ABB	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-IC3600EPSW1**

Test Procedure for a

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Jimmy Morgan	5-14-2019
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
J Morgan	R Martin		L. Groves
DATE 5-14-2019	**DATE** 5-14-2019	**DATE**	**DATE** 5/15/82019

1. SCOPE

1.1 This is a functional testing procedure for a IC3600 EPSW1 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
3		Fluke 87 DMM (or Equivalent)
1		Oscilloscope
1		28vDC source
1		18vDC source

6. Modifications/Upgrades

6.1 Fill out if applicable.

7. Testing Process

7.1 Setup

7.1.1 Connect Per Figure 1 (see bottom of test). All switches should be in the open position.

8. Testing Procudure

8.1.1 Close SW1A and SW1B. Adjust R40 on the card until the voltmeter reads 12Vdc +- 10mv.

8.1.1.1 Verify 12v exists from jack TJ1 (+) and TJ2 (-) on the card front.

8.1.2 **Current limit –** Set potentiometer R41 on the card fully CW.

8.1.3 Close SW2

8.1.4 Using the external variable resistor, set load current to .80A +- .02.

8.1.5 Turn R41 CCW until voltage begins to collapse.

8.1.6 Increase load resistance until voltage and current recover.

8.1.7 Apply short circuit to output between P12 and 0V, current should be less than .4A and voltage less than 1v.

8.1.8 Remove short circuit.

8.1.9 **Load regulation –** Close sw2.

8.1.10 Vary load current from 0 to .6 Amperes and verify that the 12V changes less than 30MV.

8.1.11 Connect O-scope + to pin (13) and – to COM.

8.1.12 Set scope for 50MV/div , 10MS/div.

8.1.13 Vary the load current between 0 and .6 Amperes. Verify that there are no sustained oscillations, any sustained ripple should be less than 10MV P-P. (you should be looking at static and noise, no discernable waveform).

8.1.14 **Parallel --** Set load current to .3A. Read output voltage of the card. As you Open and close SW3, the voltage should increase and decrease 150mV +-75mV.

8.1.14.1 Open SW3

8.1.15 **Crowbar –** Monitor Crowbar output (tp on Figure 1), referenced to 0v. Meter will read +12V. Close SW4 and crowbar output will drop to 0V. Open SW4, then Open and reclose SW1, crowbar should read 12V again.

8.1.16 Check that R33 is a 475 Ohm resistor.

8.2 Post Testing Burn-in **Required** ___ **Yes** ___ **No**

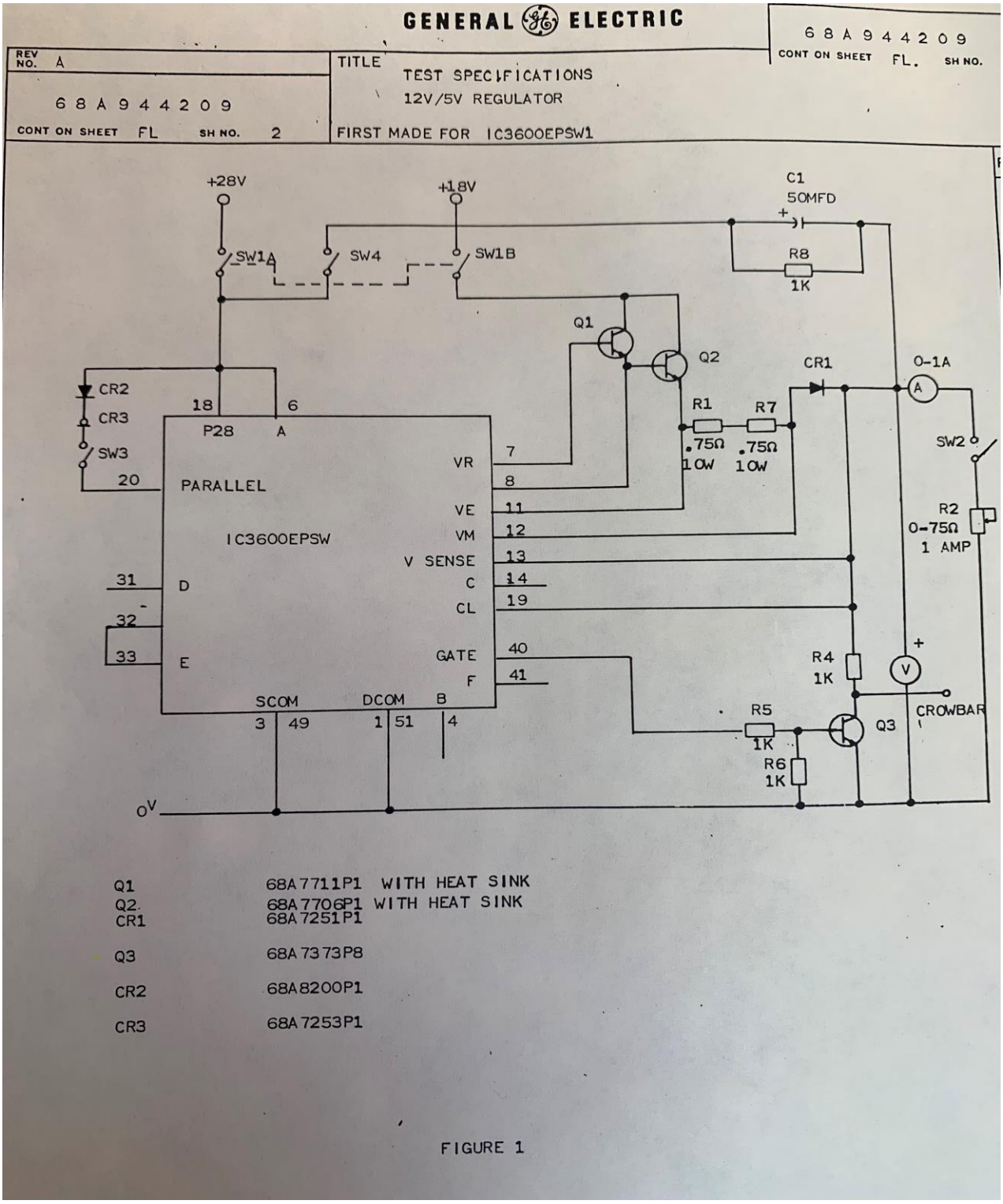
Note: All MARK I, II, & III Turbine related cards require a post testing burn-in of 100 hours.

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

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

8.3 ***TEST COMPLETE ***

9. Attachments


GENERAL ELECTRIC
68A9442209
REV NO. A
TITLE
TEST SPECIFICATIONS
12V/5V REGULATOR
68A9442209
CONT ON SHEET FL SH NO. 2
FIRST MADE FOR IC3600EPSW1
CONT ON SHEET FL. SH NO.
+28V
+18V
C1
50MFD
SW1A
SW4
SW1B
R8
1K
Q1
Q2
CR1
0-1A
CR2
CR3
SW3
18
6
P28
A
20
PARALLEL
IC3600EPSW
VR
VE
VM
V SENSE
C
CL
GATE
F
7
8
11
12
13
14
19
40
41
R1
R7
.75Ω
10W
.75Ω
10W
SW2
R2
0-75Ω
1 AMP
31
32
33
D
E
SCOM
DCOM
B
3
49
1
51
4
R4
1K
R5
1K
R6
1K
Q3
CROWBAR
0V
Q1 68A7711P1 WITH HEAT SINK
Q2. 68A7706P1 WITH HEAT SINK
CR1 68A7251P1
Q3 68A7373P8
CR2 68A8200P1
CR3 68A7253P1
FIGURE 1

9.1