

<p>LOU-GED-DS3800NHVH-Ax REV. A</p>	<p style="text-align: center;">g</p> <p style="text-align: center;">GE Energy <i>Parts & Repair Services</i> Louisville, KY</p>	<p>Page 2 of 5</p>
---	---	--------------------

Functional test procedure for High Voltage Card

1. SCOPE

1.1 This is a functional testing procedure for a High Voltage 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 **UUT documentation folder**

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 the local documented procedures 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 or cracked

4.2.1.2 Terminal strips / connectors broken or cracked

4.2.1.3 Loose wires

4.2.1.4 Components visually damaged

4.2.1.5 Capacitors leaking

4.2.1.6 Solder joints damaged or cold

4.2.1.7 Circuit board burned or de-laminated

4.2.1.8 Printed wire runs 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 DMM (or Equivalent)
1		O-Scope
1		115 VAC line cord
1		28 VDC Power Supply
1		SCR Firing Box

6. TESTING PROCESS

6.1 Setup

6.1.1 (NHVH) Connect berg jumpers J1-J5 to H position and stab jumpers WJJ1-WJJ5 to WJH1-WJH5 respectively to get values in attenuator test. (Table 1). Component test C18-C23 (.22uf) and R74-R85 (52 ohms; 25 ohms in circuit)

6.2 Testing Procedure

6.2.1 Attenuator Resistor Test (Resistive)

DS3800NHVH	Point A	Point B	Value
Circuit #1	JH-1	JH-3	20K +/- 1%
Circuit # 2	JH-1	JH-4	20K +/- 1%
Circuit # 3	JH-1	JH-5	20K +/- 1%
Circuit # 4	JH-1	JH-6	20K +/- 1%
Circuit # 5	JH-1	JH-7	20K +/- 1%
Circuit # 6	JH-3	JK-6	996K +/- .4%
Circuit # 7	JH-4	JA-5	996K +/- .4%
Circuit # 8	JH-5	JB-5	996K +/- .4%
Circuit # 9	JH-6	JC-5	996K +/- .4%
Circuit # 10	JH-7	JK-1	996K +/- .4%

6.2.2 Using the DMM verify the resistor values in table 1.

6.3 Neon Lamp Test

6.3.1 Connect the AC line cord per table 2 and apply power to check each neon. Neon glows dimly on 120 VAC.

DS3800NHVH	Point A	Point B	Neon
Circuit # 1	JA-5	JA-10	P1
Circuit # 2	JB-5	JB-10	P2
Circuit # 3	JC-5	JC-10	P3
Circuit # 4	JD-8	JD-3	P4
Circuit # 5	JE-8	JE-3	P5
Circuit # 6	JF-8	JF-3	P6

Table 2

6.3.2 Firing Circuit & LED Test

6.3.2.1 For the specific model being tested, use the information in table 3 to apply a non-isolated negative pulse from the SCR Firing box to each circuit and verify with the scope a controllable pulse train output on each circuit. (Reference Figure 1). See notes 1&2 for amplitude.

6.3.2.2 Using the information in table 3, probe each of the circuits positive input with the power supply common and verify that the LED for each circuit illuminates to full brightness.

6.3.2.3 TABLE 3

DS3800NHVH	SCR Box COM	SCR Box NEG	Scope +	Scope -	28 VDC +	Notes
Circuit # 1	JH-11	JH-12	JA-12	JA-11	JH-10	1,2
Circuit # 2	JH-13	JH-14	JB-12	JB-11	JH-10	1,2
Circuit # 3	JH-15	JH-16	JC-12	JC-11	JH-10	1,2
Circuit # 4	JH-17	JH-18	JD-1	JD-2	JH-10	1,2
Circuit # 5	JH-19	JH-20	JE-1	JE-2	JH-10	1,2
Circuit # 6	JH-21	JH-20	JF-1	JF-2	JH-10	1,2
Circuit # 7	JH-23	JH-24	JD-9	JD-10	JH-10	1,2
Circuit # 8	JH-25	JH-26	JE-9	JE-10	JH-10	1,2
Circuit # 9	JH-27	JH-28	JF-9	JF-10	JH-10	1,2
Circuit # 10	JH-29	JH-30	JA-4	JA-3	JH-10	1,2
Circuit # 11	JH-31	JH-32	JB-4	JB-3	JH-10	1,2
Circuit # 12	JH-33	JH-34	JC-4	JC-3	JH-10	1,2

Note 1: NHVH amplitude is 17 volts. .

Note 2: 28 VDC COM to SCR Box COM

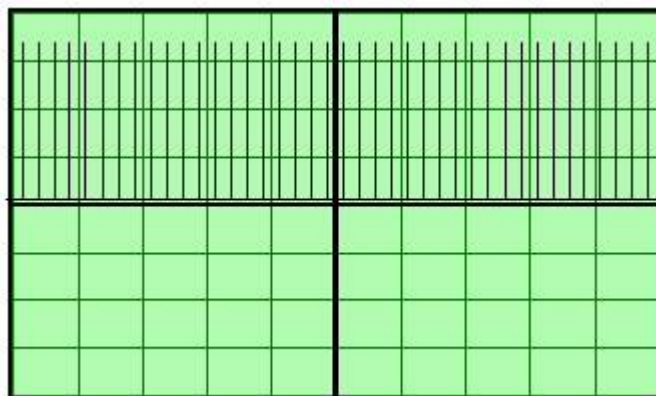
6.4 *TEST COMPLETE*****

7. NOTES

Output voltages (Waveforms) of gate circuits are measured with output unloaded.

8. Oscilloscope Verification Examples:

Fig. 1



DS3800NHVK

17V Peak 5V/Div

.5ms/Div