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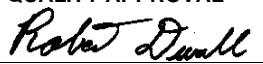
GE Energy Services

Functional Testing Specification*Inspection & Repair Services
Louisville, KY***LOU-GED-531X121PCR****Test Procedure for a 531X121 or 531X122 Card****DOCUMENT REVISION STATUS: Determined by the last entry in the "REV" and "DATE" column**

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial Release	RKD	02/18/98
B	Added section 5 & 6	RKD	06/10/02
C	Total re-write of procedure, Test no longer being done in drive.	RKD	06/12/02
D	Made modifications to table so procedure could be used on 531X122PCNx card.	SDP	06/28/02
E	Added note for those testing a 531X122PCNx Card.	JLM	02/12/04
F	Modified test to include testing under power using 24V supply to more accurately reflect field conditions	JLM	03/16/04
G	Added common connection to UUT step .6.2.3	JLM	09/25/2014

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PREPARED BY JLM	REVIEWED BY C. Wade	REVIEWED BY	QUALITY APPROVAL 
DATE 03/16/04	DATE 9/26/2014	DATE	DATE 3/19/04

<p>LOU-GED-531X121PCR REV. G</p>	<p>g</p> <p>GE Energy Services <i>Inspection & Repair Services</i> <i>Louisville, KY</i></p>	<p>Page 2 of 4</p>
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Functional test procedure for a power connect card

1. SCOPE

1.1 This is a functional testing procedure for a 531x121 or 531x122 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 GEK85769A or GEJ7301

3.1.2 36C764480AE (for 531X121PCR_x)

3.1.3 36C764481AE (for 531X122PCN_x)

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		100 Ohm Resistor
1		SCR firing box
1		O-Scope
1		BNC to Banana jack adapter
1		24Vdc power supply

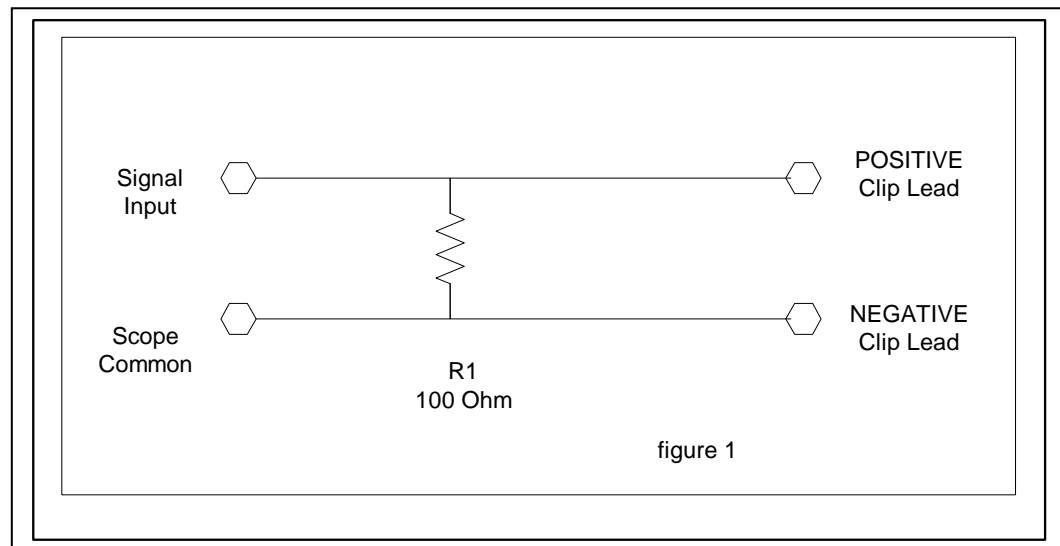
6. TESTING PROCESS

6.1 Setup

6.1.1 Use a DMM to verify the value of all resistors and capacitors. Snubber resistors on these cards are particularly prone to cold solder joints, so double-check them. Also be sure to component test the snubber circuits since these are not tested under power with the rest of the card in this test.

6.1.2 Setup test as outlined in figure 1.

6.1.3



6.2 Testing Procedure

6.2.1 Connect 5PL14 to positive output of 24V dc power supply. (Use 5PL2 for this connection on 531X122PCNx cards)

6.2.2 Connect 5PL1 to NEGATIVE non-isolated connection on SCR firing box.

6.2.3 Connect negative output of 24V dc power supply to COM on non-isolated side of SCR firing box. **Then connect common from SCR firing box to 5PL-18.**

6.2.4 Connect Scope to 6FPL (Common to pin 1 and Signal to pin 2).


6.2.5 Set scope Vertical to 5 V/div and Horizontal to .2 mSec/div.

6.2.6 Verify SCR firing box is set to NORMAL and apply power.

6.2.7 Turn output to max and verify loaded output signal is above 10Vpp and remains steady throughout adjustment range of SCR firing box. See Figure 2.

Removing 100-ohm load on scope leads should allow output to increase to above 15Vpp.

6.2.8 Repeat this test for the remaining circuits using the information in table 1.

 **Note:** * does not apply to 531X122PCNAxG1

**** 5PL2** on 531X122PCNAxG1

Circuit Under test	+ 24 VDC	SCR Box – Firing pulse	Scope +	Scope -
6FPL	5PL14**	5PL1	6FPL1	6FPL2
5FPL	5PL14**	5PL3	5FPL1	5FPL2
4FPL	5PL14**	5PL5	4FPL1	4FPL2
3FPL	5PL14**	5PL7	3FPL1	3FPL2
2FPL	5PL14**	5PL9	2FPL1	2FPL2
1FPL	5PL14**	5PL11	1FPL1	1FPL2
*1RPL	5PL14	5PL13	1RPL1	1RPL2
*2RPL	5PL14	5PL15	2RPL1	2RPL2
*3RPL	5PL14	5PL17	3RPL1	3RPL2
*4RPL	5PL14	5PL19	4RPL1	4RPL2
*5RPL	5PL14	5PL21	5RPL1	5RPL2
*6RPL	5PL14	5PL23	6RPL1	6RPL2

6.3 ***TEST COMPLETE***

7. Notes

7.1 Figure 2

