g GE Industrial Systems *Renewal Services* *Louisville,KY*	**Functional Testing Specification** **LOU–GED-193X267xx**

Test Procedure for a regulator card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	J. Archibald	07/25/02
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
J. Archibald			Robert Dwall
DATE	**DATE**	**DATE**	**DATE**
07/25/02			08/09/02

Functional test procedure for a 193X267xx Regulator card

1. SCOPE

1.1 This is a functional testing procedure for a 193X267 regulator 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 Modified 224X713BA document (See section 6)

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)
5		DC Power Supplies

6. TESTING PROCESS

6.1 Setup

6.1.1

6.2 Testing Procedure

GENERAL ELECTRIC

224X713BA

CONT ON SHEET 2 SH NO. 1

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REV NO. 0

224X713BA

CONT ON SHEET 2 SH NO. 1

TITLE

REGULATOR CARD 193X267BAG01
TEST INSTRUCTIONS

FIRST MADE FOR

REVISIONS

1.0 SCOPE

This instruction covers the production test of the regulator card, 193X267BAG01, when tested under the conditions of section 3.0.

2.0 PROCEDURE

All voltage inputs shall be ± .1 volt unless otherwise specified.
All voltage measurements shall be ± .5 volts unless otherwise specified.

2.01 Connect tabs 22X and 24 to -20 volts.
Connect tab 25X to common.
Connect tab 20X to 28X. Rotate TIM+ and TIM- full CCW.
Apply +20 volts to tab 25X and tab 30 will ramp to +10 volts in approximately 3 seconds.

2.02 Connect tab 22 to +20 volts and tab 30 will ramp down to zero in approximately 3 seconds.

2.03 Disconnect tabs 22 and 25X. Apply +20 volts to 25X.
Tab 30 will ramp to -10 volts ± .5 in approximately 3 seconds.

2.04 Connect tab 29 to +20 volts and tab 30 will return immediately to approximately zero.

2.05 Disconnect tabs 22X and 29. Tab 30 will be at zero volts ± .1.

2.06 Disconnect tabs 20X and 28X. Connect 20X to 27X.
Rotate TIM+ and TIM- to approximately midpoint and apply +10 volts to tab 21X. Tab 30 will ramp to -10 volts in approximately 1-1/2 seconds.
Disconnect tab 21X and tab 30 will ramp to zero in approx. 1-1/2 sec.

2.07 Repeat with tab 23X. Return TIM+ and TIM- to full CCW

2.08 Disconnect tabs 20X, 22X and 24. Connect 24X to 29X; 30X to +20 volts and 25X to +20 volts. Connect 26 to -20 volts.
Rotate RESP full CCW. Rotate APR full CW.
Tab 3 will be zero volts.

2.09 Connect tab 22 and 29 to -20 volts. Tab 3 will step to ~~+1.5~~ volts, then ramp to +10 volts in from 2 to 3 seconds.
During ramp, tab 13 will be between +15 and +18 volts.
Upon completion of ramp tab 13 will be between +1 and -1 volt.

Apply 1 min

2.10 Disconnect tab 29. Connect tab 6 to common and rotate RESP to its midpoint. Connect tab 27 to -20 volts. Tab 3 will be -4 volts.
Rotate APR to its midpoint. Tab 3 will be -2 volts.
Disconnect tab 27.

2.11 Connect tab 21 to common thru a 10K resistor. Connect 9X to common.
Set ILIM at midpoint. Connect 7X to +2 volts. Connect 24 to -20 V.
Tab 3 will be at least +11 volts and tab 7 will be between +8 and +11V.
Tab 21 will be zero.

Remove TAB FROM 7X JPA 07/23/02

2.12 Connect tab 23 to +20 volts. Tab 3 will be ~~zero~~. Disconnect tab 23.

2.13 Connect tab 28 to +20 volts. Tab 3 will be zero. Tab 21 will be +10V.

5D (BW)
5E (BW)
5K (BW)
5P (BW)
5QC (2BW)
5R (BW)
5AE (BW)
PRINTS TO

MADE BY C.A. Johnson 8/6/74
ISSUED 9-17-74
APPROVALS
DCM&GPD DIV OR DEPT.
Erie, Pa. LOCATION
224X713BA
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CODE IDENT NO

FF-803-WA (6-72)
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GENERAL ELECTRIC

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TITLE
REGULATOR CARD 193X267BAG01
TEST INSTRUCTIONS

FIRST MADE FOR

REVISIONS

2.14 Connect tab 7X (39) to +4 volts. Tab 3 will swing to at least -10 volts.

2.15 Reconnect tab 25X (57) to -20V and repeat 2.11 and 2.14 with 7X (39) connected to -2V and -4V. Tab 3 will be at least -11V initially and will swing to at least +10V. Tab 7 will be between -8 and -11V initially.

2.16 Disconnect tabs 22X (54), 28, 9X (41), 7X (39), 24 and 22. Tab 9X (41) will measure between +11 and +13V.

2.17 Connect 7X (39) and +10V and 3X (35) to common. Set DAMP and COMP to midpoint. Connect 5X (37) and 6X (38) to common thru a 15K resistor. Tabs 5X (37) and 6X (38) will measure approx. +5V. +3V JPA 07/23/02

2.18 Connect tabs 13X (45) to 14X (46), 17 to 18, 14 to 16, 18X (50) to 19X (51). Connect -50V to ~~46~~ Connect 14X (46) to +50V. Tab 19X (51) will be -10.5V. Tab 3 will be zero. 17

2.19 Reconnect tab 14X (46) to -50V. Tab 19X (51) will be zero ± .2V.

2.20 Reconnect tab 14X (46) to +50V. Connect 11X (43) to tab 12. Set SMAX full CCW. Connect tab 24 to -20V. Tab 13 will be +10.5V.

2.21 Connect tab 11 to 19. Tab 13 will be -10.5V.

2.22 Rotate SMAX to midpoint. Tab 13 will be between -4 and -6V.

2.23 Leave all adjustments at midpoint.

3.0 TEST CONDITIONS

Power Requirements: +20V at tab 31 +50 VDC JPA 07/23/02
-20V at tab 2 -50 VDC
+30V at tab 25 2-7 VDC PS
Power Supply commons on tabs 15 and 32.
Connect 4.7K resistor from tab 3 to common.

[redacted] REVIEWED
JAMES ARCHIBALD

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6.3 ***TEST COMPLETE ***

7. NOTES

8. Oscilloscope Verification Examples:

Fig. 1

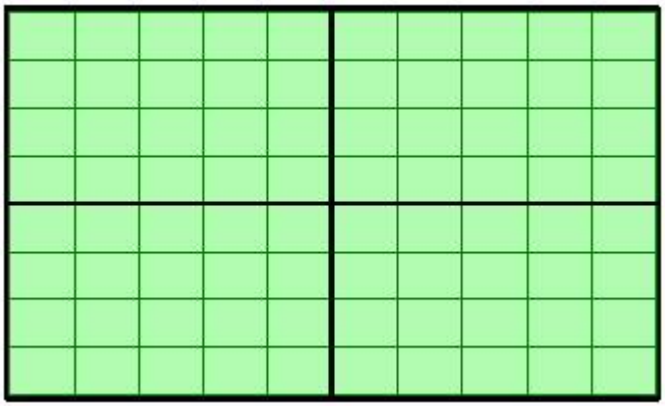

Fig. 2