g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-531X185CPTA**

Test Procedure for a 531X185CPTA

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	G. Chandler	1/3/2011
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PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
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DATE	**DATE**	**DATE**	**DATE**
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1. SCOPE

1.1 This is a functional testing procedure for a

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 85 or Equivalent
1		SCR Firing Box
1		Oscilloscope

6. Testing Process

6.1 Resistance checks

6.1.1 Remove jumpers at JP3, JP4, and JP5.

6.1.2 Measure from NFB1 to L1 for 3.75M ohm.

6.1.3 Measure from NFB2 to L2 for 3.75M ohm.

6.1.4 Measure from NFB3 to L3 for 3.75M ohm.

6.1.5 DMM set to diode scale.

6.1.6 Measure from L1 (+) to CPSR (-) for 1.5V

6.1.7 Measure from L2 (+) to CPSR (-) for 1.5V

6.1.8 Measure from L3 (+) to CPSR (-) for 1.5V

6.1.9 Measure R38-R43 and R67 for 20 ohms.

6.1.10 Measure R68-R69 for 1 ohm.

6.1.11 Component test all snubber caps.

6.1.12 Verify fuses are operational and they are of proper value.

6.2 Power On Test

6.2.1 Connect +24Vdc to pin 16 and com. to pin 14 (PCOM) of connector NFB.

6.2.2 Use the chart below to test the firing circuit of the card. Set scope at 5V per/div. and 1ms/div.

SCR Firing Box	SCR Firing Box	Scope (+)	Scope (-)	LED
NPT 13	PCOM	1SP2	1SP1	No
NPT 14	PCOM	1NP2	1NP1	LED A
NPT 15	PCOM	2SP2	2SP1	No
NPT 16	PCOM	2NP2	2NP1	LED B
NPT 17	PCOM	3SP2	3SP1	No
NPT 18	PCOM	3NP2	3NP1	LED C

6.2.3 Connect a 33 ohm 5w resistor (for a load) to each of the output circuits (1S-3S) as you test them.

6.2.4 You will observe an approximant 12V p/p positive pulse train on each of the output circuits

6.2.5 The LEDs A, B and C will illuminate in intensity with the varying of the SCR firing box.

6.3 ***TEST COMPLETE ***

7. Notes & Attachments

7.1 None at this time.