

ABB

Functional Testing Specification

Parts & Repair Services
Louisville, KY

LOU-GED-IS200HFPA

Test Procedure for an IS200HFPA Card

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

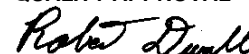
REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	L. Groves	9-14-2002
B	Added reference number for load resistors	L. Groves	2/1/08
C	Added revision warning to page section 6 and change header & footer.	C. Wade	12/11/2008
D	Lowered input voltage to accommodate existing load.	D. Johnson	4/26/2011
E	Step 6.1.2 Changed incoming voltage to 230VAC to match GEI-1000255, page 1	J. Barton	11/17/2011
F	Step 6.2.1 corrected	M. Trull	7/16/2019

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QUALITY APPROVAL



DATE
9-14-2002

DATE
4/26/2011

DATE
11/17/2011

DATE
09/16/2002

Functional test procedure for an IS200HFPA Card

1. SCOPE

1.1 This is a functional testing procedure for a 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 **GEI-100255**

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		Fluke 85 DMM (or Equivalent)
1	H033942	IS200HFPA LOAD RESISTORS
1		Scope, Tektronix TDS2012B or equivalent.

6. TESTING PROCESS

WARNING: Some ADB and earlier revision models were prone to inlayer trace problems due to board layer shifting, which caused clearance problems. This shows up in the field with the blowing of one or both of the fuses FU2 or FU3. Closer examination of the back of the board may reveal what looks like bubbling between the fabrication layers around components CR5 and R2. In some cases the board will be charred. If board has been working in the field and there is no bubbling or damage around CR5 and R2, board may be repaired. Any apparent damage to this area, do not repair, but replace with new. See Technical Bulletin TB-21008 C. Wade (QA)

6.1 Setup

6.1.1 CONNECT IS200HFPA LOAD RESISTORS TO DPPL1, DPPL2, HFPL1, HFPL2, AND FAPL1.

6.1.2 CONNECT 230VAC TO ACF1 AND ACF2.

6.2 Testing Procedure

6.2.1 TURN ON 230VAC AND VERIFY WITH DVM APPROXIMATELY 17 – 19 VAC ON DPPL1 & DPPL2.

6.2.2 VERIFY DS1 LED IS ON.

6.2.3 VERIFY WITH DVM APPROXIMATELY 48 – 52 VAC ON HFPL1 & HFPL2.

6.2.4 VERIFY DS2 LED IS ON.

6.2.5 VERIFY APPROXIMATELY 52 VDC AT CONNECTOR FAPL2 WITH DVM. +POS AT PIN 3 AND –NEG AT PIN 1 OF CONNECTOR.

6.2.6 VERIFY WAVEFORM IN FIG.1 WITH SCOPE PROBE AT X10 AT CONNECTOR HFPL1-1 TO HFPL1-2.

6.2.7 VERIFY WAVEFORM IN FIG.2 WITH SCOPE PROBE AT X10 AT CONNECTOR DPPL1-1 TO DPPL1-2.

6.2.8 REMOVE POWER FROM CARD.

6.2.9 CHECK FOR A DIODE BETWEEN STABON DCPLF1 TO THE SIDE OF CAPACITOR C10 CLOSEST TO THE CENTER OF THE CARD. FORWARD BIAS SHOULD BE +POS TO THE STABON AND –NEG TO CAPACITOR C10.

6.3 ***TEST COMPLETE***

7. NOTES

7.1 None at this time.

8. Oscilloscope Verification Examples:

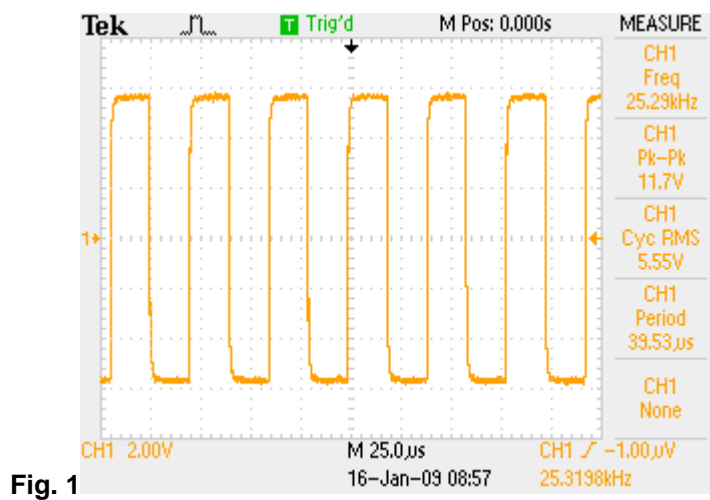


Fig. 1

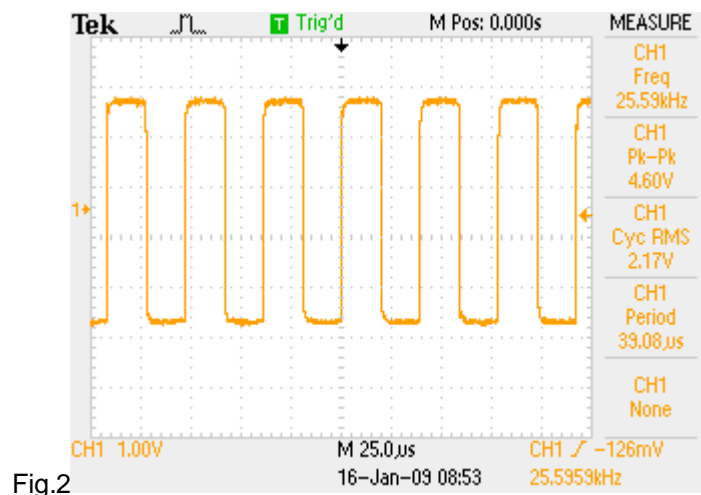


Fig.2