g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-IS200DTCIH1A**

Test Procedure for any IS200DTCIH1A MK VI card

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

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A	Initial release	J. Francis	09/14/2011
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DATE	**DATE**	**DATE**	**DATE**
09/14/2011			9/14/2011

1. SCOPE

1.1 This is a functional testing procedure Test Procedure for an IS200DTCIH1Ax MK VI 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 N:\Design Folders\IS2\IS200D

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 70III Multimeter or equivalent
1		ID chip programmer PC

6. TESTING PROCESS

6.1 Testing Procedure

6.1.1 Initial visual inspection of card: Look the card over very closely. These cards can arrive in the full range of conditions, from clean and excellent to filthy and corroded. Some even have physical damage from burns and/or impacts with other objects. Some will be missing components. An area of particular concern is JR1 and TB1.

6.1.2 Verification of ID Chip (Hyperterminal): When you visually inspected the card, you should also have taken note of the complete model and serial numbers on the card. It's a good thing to write them down, take the card over to the Chip ID programmer PC and call up the Main Menu, then select ID Prom Programmer, then go through the menus until you find the one for your card. Follow the directions it gives you.

6.1.3 Point to Point Verification of Traces

Note: *Board orientation for this portion of test is component side of board UP, with TB1 closest to you***.**

6.1.3.1 Check the following point to point connections for the expected resistance results listed:

From:	To:	Expected Resistance Result:
TB1-1	TB1-3	< 10 Ohms
TB1-1	TB1-5	< 10 Ohms
TB1-1	TB1-7	< 10 Ohms
TB1-1	TB1-9	< 10 Ohms
TB1-1	TB1-11	< 10 Ohms
TB1-1	TB1-13	< 10 Ohms
TB1-1	TB1-15	< 10 Ohms
TB1-1	TB1-17	< 10 Ohms
TB1-1	TB1-19	< 10 Ohms
TB1-1	TB1-21	< 10 Ohms
TB1-1	TB1-23	< 10 Ohms
TB1-1	TB1-25	< 10 Ohms
TB1-1	TB1-27	< 10 Ohms
TB1-1	TB1-29	< 10 Ohms
TB1-1	TB1-31	< 10 Ohms
TB1-1	TB1-33	< 10 Ohms
TB1-1	TB1-35	< 10 Ohms

TB1-1	TB1-37	< 10 Ohms

From:	To:	Expected Resistance Result:
TB1-1	TB1-39	< 10 Ohms
TB1-1	TB1-41	< 10 Ohms
TB1-1	TB1-43	< 10 Ohms
TB1-1	TB1-45	< 10 Ohms
TB1-1	TB1-47	< 10 Ohms
TB1-1	TB1-49	< 10 Ohms
TB1-1	TB1-51	< 10 Ohms
TB1-51	JR1-32	86.6K Ohms -/+ 100 Ohms
TB1-51	TB1-49	< 10 Ohms
TB1-51	TB1-50	< 10 Ohms
TB1-55	TB1-56	< 10 Ohms
TB1-55	D41 Cathode	< 10 Ohms
TB1-55	D43 Cathode	< 10 Ohms
TB1-55	D45 Cathode	< 10 Ohms
TB1-55	D47 Cathode	< 10 Ohms
TB1-55	D49 Cathode	< 10 Ohms
TB1-55	D51 Cathode	< 10 Ohms
TB1-55	D53 Cathode	< 10 Ohms
TB1-55	D1 Cathode	< 10 Ohms
TB1-55	D5 Cathode	< 10 Ohms
TB1-55	D9 Cathode	< 10 Ohms
TB1-55	D13 Cathode	< 10 Ohms
TB1-55	D17 Cathode	< 10 Ohms
TB1-55	D21 Cathode	< 10 Ohms
TB1-55	D25 Cathode	< 10 Ohms
TB1-55	D29 Cathode	< 10 Ohms
TB1-55	D33 Cathode	< 10 Ohms
TB1-55	D4 Cathode	< 10 Ohms
TB1-55	D8 Cathode	< 10 Ohms
TB1-55	D12 Cathode	< 10 Ohms
TB1-55	D16 Cathode	< 10 Ohms
TB1-55	D20 Cathode	< 10 Ohms
TB1-55	D24 Cathode	< 10 Ohms
TB1-55	D28 Cathode	< 10 Ohms
TB1-55	D32 Cathode	< 10 Ohms

From:	To:	Expected Resistance Result:
TB1-55	D36 Cathode	< 10 Ohms
TB1-55	D38 Cathode	< 10 Ohms
TB1-55	D40 Cathode	< 10 Ohms
D1 Anode	D2 Anode	< 10 Ohms
D5 Anode	D6 Anode	< 10 Ohms
D9 Anode	D10 Anode	< 10 Ohms
D13 Anode	D14 Anode	< 10 Ohms
D17 Anode	D18 Anode	< 10 Ohms
D21 Anode	D22 Anode	< 10 Ohms
D25 Anode	D26 Anode	< 10 Ohms
D29 Anode	D30 Anode	< 10 Ohms
D33 Anode	D34 Anode	< 10 Ohms
D4 Anode	D3 Anode	< 10 Ohms
D8 Anode	D7 Anode	< 10 Ohms
D12 Anode	D11 Anode	< 10 Ohms
D16 Anode	D15 Anode	< 10 Ohms
D20 Anode	D19 Anode	< 10 Ohms
D24 Anode	D23 Anode	< 10 Ohms
D28 Anode	D27 Anode	< 10 Ohms
D32 Anode	D31 Anode	< 10 Ohms
D36 Anode	D35 Anode	< 10 Ohms
D38 Anode	D37 Anode	< 10 Ohms
D40 Anode	D39 Anode	< 10 Ohms
D41 Anode	D42 Anode	< 10 Ohms
D43 Anode	D44 Anode	< 10 Ohms
D45 Anode	D46 Anode	< 10 Ohms
D47 Anode	D48 Anode	< 10 Ohms
D49 Anode	D50 Anode	< 10 Ohms
D51 Anode	D52 Anode	< 10 Ohms
D53 Anode	D54 Anode	< 10 Ohms
TB1-2	D2 Cathode	< 10 Ohms
TB1-4	D6 Cathode	< 10 Ohms
TB1-6	D10 Cathode	< 10 Ohms
TB1-8	D14 Cathode	< 10 Ohms
TB1-10	D18 Cathode	< 10 Ohms

From:	To:	Expected Resistance Result:
TB1-12	D22 Cathode	< 10 Ohms
TB1-14	D26 Cathode	< 10 Ohms
TB1-16	D30 Cathode	< 10 Ohms
TB1-18	D31 Cathode	< 10 Ohms
TB1-20	D27 Cathode	< 10 Ohms
TB1-22	D23 Cathode	< 10 Ohms
TB1-24	D19 Cathode	< 10 Ohms
TB1-26	D15 Cathode	< 10 Ohms
TB1-28	D11 Cathode	< 10 Ohms
TB1-30	D7 Cathode	< 10 Ohms
TB1-32	D3 Cathode	< 10 Ohms
TB1-34	D37 Cathode	< 10 Ohms
TB1-36	D35 Cathode	< 10 Ohms
TB1-38	D42 Cathode	< 10 Ohms
TB1-40	D44 Cathode	< 10 Ohms
TB1-42	D46 Cathode	< 10 Ohms
TB1-44	D48 Cathode	< 10 Ohms
TB1-46	D50 Cathode	< 10 Ohms
TB1-48	D52 Cathode	< 10 Ohms
TB1-54	D54 Cathode	< 10 Ohms
TB1-54	JR1-30	< 10 Ohms
TB1-54	D34 Cathode	< 10 Ohms
TB1-54	D39 Cathode	< 10 Ohms
TB1-54	TB1-52	< 10 Ohms
TB1-54	TB1-53	< 10 Ohms
TB1-54	C25 - Right Side	< 10 Ohms
TB1-54	C23 - Right Side	< 10 Ohms
TB1-54	C11 - Right Side	< 10 Ohms
TB1-54	C3 - Right Side	< 10 Ohms
TB1-54	C4 - Right Side	< 10 Ohms
TB1-54	C16 - Right Side	< 10 Ohms
TB1-54	C24 - Right Side	< 10 Ohms
TB1-54	C14 - Right Side	< 10 Ohms
TB1-54	C2 - Right Side	< 10 Ohms
TB1-54	C6 - Left Side	< 10 Ohms

From:	To:	Expected Resistance Result:
TB1-54	C10 - Left Side	< 10 Ohms
TB1-54	C18 - Left Side	< 10 Ohms
TB1-54	C22 - Left Side	< 10 Ohms
TB1-54	C8 - Left Side	< 10 Ohms
TB1-54	C12 - Left Side	< 10 Ohms
TB1-54	C20 - Left Side	< 10 Ohms
TB1-54	C15 - Left Side	< 10 Ohms
TB1-54	C7 - Left Side	< 10 Ohms
TB1-54	C19 - Left Side	< 10 Ohms
TB1-54	C5 - Left Side	< 10 Ohms
TB1-54	C9 - Left Side	< 10 Ohms
TB1-54	C13 - Left Side	< 10 Ohms
TB1-54	C17 - Left Side	< 10 Ohms
TB1-54	C21 - Left Side	< 10 Ohms
TB1-54	TB1-2	10K Ohms -/+ 100 Ohms
TB1-54	TB1-4	10K Ohms -/+ 100 Ohms
TB1-54	TB1-6	10K Ohms -/+ 100 Ohms
TB1-54	TB1-8	10K Ohms -/+ 100 Ohms
TB1-54	TB1-10	10K Ohms -/+ 100 Ohms
TB1-54	TB1-12	10K Ohms -/+ 100 Ohms
TB1-54	TB1-14	10K Ohms -/+ 100 Ohms
TB1-54	TB1-16	10K Ohms -/+ 100 Ohms
TB1-54	TB1-18	10K Ohms -/+ 100 Ohms
TB1-54	TB1-20	10K Ohms -/+ 100 Ohms
TB1-54	TB1-22	10K Ohms -/+ 100 Ohms
TB1-54	TB1-24	10K Ohms -/+ 100 Ohms
TB1-54	TB1-26	10K Ohms -/+ 100 Ohms
TB1-54	TB1-28	10K Ohms -/+ 100 Ohms
TB1-54	TB1-30	10K Ohms -/+ 100 Ohms
TB1-54	TB1-32	10K Ohms -/+ 100 Ohms
TB1-54	TB1-34	10K Ohms -/+ 100 Ohms
TB1-54	TB1-36	10K Ohms -/+ 100 Ohms
TB1-54	TB1-38	10K Ohms -/+ 100 Ohms
TB1-54	TB1-40	10K Ohms -/+ 100 Ohms
TB1-54	TB1-42	10K Ohms -/+ 100 Ohms

From:	To:	Expected Resistance Result:
TB1-54	TB1-44	2.42K Ohms -/+ 240 Ohms
TB1-54	TB1-46	2.42K Ohms -/+ 240 Ohms
TB1-54	TB1-48	2.42K Ohms -/+ 240 Ohms
TB1-38	C25 - Left Side	100K Ohms -/+ 1K Ohms
TB1-36	C23 - Left Side	100K Ohms -/+ 1K Ohms
TB1-30	C11 - Left Side	100K Ohms -/+ 1K Ohms
TB1-26	C3 - Left Side	100K Ohms -/+ 1K Ohms
TB1-24	C4 - Left Side	100K Ohms -/+ 1K Ohms
TB1-18	C16 - Left Side	100K Ohms -/+ 1K Ohms
TB1-14	C24 - Left Side	100K Ohms -/+ 1K Ohms
TB1-8	C14 - Left Side	100K Ohms -/+ 1K Ohms
TB1-2	C2 - Left Side	100K Ohms -/+ 1K Ohms
TB1-4	C6 - Right Side	100K Ohms -/+ 1K Ohms
TB1-6	C10 - Right Side	100K Ohms -/+ 1K Ohms
TB1-10	C18 -Right Side	100K Ohms -/+ 1K Ohms
TB1-12	C22 - Right Side	100K Ohms -/+ 1K Ohms
TB1-16	C20 - Right Side	100K Ohms -/+ 1K Ohms
TB1-20	C12 - Right Side	100K Ohms -/+ 1K Ohms
TB1-22	C8 - Right Side	100K Ohms -/+ 1K Ohms
TB1-28	C7 - Right Side	100K Ohms -/+ 1K Ohms
TB1-32	C15 - Right Side	100K Ohms -/+ 1K Ohms
TB1-34	C19 - Right Side	100K Ohms -/+ 1K Ohms
TB1-40	C21 - Right Side	100K Ohms -/+ 1K Ohms
TB1-42	C17 - Right Side	100K Ohms -/+ 1K Ohms
TB1-44	C13 - Right Side	100K Ohms -/+ 1K Ohms
TB1-46	C9 - Right Side	100K Ohms -/+ 1K Ohms
TB1-48	C5 - Right Side	100K Ohms -/+ 1K Ohms
TB1-2	JR1-3	118.1K Ohms -/+ 1181 Ohms
TB1-4	JR1-4	118.1K Ohms -/+ 1181 Ohms
TB1-6	JR1-5	118.1K Ohms -/+ 1181 Ohms
TB1-8	JR1-6	118.1K Ohms -/+ 1181 Ohms
TB1-10	JR1-7	118.1K Ohms -/+ 1181 Ohms
TB1-12	JR1-8	118.1K Ohms -/+ 1181 Ohms
TB1-14	JR1-9	118.1K Ohms -/+ 1181 Ohms
TB1-16	JR1-10	118.1K Ohms -/+ 1181 Ohms
TB1-18	JR1-11	118.1K Ohms -/+ 1181 Ohms

From:	To:	Expected Resistance Result:
TB1-20	JR1-12	118.1K Ohms -/+ 1181 Ohms
TB1-22	JR1-13	118.1K Ohms -/+ 1181 Ohms
TB1-24	JR1-14	118.1K Ohms -/+ 1181 Ohms
TB1-26	JR1-15	118.1K Ohms -/+ 1181 Ohms
TB1-28	JR1-16	118.1K Ohms -/+ 1181 Ohms
TB1-30	JR1-22	118.1K Ohms -/+ 1181 Ohms
TB1-32	JR1-23	118.1K Ohms -/+ 1181 Ohms
TB1-34	JR1-24	118.1K Ohms -/+ 1181 Ohms
TB1-36	JR1-25	118.1K Ohms -/+ 1181 Ohms
TB1-38	JR1-26	118.1K Ohms -/+ 1181 Ohms
TB1-40	JR1-27	118.1K Ohms -/+ 1181 Ohms
TB1-42	JR1-28	118.1K Ohms -/+ 1181 Ohms
TB1-44	JR1-29	118.1K Ohms -/+ 1181 Ohms
TB1-46	JR1-34	118.1K Ohms -/+ 1181 Ohms
TB1-48	JR1-35	118.1K Ohms -/+ 1181 Ohms
TB1-55	C1 - Left Side	< 10 Ohms
JR1 Shield (metal cover)	C1 - Right Side	< 10 Ohms

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

Note: The technician, lead tech, or MSO determines burn-in requirement on an as-needed basis, or per customer request.

6.3 ***TEST COMPLETE ***

7. ATTACHMENTS

7.1 None.