g GE Energy Services	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DS3800NHVN**

Test Procedure for a High Voltage Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release written for DS3800NHVK. Entered references to DS3800NHVG as an example for adding other NHV cards to this procedure.	R. Duvall	07/19/02
B	Added information pertaining to DS3800NHVG.	D. Laemmle	10/14/02
C	Added information pertaining to DS3800NHVB	D. Laemmle	10/25/02
D	Added information pertaining to DS3800NHVN	R. Duvall	11/01/02
E	Added information pertaining to DS3800NHVJ	D. Laemmle	11/02/02
F	Added information pertaining to DS3800NHVM	D. Laemmle	12/17/02
G	Added information pertaining to DS3800NHVL	D. Laemmle	5/15/03
H	Added information pertaining to DS3800NHVA	D. Laemmle	9/29/03
I	Corrected table in firing circuit for NHVL card	S. Pharris	4/20/04
J	Corrected tables for NHVM	D. Laemmle	5/20/04
K	Corrected Attenuator test for NHVN	D. Laemmle	6/08/04
L	Added information pertaining to DS3800NHVE, corrected DS3800NHVM, and change header	D. Laemmle Glenn Chandler	6/22/07
M	Removed all data that did not pertain to DS3800NHVN	D. Laemmle	2/19/2008

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
R. Duvall	D. Laemmle		Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
07/19/02	10/14/02		6/22/2007

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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		115 VAC line cord
1		28 VDC Power Supply
1		SCR Firing Box

6. TESTING PROCESS

6.1 Setup (NHVK & NHVN)

6.1.1 Connect berg jumpers J1 and J2 to H position and connect JJ-1 to JH-1 and JJ-2 to JH-2 to get values in attenuator test.

6.2 Testing Procedure

6.2.1 Attenuator Resistor Test (Resistive)

DS3800NHVK & N	Point A	Point B	Value
Circuit # 1	JA-7	JA-10	40 K ± .2%
Circuit # 2	JA-7	JA-9	20 K ± .1%
Circuit # 3	JA-9	JA-10	20 K ± .1%
Circuit # 4	JB-7	JA-7	996 K ± .4%
Circuit # 5	JC-1	JA-10	996 K ± .4%
Circuit # 6	JB-7	JC-1	2012 K ± 1%
	Table 1		

6.2.1.1 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.

DS3800NHVK & N	Point A	Point B	Neon
Circuit # 1	JB-1	JB-7	DS1
Circuit # 2	JB-7	JC-8	DS2

Table 2

6.4 Firing Circuit & LED Test

6.4.1 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.

6.4.2 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.

DS3800NHVK & DS3800NHVN	SCR Box COM	SCR Box NEG	Scope +	Scope -	28 VDC +	Notes
Circuit # 1	JA-19	JA-20	JD-2	JD-1	JA-13 or 14	1
Circuit # 2	JA-17	JA-18	JE-8	JE-7	JA-13 or 14	1
Circuit # 3	JA-2	JA-1	JH-8	JH-7	JA-13 or 14	1
Circuit # 4	JA-3	JA-4	JK-2	JK-1	JA-13 or 14	1

TABLE 3

Note 1: NHVN and NHVM, output is 12 Volts.
Note 2: 28 VDC COM to SCR Box COM

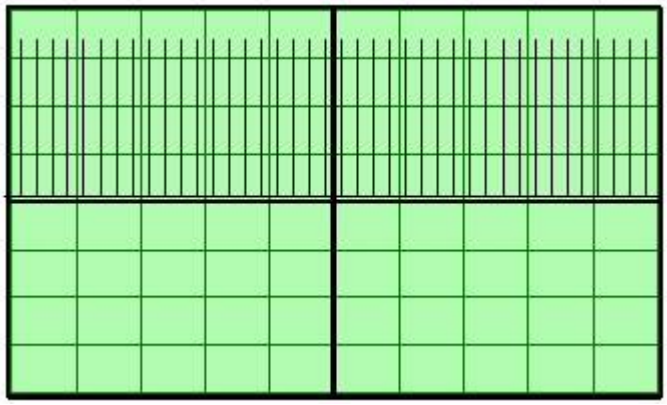
6.5 ******TEST COMPLETE ******

7. NOTES

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

8. Oscilloscope Verification Examples:

Fig. 1



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