



GE Energy

## Functional Testing Specification

Parts & Repair Services  
Louisville, KY

CAN-GEB-471L0540

### Test Procedure for a 6 Pulse Gate Pulse Amplifier

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A	Converted from Burlington test to this format, initial release	G. Chandler	4/22/2013
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DATE 4/22/2013	DATE	DATE	DATE 4/22/2013

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## 1. SCOPE

1.1 This is a functional testing procedure for a 6 Pulse Gate Pulse Amplifier 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)
2		+/- 50VDC power supplies
1		+5.3VDC power supply
1		Scope
1		Variable DC Supply

## 6. Testing Process

### 6.1 Setup

- 6.1.1 Connect power supplies to the card.
- 6.1.2 Connect a variable supply (+) to pin 51 and (-) to pin 6. Turn on this supply and set 0vdc.  
IMPORTANT: If you apply power to the card without this variable supply connected, the output will go into saturation and burn up components on the card.
  - 6.1.2.1 +50vdc to pin25
  - 6.1.2.2 -50vdc to pin 30
  - 6.1.2.3 +5.3vdc to pin 28
  - 6.1.2.4 The common of all supplies to pin 51.
- 6.1.3 Connect the following pins together.
  - 6.1.3.1 Pin 3 to 50 to 51
  - 6.1.3.2 Pin 16 to 36
  - 6.1.3.3 Pin 31 to 32
  - 6.1.3.4 Pin 38 to 42
  - 6.1.3.5 Pin 6 to 37 to 10 to 33 to 17 to 39
- 6.1.4 Connect the non-isolated pulses of a SCR firing box to the card. Positive to pin 6 and common to pin 51.
- 6.1.5 Connect an O-scope to the card using X10 probes. Set scope to 20v/20usec per division on each channel, dual/chop mode and AC coupling. Trigger on Channel 1, (-) slope, AC coupled.

### 6.2 Testing Procedure

- 6.2.1 This card consists of 3 identical circuits.
- 6.2.2 Use the following chart and verify the waveform in figure 1. Verify all LEDs light and vary in intensity when varying the firing box.

Channel 1	Channel 2
Pin 7	Pin 26
Pin 14	Pin 34
Pin 11	Pin 40

- 6.2.3 Disconnect all connections to the card and verify 680 ohms (+/- 5%) of resistance from pin 28 to pins 4, 9 and 13.

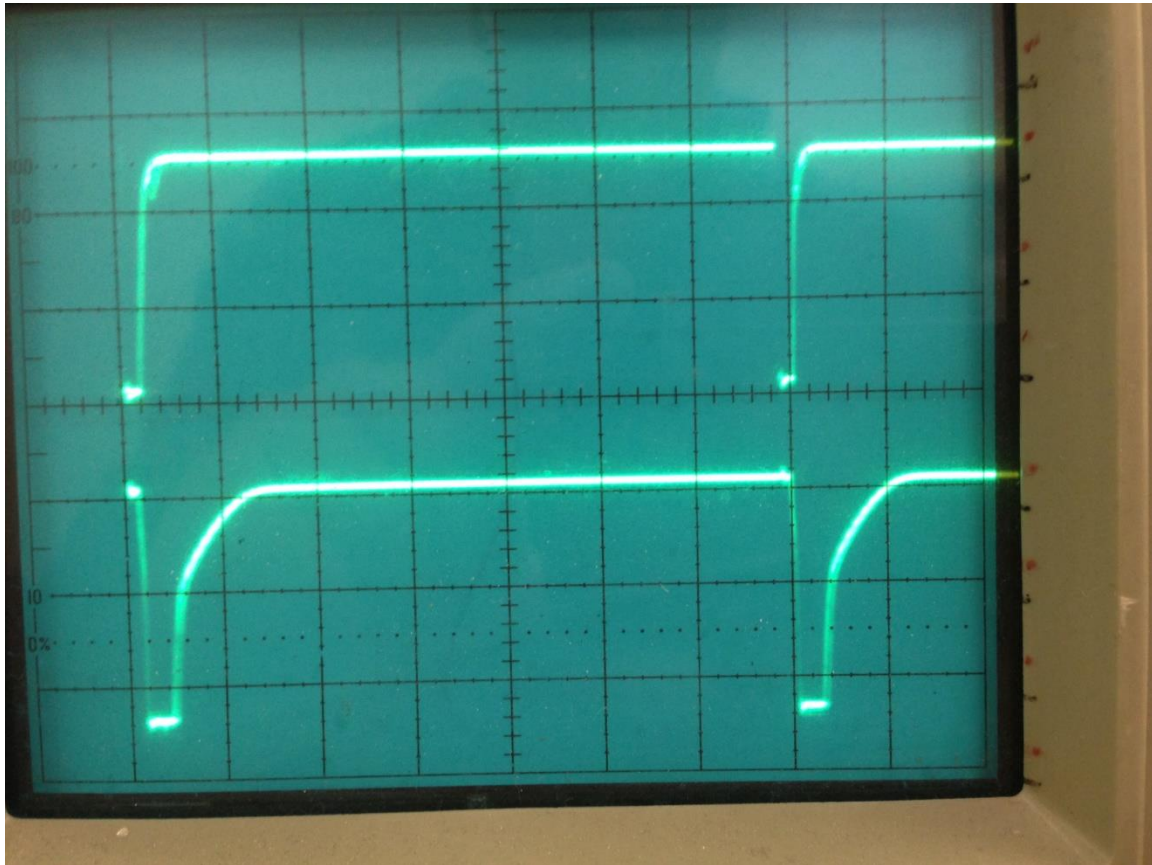
### 6.3 \*\*\*TEST COMPLETE\*\*\*

7. Notes

7.1 None at this time.

8. Attachments

8.1 Figure 1



8.2