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GE Industrial Systems

Functional Testing Specification

Renewal Services
Louisville, KY

LOU-GED-193X241xx

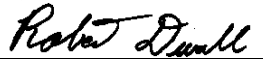
Test Procedure for a Card

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REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	John Madden	7/22/02
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PREPARED BY John Madden	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL 
DATE 07/22/02	DATE	DATE	DATE 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)

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6. TESTING PROCESS

6.1 Setup

6.1.1



Note:

6.2 Testing Procedure

6.2.1 See following pages.

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224X661AA

REV NO. 0	TITLE SPECIAL PURPOSE COORDINATION TEST INSTRUCTIONS		CONT ON SHEET FL SH NO. 1
224X661AA	FIRST MADE FOR 193X241AAG01		
CONT ON SHEET FL SH NO. 1			
<p>1.0 <u>SCOPE</u></p> <p>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.</p> <p>2.0 <u>INSTRUCTIONS</u></p> <p>2.1 All resistors, except 1% tolerance, are to be within $\pm 10\%$ of their nominal values.</p> <p>2.2 All 1% resistors are to be within $\pm 1\%$ of their nominal value.</p> <p>2.3 Resistance of potentiometers, when turned fully counterclockwise, is to be within $\pm 20\%$ of their nominal value.</p> <p>*2.4 Class I capacitors are to be within $\pm 20\%$ of their nominal value.</p> <p>*2.5 Class II capacitors are to be within -10% and +100% of their nominal value.</p> <p>2.6 Leakage current of diodes to be less than 1 micro amp at 10 volts DC reverse voltage.</p> <p>2.7 Zener diode voltage is to be within $\pm 5\%$ of the nominal value at a test current of 70 ma.</p> <p>3.0 <u>CONDITIONS</u></p> <p>The above tests should be conducted at an ambient temperature of from 20 to 30°C.</p> <p>4.0 <u>REQUALIFICATION</u></p> <p>The subject card should be requalified by Quality Control every six months or after every 100 production cards, whichever comes first.</p> <p>*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.</p>			REVISIONS
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			5F (T)
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MADE BY H.J. HAVLICEK	APPROVALS [Signature]	SPEED VARIATOR	DIV OR DEPT.
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6.3 *TEST COMPLETE *****

7. NOTES

8. Oscilloscope Verification Examples:

Fig. 1

Fig. 2