g GE Energy Services *Parts & Repair Services* *Louisville, KY*	**Functional Testing Specification** **LOU-GED-DS3800NHVE**

Test Procedure for a High Voltage Card

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A	Separated DS3800NHVE information into its own test from parent document DS3800NHVx.	D. Laemmle Glenn Chandler	8/20/2008
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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		28 VDC Power Supply
1		SCR Firing Box

6. TESTING PROCESS

6.1 Testing Procedure

6.1.1 Attenuator Resistor Test (Resistive)

DS3800NHVE	Point A	Point B	Value	Point B
Circuit # 1	JA-5	JA-2	20K +/- .2%	Bergs:BJ1-BJ5 to H Pos
Circuit # 2	JA-3	JA-2		
Circuit # 3	JA-6	JA-2		
Circuit # 4	JA-7	JA-2		
Circuit # 5	JA-4	JA-2		
Circuit # 1	JA-5	JA-2	10K +/- .1%	Bergs:BJ1-BJ5 to L Pos
Circuit # 2	JA-3	JA-2		
Circuit # 3	JA-6	JA-2		
Circuit # 4	JA-7	JA-2		
Circuit # 5	JA-4	JA-2		
Circuit # 1	JM1	JA4	996K +/- .4%	Jumper J1 to JH1
Circuit # 2	JN1	JA5		Jumper J2 to JH2
Circuit # 3	JP1	JA6		Jumper J3 to JH3
Circuit # 4	JQ1	JA3		Jumper J4 to JH4
Circuit # 5	JR1	JA7		Jumper J5 to JH5
Circuit # 1	JM1	JA4	498K +/- .2%	Jumper J1 to JL1
Circuit # 2	JN1	JA5		Jumper J2 to JL2
Circuit # 3	JP1	JA6		Jumper J3 to JL3
Circuit # 4	JQ1	JA3		Jumper J4 to JL4
Circuit # 5	JR1	JA7		Jumper J5 to JL5

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

6.1.2 Firing Circuit & LED Test

6.1.2.1 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.

6.1.2.2 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.

6.1.2.3 TABLE 3

DS3800NHVE	SCR Box COM	SCR Box NEG	Scope +	Scope -	28 VDC +	Notes
Circuit # 1	JA-11	JA-12	JC-1	JC-2	JA-9	1,2
Circuit # 2	JA-13	JA-14	JD-1	JD-3	JA-9	1,2
Circuit # 3	JA-15	JA-16	JE-3	JE-4	JA-9	1,2
Circuit # 4	JA-17	JA-18	JF-3	JF-5	JA-9	1,2
Circuit # 5	JA-19	JA-20	JG-2	JG-5	JA-9	1,2
Circuit # 6	JA-21	JA-22	JJ-4	JJ-5	JA-9	1,2

TABLE 3

Note 1: NHVE amplitude is 17 volts.
Note 2: 28 VDC COM to SCR Box COM

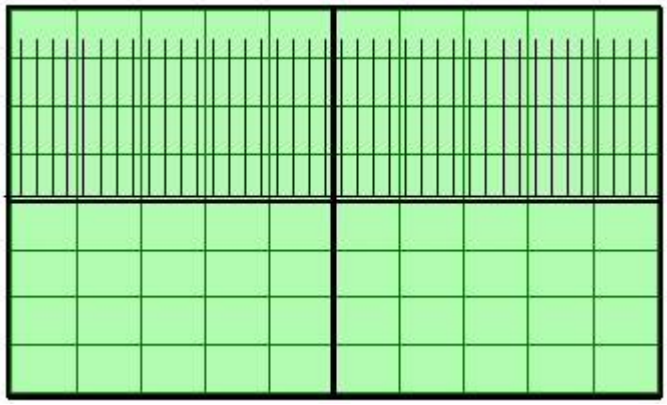
*6.2 ***TEST COMPLETE *** SEAL POTS ON TEMP SENSOR CARDS*

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