g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-IS200AVGC**

Test Procedure for an IS200AVGCG1AAA card.

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	J. Francis	06/20/2012

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
J. Francis			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
06/20/2012			6/22/2012

1. SCOPE

1.1 This is a functional testing procedure for an **IS200AVGCG1AAA** 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 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)
1	*	SCR Firing Box
1	*	O-Scope

6. TESTING PROCESS

6.1 Setup Procedure

6.1.1 DO NOT APPLY POWER TO UNIT AT THIS TIME.

6.1.1.1 Perform static check with Multimeter of all components to verify that there are no "SHORTS" or "OPENS" before continuing with test setup.

6.1.1.2 Connect +15 VDC power supply positive output to 2PL-8.

6.1.1.3 Connect +15 VDC power supply return to 2PL-6.

6.1.1.4 Connect -7 VDC power supply negative output to 2PL-7.

6.1.1.5 Connect -7 VDC power supply return to 2PL-6.

6.1.1.6 Connect SCR Firing Box "GATE" to 2PL-5.

6.1.1.7 Connect SCR Firing Box "CATHODE" to 2PL-6.

6.1.1.8 Adjust the SCR Firing Box to 0 output, and place the Normal/Boost switch in "NORMAL" position.

6.1.1.9 Connect O-Scope positive input to UGA eyelet.

6.1.1.10 Connect O-Scope return to UEA eyelet, close to UGA eyelet.

6.2 Testing Procedure

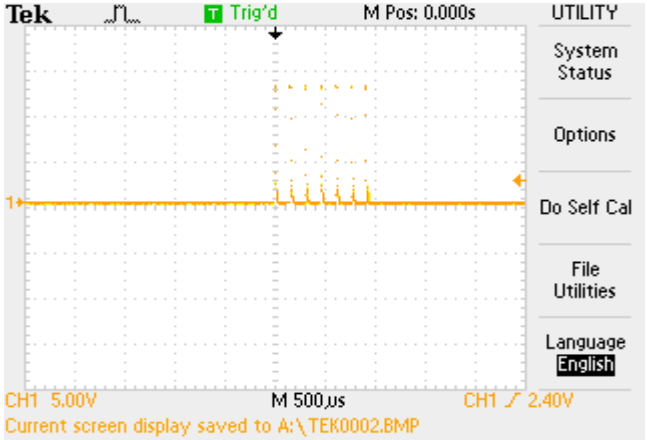
6.2.1 "UPPER" circuits testing

6.2.1.1 Turn on both +15 and -7 VDC power supplies.

6.2.1.1.1 Make sure the unit powers up properly without drawing too much current. As measured on a good unit, both supplies should draw less than 20 mADC each.

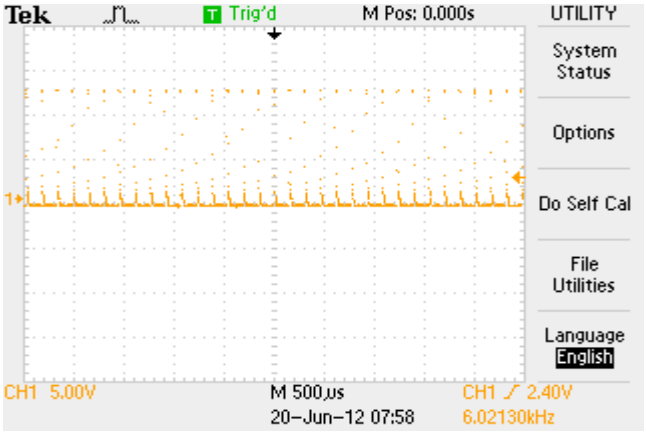
6.2.1.2 Making sure the SCR Firing Box is adjusted for 0 output and the switch in "NORMAL" position, turn on the SCR Firing Box.

6.2.1.3 Adjust the SCR Firing Box to "20". The O-Scope should display the following:



6.2.1.4

6.2.1.5 Adjust the SCR Firing Box to “100”. The O-Scope should display the following:



6.2.1.6

6.2.1.7 Adjust the SCR Firing Box to “0”.

6.2.1.8 Move O-Scope positive input to UGB eyelet.

6.2.1.9 Move O-Scope return to UEB eyelet.

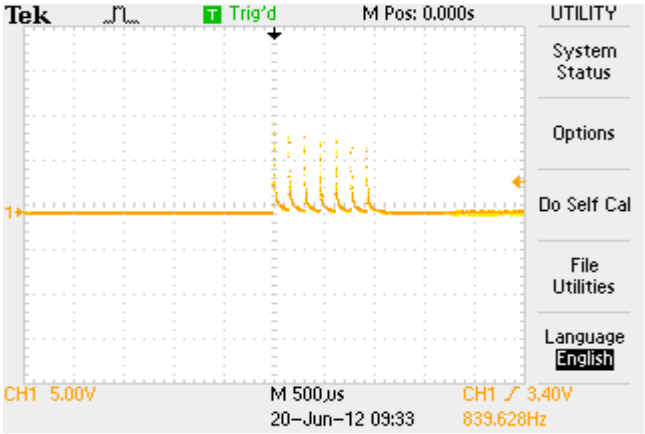
6.2.1.10 Adjust the SCR Firing Box to “20”. O-Scope should display the same as in step 6.2.1.4.

6.2.1.11 Adjust the SCR Firing Box to “100”. O-Scope should display the same as in step 6.2.1.6.

6.2.1.12 Move O-Scope positive input to UCA eyelet.

6.2.1.13 Move O-Scope return to 2PL-6.

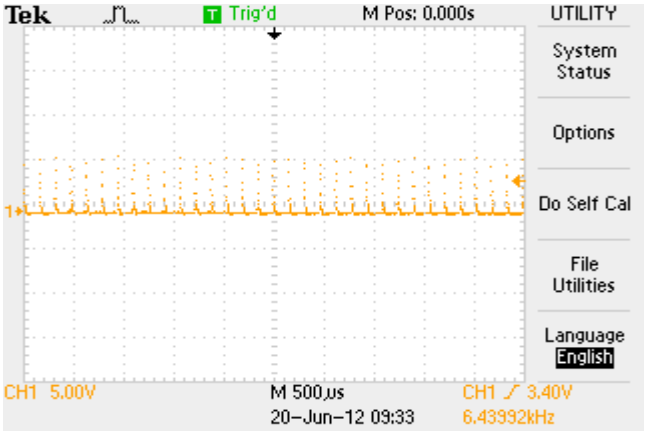
6.2.1.14 Adjust the SCR Firing Box to “20”. O-Scope should display the following:



6.2.1.15

6.2.1.16 Adjust the SCR Firing Box to “100”. O-Scope should display the following:

6.2.1.17



6.2.1.18 Turn off SCR Firing Box and adjust to "0".

6.2.1.19 Turn off both +15 and -7 VDC power supplies.

6.2.2 "LOWER" circuits testing

6.2.2.1 Move +15 VDC power supply positive output to 1PL-6.

6.2.2.2 Move +15 VDC power supply return to 1PL-4.

6.2.2.3 Move -7 VDC power supply negative output to 1PL-5.

6.2.2.4 Move -7 VDC power supply return to 1PL-4.

6.2.2.5 Move SCR Firing Box "GATE" to 1PL-3.

6.2.2.6 Move SCR Firing Box "CATHODE" to 1PL-4.

6.2.2.7 Adjust the SCR Firing Box to 0 output, and place the Normal/Boost switch in "NORMAL" position.

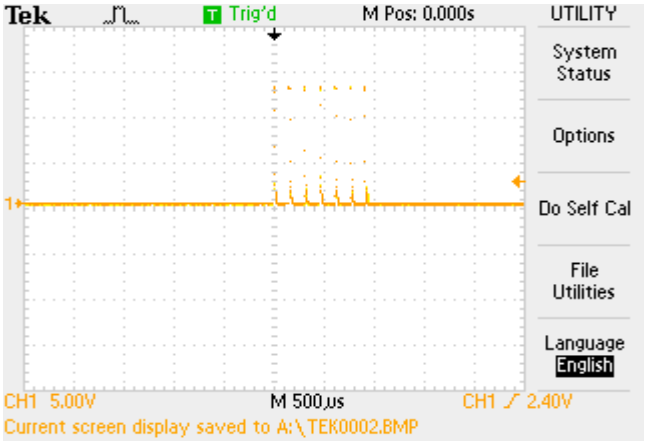
6.2.2.8 Move O-Scope positive input to LGA eyelet.

6.2.2.9 Move O-Scope return to LEA eyelet.

6.2.2.10 Turn on both +15 and -7 VDC power supplies.

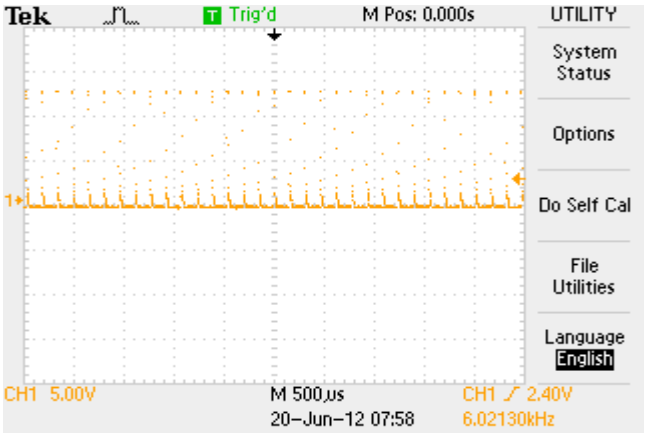
6.2.2.11 Making sure the SCR Firing Box is adjusted for 0 output and the switch in "NORMAL" position, turn on the SCR Firing Box.

6.2.2.12 Adjust the SCR Firing Box to “20”. The O-Scope should display the following:



6.2.2.13

6.2.2.14 Adjust the SCR Firing Box to “100”. The O-Scope should display the following:



6.2.2.15

6.2.2.16 Adjust the SCR Firing Box to “0”.

6.2.2.17 Move O-Scope positive input to LGB eyelet.

6.2.2.18 Move O-Scope return to LEB eyelet.

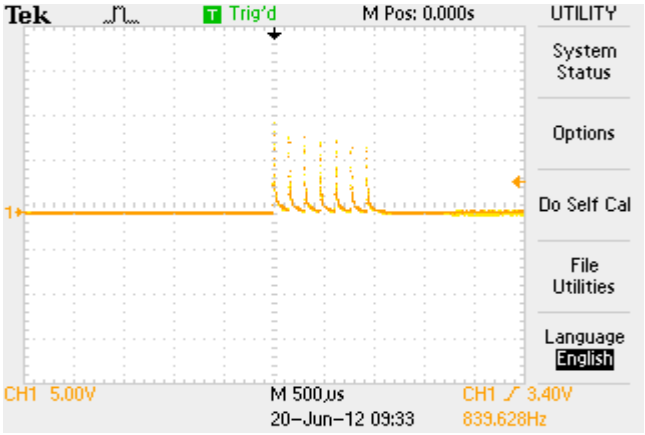
6.2.2.19 Adjust the SCR Firing Box to “20”. O-Scope should display the same as in step 6.2.2.13.

6.2.2.20 Adjust the SCR Firing Box to “100”. O-Scope should display the same as in step 6.2.2.15.

6.2.2.21 Move O-Scope positive input to UEA eyelet, close to UCA eyelet.

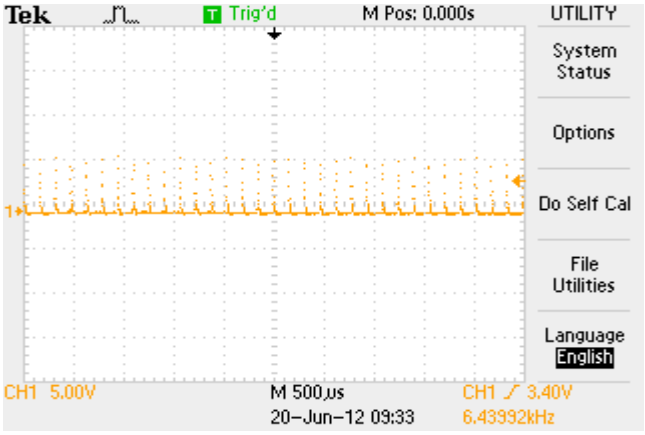
6.2.2.22 Move O-Scope return to 1PL-4.

6.2.2.23 Adjust the SCR Firing Box to “20”. O-Scope should display the following:



6.2.2.24

6.2.2.25 Adjust the SCR Firing Box to “100”. O-Scope should display the following:



6.2.2.26

6.2.2.27 Turn off SCR Firing Box and adjust to “0”.

6.2.2.28 Turn off both +15 and -7 VDC power supplies.

6.2.3 “SHPL” Connector

6.2.3.1 Using Multimeter set for Resistance Check function, check for continuity between connector SHPL-1 and connector 2PL-1.

6.2.3.2 Using Multimeter set for Resistance Check function, check for continuity between connector SHPL-2 and connector 2PL-2.

*6.3 ***TEST COMPLETE ****

7.1 NOTES & ATTACHMENTS

7.1.1 None at this time.