.0vdc	4.05ma	0.182	0.152	1.71	3.897	0.082	Dim	Dim
6.2vdc	76.4ma	2.845	2.88	4.54	73.846	1.287	Bright	Bright
3.0vdc	3.72ma	0.179	0.14	1.7	3.590	0.081	Dim	Dim
6.2vdc	77.7ma	2.848	2.872	4.53	73.641	1.289	Bright	Bright

These readings are from the first four cards performed under this procedure.

Note: U1 current = measured R4 voltage/39 ohm

DS1 current = measured R3 voltage/2.21k

6.3 Post Testing Burn-in Required __x_ Yes ___ No

Let each measurement settle for several minutes before documenting results.

6.4 ***TEST COMPLETE ***

7. NOTES

7.1 The difference between the G1 and G2 is T1. G1 contains part # 323A2270P1. G2 contains part # 323A2270P2. The bridge circuits of each use the same diodes and this test works on both revisions. The practical difference (if any) between the 2 revisions respective transformers is not known at this time.

8. ATTACHMENTS

8.1 None at this time