g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-IS200DAMDG1A**

Test Procedure for a 92A/125A/180A Gate Drive Interface

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

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A	Initial release	J. Hardin	09/26/2012
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DATE	**DATE**	**DATE**	**DATE**
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1. SCOPE

1.1 This is a functional testing procedure for a Gate Drive Interface 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
1		SCR firing Box
1		Fluke 87 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 This test is written with the assumption that new power modules are used.

7.1.2 Verify Diodes for correct value:

D1	**.601 Vdc**
D2	**.735 Vdc**
D3	**.601 Vdc**
D4	**.735 Vdc**
D5	**.735 Vdc**
D6	**.737 Vdc**

7.1.3 Verify resistor values:

R1	**6.2 k +/-.5**
R15	**6.2 k +/-.5**
R17	**2.15 k +/-.5**
R2	**2.15 k +/-.5**
R21	**1 k +/-.5**
R3	**1 k +/-.5**
R4	**4.7 ohms +/-.5**
R5	**4.7 ohms +/-.5**
R6	**1 ohm +/-.5**
R7	**1 ohm +/-.5**

7.1.4 LED check

7.1.4.1 Connect leads to PL-1 (+) and PL-2 (-) and com and positive on SCR firing box. Apply power. DS-2 should light up. Reverse leads. DS-4 should light up.

7.1.4.2 Connect leads to PL-7 (+) and PL-6 (-) and com and positive on SCR firing box. Apply power. DS-1 should light up. Reverse leads. DS-3 should light up.

7.2 ***TEST COMPLETE ***

8. Notes

8.1 None at this time.

9. Attachments

9.1 None at this time.