



GE Energy

Functional Testing Specification

*Parts & Repair Operations
Louisville, KY*

LOU-GED-DS200UPSAG1Axx-A

Test Procedure for a UPSA Power Supply Card

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DATE 08-07-2007	DATE	DATE	DATE 8/9/2007

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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

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, cracked, or loosely connected

4.2.1.2 Terminal strips / connectors - broken or cracked

4.2.1.3 Components - visually damaged

4.2.1.4 Capacitors - bloated or leaking

4.2.1.5 Solder joints - damaged or cold


4.2.1.6 Circuit board - burned or de-laminated

4.2.1.7 Printed wire runs / Traces - 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
2		Fluke 87 DMM (or Equivalent)
1		Variac (60VAC-120VAC)

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6. TESTING PROCESS

6.1 Setup

- 6.1.1** Connectors 2PLA, 2PLB and 2PLC are in parallel but you should verify continuity. Use the schematics to determine where you want to connect resistive loads. Connect them at this time. 1 ohm to +5V, 100 ohm to +/-15V and 20 ohm to +/-24V. When taking voltage readings, whichever common you choose to use will be the same for all readings.



Note: The DS200UPSA card must be loaded for it to function properly. There is small box marked DS200UPSA on the top shelf of test equipment rack by Sonny that have loads already made up.

6.2 Testing Procedure

- 6.2.1** Ensuring that Variac and switch SW1 on UUT is in off position, connect the Variac output to stab-ons E11 and E12 on UUT. Apply power to Variac and set for 120VAC. Turn SW1 to on and green "OK" indicator should come on. Check for appropriate voltages at each 2PL output. The positive and negative 24VDC are unregulated, positive and negative 15VDC should be between +/-14.70V and +/-15.30V and the +5V should be between +4.9 and +5.1. Potentiometer RV1 adjusts +5V. Turn SW1 off.



Note: The next step will involve taking current readings. Always turn SW1 to off position before moving and placing meter leads. The Variac should also be turned off as there will be 120VAC on E11 and E12.

- 6.2.2** Set up DMM to read DC amps. Check the current of each output by removing lead from 2PLA, B or C and connecting it to the positive input of the DMM. Connect common of meter to 2PL connector that you took lead off of. The +/-24V should read +/-1.5A, +/-15V should read +/-150mA and the +5V should read +4.50A.

- 6.2.3** Let card burn in for 30 minutes under load.


6.3 Post Testing Burn-in

Required ☐ Yes ☐ No



Note: All MARK I, II, & III Turbine related cards require a post testing burn-in of 100 hours.

- 6.3.1** Apply BUS or Operational power to the card for a period of 100 hours.

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6.4 *TEST COMPLETE *****

7. NOTES

7.1

8. ATTACHMENTS

8.1