g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-IS200EXAM**

Test Procedure for an IS200EXAMG1x Exciter Attenuation Module.

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release. Covers **G1A** and ***G1B*** versions of this type of card.	J. Francis	01/13/2014
B			
C			

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DATE	**DATE**	**DATE**	**DATE**
01/13/2014			6/10/2014

1. SCOPE

1.1 This is a functional testing procedure for an **IS200EXAMG1x** Excitation Attenuation Module.

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		Fluke 87 DMM (or Equivalent)
1		Tenma Dual Output Power Supply (or Equivalent)

6. TESTING PROCESS

6.1 Setup Procedure

6.1.1 Place Jumpers JP1, JP2, and JP3 to positions 1 to 2.

6.2 Testing Procedure - Static checks

Note: For testing Board Orientation is component side up, able to read model number correctly (left to right) between eyelets E1 (right side) and E2 (left side). ***Items in italics "(G1B ONLY)" are for G1B models only.***

6.2.1 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for 17.9 Kohms -/+ 200 Ohms from eyelet E1 to connector J1-1.

6.2.2 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for 17.9 Kohms -/+ 200 Ohms from eyelet E2 to connector J1-1.

6.2.3 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for continuity between screw-on connector TB1 and connector J2 shield.

6.2.4 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for 2 Kohms -/+ 20 Ohms between jumper JP1 and connector J1-1.

6.2.5 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for 2 Kohms -/+ 20 Ohms between jumper JP2 and connector J1-1.

6.2.6 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for 1 Kohms -/+ 20 Ohms between jumper JP3 and connector J1-2.

6.2.7 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for 5.8 Kohms -/+ 50 Ohms between connector J1-2 and connector J2-4.

6.2.8 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for 5.8 Kohms -/+ 50 Ohms between connector J1-2 and connector J2-9.

6.2.9 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for continuity between connector J1-3 and left side of Capacitor C2.

6.2.10 Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for continuity between connector J1-3 and right side of Capacitor C4.

6.2.11 (G1B ONLY) *Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for an open (more than 1 Mohm) from screw-on connector TB1 to jumper JP3.*

6.2.12 (G1B ONLY) *Using Fluke 87 DMM (or Equivalent), set for Resistance (Ohms) function, check for 13.6 Kohms -/+ 150 Ohms from connector J1-3 to top side of Resistor R27.*

6.3 Testing Procedure - Functional Testing

6.3.1 Connect Power Supply output, set for 24 VDC -/+ 0.5VDC, positive lead to connector J2-3 and to J1-2.

6.3.2 Connect Power Supply output negative lead to connector J2-8. Should hear Relay K1 energize.

6.3.3 Connect Fluke 87 DMM (or Equivalent), set for DC Volt function, negative meter lead to Power Supply output negative lead.

6.3.4 Using Fluke 87 DMM (or Equivalent), set for DC Volt function, check for 0 Volts on J1-1 and +24 VDC -/+ 0.5 VDC on J1-2.

6.3.5 Remove Power Supply output negative lead from connector J2-8. Should hear Relay K1 de-energize.

6.3.6 Using Fluke 87 DMM (or Equivalent), set for DC Volt function, check for +24 VDC -/+ 0.5 VDC on J1-1 and 0 Volts on J1-2.

6.3.7 **G1A** testing complete. ***G1B*** units proceed to step 6.2.2.8 for testing.

6.3.8 ***(G1B ONLY)*** *Using Fluke 87 DMM (or Equivalent), set for DC Volt function, check for +24 VDC -/+ 0.5 VDC on J1-1.*

6.3.9 ***(G1B ONLY)*** *Connect Power Supply output negative lead to connector J2-7. Should hear Relay K2 energize.*

6.3.10 ***(G1B ONLY)*** *Using Fluke 87 DMM (or Equivalent), set for DC Volt function, check for 0 Volts on J1-1.*

6.4 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time.

8. ATTACHMENTS

8.1 None at this time.