g GE Industrial Systems	**Functional Testing Specification**
Renewal Services ***Louisville,KY***	**LOU–GED-193X241xx**

Test Procedure for a Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	John Madden	7/22/02
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
John Madden			Robert Dunn
DATE	**DATE**	**DATE**	**DATE**
07/22/02			08/09/02

Functional test procedure for a special coordination card

1. SCOPE

1.1 This is a functional testing procedure for a 193X241xx special coordination 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 Documentation Folder**
- **3.1.2 224X661AA, Factory Procedure**

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)

6. TESTING PROCESS

6.1 Setup

6.1.1

Note:

6.2 Testing Procedure

6.2.1 See following pages.

GENERAL ELECTRIC

224X661AA
CONT ON SHEET FL SH NO. 1

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TITLE SPECIAL PURPOSE COORDINATION TEST INSTRUCTIONS

FIRST MADE FOR 193X241AAG01

REVISIONS

1.0 SCOPE

These procedures cover the suggested production testing of the subject card for the performance capabilities covered in Engineering Specification 224X315AA. The conditions are stated in Part 3.

2.0 INSTRUCTIONS

2.1 All resistors, except 1% tolerance, are to be within ± 10% of their nominal values.

2.2 All 1% resistors are to be within ± 1% of their nominal value.

2.3 Resistance of potentiometers, when turned fully counterclockwise, is to be within ± 20% of their nominal value.

*2.4 Class I capacitors are to be within ± 20% of their nominal value.

*2.5 Class II capacitors are to be within -10% and +100% of their nominal value.

2.6 Leakage current of diodes to be less than 1 micro amp at 10 volts DC reverse voltage.

2.7 Zener diode voltage is to be within ± 5% of the nominal value at a test current of 70 ma.

3.0 CONDITIONS

The above tests should be conducted at an ambient temperature of from 20 to 30°C.

4.0 REQUALIFICATION

The subject card should be requalified by Quality Control every six months or after every 100 production cards, whichever comes first.

*Class I Capacitors are C416, C420, C421, C422, C423, C425
Class II Capacitors are C417, C418, C419 C424, C426
Capacitance measurements to be made at 120 Hz, 1 volt RMS maximum.

5E (BW)
5F (T)
5QC (2)

PRINTS TO

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ISSUED M. OLSON JAN. 31, 1969
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SPEED VARIATOR DIV OR DEPT.
ERIE, PA. LOCATION
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6.3 ***TEST COMPLETE ***

7. NOTES

8. Oscilloscope Verification Examples:

Fig. 1

Fig. 2