g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-531X307LTBA**

Test Procedure Bench test

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	John madden	12/3/2010
B	Revised	James Archibald	10/17/2018
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
James Archibald			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
10/17/2018			12/3/2010

Functional test procedure for a 531X307LTBA card tested on the bench

1. SCOPE

1.1 This is a functional testing procedure for bench Test

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 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		24volt power supply
1		30volt power supply
1		DVM

6. TESTING PROCESS

6.1 Setup

6.1.1 Apply +24 volts positive (+) to 10PL1 and negative (-) to R80 closest to U8

6.1.2 Apply+ 30 volts to IN1 pin 3 (+) and Negative to IN1 pin 1(-)

6.1.3 LED1 should illuminate.

6.1.4 Apply+ 30 volts to IN2 pin 3 (+) and Negative to IN2 pin 1(-)

6.1.5 LED2 should illuminate.

6.1.6 Apply+ 30 volts to IN3 pin 3 (+) and Negative to IN3 pin 1(-)

6.1.7 LED3 should illuminate.

6.1.8 Apply+ 30 volts to IN4 pin 3 (+) and Negative to IN4 pin 1(-)

6.1.9 LED4 should illuminate.

6.1.10 Apply+ 30 volts to IN5 pin 3 (+) and Negative to IN5 pin 1(-)

6.1.11 LED5 should illuminate.

6.1.12 Apply+ 30 volts to IN6 pin 3 (+) and Negative to IN6 pin 1(-)

6.1.13 LED6 should illuminate.

6.1.14 Apply+ 30 volts to IN7 pin 3 (+) and Negative to IN7 pin 1(-)

6.1.15 LED7 should illuminate.

6.1.16 Apply+ 30 volts to IN8 pin 3 (+) and Negative to IN8 pin 1(-)

6.1.17 LED8 should illuminate.

6.1.18 Remove 30 volts from card

6.1.19 Leave +24 volts on 10PL pin 1

6.1.20 RELAY CHECK

6.1.21 Check for infinity between OPTPL pin 2 and RPL pin 3

6.1.22 Check for infinity between OPTPL pin 2 and RPL pin 5

6.1.23 Check for infinity between OPTPL pin 2 and RPL pin 7

6.1.24 Check for infinity between OPTPL pin 2 and RPL pin 9

6.1.25 Check for infinity between OPTPL pin 2 and RPL pin 11

6.1.26 Check for infinity between OPTPL pin 2 and RPL pin 13

6.1.27 Check for infinity between OPTPL pin 2 and RPL pin 15

6.1.28 Check for infinity between OT1 pin 1(cm) and OT1 pin 3(no)

6.1.29 Check for infinity between OT2 pin 1(cm) and OT2 pin 3(no)

6.1.30 Check for infinity between OT3 pin 1(cm) and OT3 pin 3(no)

6.1.31 Check for infinity between OT4 pin 1(cm) and OT4 pin 3(no)

6.1.32 Check for infinity between OT5 pin 1(cm) and OT5 pin 3(no)

6.1.33 Check for infinity between OT6 pin 1(cm) and OT6 pin 3(no)

6.1.34 Check for infinity between OT7 pin 1(cm) and OT7 pin 3(no)

6.1.35 Check for appx 0 ohms between OT1 pin 1(cm) and OT1 pin 2(nc)

6.1.36 Check for appx 0 ohms between OT2 pin 1(cm) and OT2 pin 2(nc)

6.1.37 Check for appx 0 ohms between OT3 pin 1(cm) and OT3 pin 2(nc)

6.1.38 Check for appx 0 ohms between OT4 pin 1(cm) and OT4 pin 2(nc)

6.1.39 Check for appx 0 ohms between OT5 pin 1(cm) and OT5 pin 2(nc)

6.1.40 Check for appx 0 ohms between OT6 pin 1(cm) and OT6 pin 2(nc)

6.1.41 Check for appx 0 ohms between OT7 pin 1(cm) and OT7 pin 2(nc)

6.1.42 Apply com from 24volt power supply to 10PL19 leave + on 10PL1 and turn on.

6.1.43 Verify LED17 lights and Check for 0 ohms between OPTPL pin 2 and RPL pin 3

6.1.44 Check for 0 ohms between OT1 pin 1(cm) and OT1 pin 3(no)

6.1.45 Apply com from 24volt power supply to 10PL20

6.1.46 Verify LED18 lights and check for 0 ohms between OPTPL pin 2 and RPL pin 5

6.1.47 Check for 0 ohms between OT2 pin 1(cm) and OT2 pin 3(no)

6.1.48 Apply com from 24volt power supply to 10PL21

6.1.49 Verify LED19 lights and check for 0 ohms between OPTPL pin 2 and RPL pin 7

6.1.50 Check for 0 ohms between OT3 pin 1(cm) and OT3 pin 3(no)

6.1.51 Apply com from 24volt power supply to 10PL22

6.1.52 Verify LED20 lights and check for 0 ohms between OPTPL pin 2 and RPL pin 9

6.1.53 Check for 0 ohms between OT4 pin 1(cm) and OT4 pin 3(no)

6.1.54 Apply com from 24volt power supply to 10PL23

6.1.55 Verify LED21 lights and check for 0 ohms between OPTPL pin 2 and RPL pin 11

6.1.56 Check for 0 ohms between OT5 pin 1(cm) and OT5 pin 3(no)

6.1.57 Apply com from 24volt power supply to 10PL24

6.1.58 Verify LED22 lights and check for 0 ohms between OPTPL pin 2 and RPL pin 13

6.1.59 Check for 0 ohms between OT6 pin 1(cm) and OT6 pin 3(no)

6.1.60 Apply com from 24volt power supply to 10PL25

6.1.61 Verify LED23 lights and check for 0 ohms between OPTPL pin 2 and RPL pin 15

6.1.62 Check for 0 ohms between OT7 pin 1(cm) and OT7 pin 3(no)

6.1.63

6.2 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time.

8. Attachments

8.1 None at this time.