



GE Energy

Functional Testing Specification

*Parts & Repair Services
Louisville, KY*

LOU-GED-DS200TBSAG1A

Test Procedure for a DS200TBSAG1A

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DATE 2/12/15	DATE	DATE	DATE 2/12/2015

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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 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, 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
1		Fluke 87 DMM (or Equivalent)
1		Adjustable Power Supply (+12VDC)

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6. Modifications/Upgrades

6.1 Fill out if applicable.

7. Testing Process

7.1 Setup

- 7.1.1 Verify that no shorts exist between etching runs.
- 7.1.2 Verify that all components are properly assembled and soldered.
- 7.1.3 Verify that C2 and C3 are assembled per the top stamp.
- 7.1.4 Verify that the TB1 points 22 - 55 have a numbered label attached to the green terminal board.
- 7.1.5 Verify that P3 and P4 are assembled so the flange is toward the center of the card.
- 7.1.6 Verify that P5 and P6 are mounted with the side with the two notches closest to the edge of the fab.
- 7.1.7 Verify that DN1 - DN8 (rectifier bridges) are assembled with the component + over the top stamp +.
- 7.1.8 Verify that berg jumpers JP1 - JP16 are in the IN position.



Note: ALL Must be Installed

7.2 Testing Procedure

- 7.2.1 Connect 12 VDC supply (set for 11.95 - 12.05 VDC) between TBP3-1 (+) and TBP3-2 (-).
- 7.2.2 Using DVM set on DCV scale measure UUT TB1-1 (+) and UUT TB1-2 (-). DVM should read 11.95 - 12.05 VDC.
- 7.2.3 Move the DVM + lead to the CATHODE of D1; DVM - lead to the ANODE of D1.
- 7.2.4 DVM should read 7.79 - 8.61 VDC.
- 7.2.5 Move the DVM + lead to the + lead of C2; DVM - lead to UUT TB1-2.
- 7.2.6 DVM should read 4.8 - 5.2 VDC.
- 7.2.7 Verify ~+8VDC is at each of the rectifiers DN1 thru DN8 with DMM at the + and - leads.
- 7.2.8 Verify ~+.407VDC is across the rectifiers DN1 thru DN8 with the DMM at the ~ and ~ leads.
- 7.2.9 Move the 12 VDC supply + lead (set for 11.95 - 12.05 VDC) to TBP3-7 (+).
- 7.2.10 Move the DVM + lead to UUT TB1-7 . DVM should read 11.95 - 12.05 VDC.
- 7.2.11 Move the DVM + lead to the + lead of C2. DVM should read 4.8 - 5.2 VDC.
- 7.2.12 Remove Power Supply from UUT.

7.2.13 Verify remaining using chart below:

P3	1		TO	TB1	1	=	0	OHMS
P3	2		TO	TB1	2	=	0	OHMS
P3	3		TO	TB1	3	=	0	OHMS
P3	4		TO	TB1	4	=	0	OHMS
P3	5		TO	TB1	5	=	0	OHMS
P3	6		TO	TB1	6	=	0	OHMS
P3	7		TO	TB1	7	=	0	OHMS
P3	8		TO	TB1	8	=	0	OHMS
P3	9		TO	TB1	9	=	0	OHMS
P3	10		TO	TB1	10	=	0	OHMS
P3	11		TO	TB1	11	=	0	OHMS
P3	12		TO	TB1	12	=	0	OHMS
P4	1		TO	TB1	13	=	0	OHMS
P4	2		TO	TB1	14	=	0	OHMS
P4	3		TO	TB1	15	=	0	OHMS
P4	4		TO	TB1	16	=	0	OHMS
P4	5		TO	TB1	17	=	0	OHMS
P4	6		TO	TB1	18	=	0	OHMS
P4	7		TO	TB1	19	=	0	OHMS
P4	8		TO	TB1	20	=	0	OHMS
P6	1		TO	TB1	22	=	0	OHMS
P6	7		TO	TB1	25	=	0	OHMS
P6	6		TO	TB1	29	=	0	OHMS
P6	8		TO	TB1	30	=	0	OHMS
P6	11		TO	TB1	31	=	0	OHMS
P6	17		TO	TB1	34	=	0	OHMS
P6	16		TO	TB1	38	=	0	OHMS
P6	18		TO	TB1	39	=	0	OHMS
P5	1		TO	TB1	40	=	0	OHMS
P5	7		TO	TB1	43	=	0	OHMS
P5	6		TO	TB1	47	=	0	OHMS
P5	8		TO	TB1	48	=	0	OHMS

P5	11		TO	TB1	49	=	0	OHMS
P5	17		TO	TB1	52	=	0	OHMS
P5	16		TO	TB1	56	=	0	OHMS
P5	18		TO	TB1	57	=	0	OHMS
P6	2		TO	TB1	27	=	18.2	OHMS
P6	3		TO	TB1	23	=	18.2	OHMS
P6	4		TO	TB1	28	=	18.2	OHMS
P6	5		TO	TB1	24	=	18.2	OHMS
P6	12		TO	TB1	36	=	18.2	OHMS
P6	13		TO	TB1	32	=	18.2	OHMS
P6	14		TO	TB1	37	=	18.2	OHMS
P6	15		TO	TB1	33	=	18.2	OHMS
P5	2		TO	TB1	45	=	18.2	OHMS
P5	3		TO	TB1	41	=	18.2	OHMS
P5	4		TO	TB1	46	=	18.2	OHMS
P5	5		TO	TB1	42	=	18.2	OHMS
P5	12		TO	TB1	54	=	18.2	OHMS
P5	13		TO	TB1	50	=	18.2	OHMS
P5	14		TO	TB1	55	=	18.2	OHMS
P5	15		TO	TB1	51	=	18.2	OHMS
P6	9		TO	TB1	26	=	100	OHMS
P6	19		TO	TB1	35	=	100	OHMS
P5	9		TO	TB1	44	=	100	OHMS
P5	19		TO	TB1	53	=	100	OHMS

7.3 Post Testing Burn-in

Required ___ Yes X No



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

7.3.1 Apply BUS or Operational power to the card for a period of 100 hours.

7.3.2 Re-test card while warm using the above procedure.

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7.4 *TEST COMPLETE *****

8. Notes

8.1 None at this time

9. Attachments

9.1

