ABB	**Functional Testing Specification**
ABB ***Parts & Repair Services*** ***Louisville, KY***	**LOU-GED-DS3800HPTP**

Test Procedure for a Card that goes on a PEG Module

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	R. Johnson	3/30/2009
B	Correct some typos	S. Cash	5/18/2009
C	Comment in 6.2.3.1.1	J. Hardin	9/14/2009
D	Rewrite of procedure to accommodate new test fixture	S. Pharris	11/01/10
E	Added steps 6.2.1.12 & 6.2.1.14	S. Cash	9/5/2017
F.	Added steps 6.1.2 & 6.3.1	D. Bush	10/18/2017
G.	Inserted additional step at 6.2.1.6	D. Bush	1/2/2020

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Roger Johnson	Scott Cash	D. Bush	Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
3/30/2009	5/18/2009	1/2/2020	3/30/2009

Functional test procedure for a DS3800HPTP Card

1. SCOPE

1.1 This is a functional testing procedure for a DS3800HPTP 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 See 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 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
2		Fluke 87 DMM (or Equivalent)
1	H188955	PEG Test Station
1		O-Scope
1		AC Current Probe
1		Function Generator

6. TESTING PROCESS

6.1 Setup

6.1.1 Install card in test fixture and make all connections.

6.1.2 Remove jumper wire from TP6 to TP9.

6.2 Testing Procedure

6.2.1 Power On

6.2.1.1 Apply power to the unit by setting switch to “ON W/FAN” position.

6.2.1.2 Adjust Variac for 120VAC +/- 1% between green jacks on top of fixture labeled 120VAC with reference to ACOM (black jack in middle).

6.2.1.3 Verify IMOK LED CR52 and Firing LED CR51 are ON.

6.2.1.4 With DMM across JD1 to JD2 should read short.

6.2.1.5 Verify the voltages listed below using the jacks on the top of the fixture.

TP7	+10V
TP4	+15V
TP6	-15V

6.2.1.6 After verifying above voltages, plug meter back in +10v(TP7), open test fixture drawer and adjust the AMTRAK SCR firing box both full on and full off. The +10v on TP7 should not vary more than .1 Vdc. (Note for repairs: If this step fails change U3 on main circuit board.)

6.2.1.7 Verify steady firing pulses on O-Scope with approx 9.5 Amps amplitude. (Depending on the scope you are using you may have to measure the current as a peak to peak voltage. It will read approx 9.5V)

6.2.1.8 Verify red and black jumpers on front of fixture are connected red to red and black to black.

6.2.1.9 Set SW1 “UP” to turn on auxiliary power supply

6.2.1.10 Using DMM verify 12VDC at jacks on front of fixture

6.2.1.11 Set SW2 “UP”

6.2.1.12 Push Black push button. IMOK LED should go OFF.

6.2.1.13 Push Black push button again and verify JA-6 jack goes zero volts.

6.2.1.14 Set SW2 “DOWN” and press Red push button. The IMOK will be OFF.

6.2.1.15 Push Red push button again and verify JA-6 jack goes zero volts.

6.2.1.16 Adjust the voltage to 7V on the red and black jacks.

6.2.1.17 Connect the red test jack to the black test jack so as to form an X.

6.2.1.18 Press Red push button JD1 to JD2 should open briefly.

6.2.1.19 CR50 0V Fire LED should come ON and stay ON when button is released. (CR50 must latch, if it does not there is a problem with the card.)

6.2.1.20 Push SW1 (on unit next to CR50).

6.2.1.21 CR50 0V Fire LED should turn OFF.

6.2.1.22 Set SW2 “UP”

6.2.1.23 Press Black Button JD1 to JD2 should open briefly

6.2.1.24 CR50 0V Fire LED should come ON and stay ON when button is released.

6.2.1.25 Push SW1 (on unit next to CR50).

6.2.1.26 CR50 0V Fire LED should turn OFF.

6.2.1.27 Set SW1 “DOWN” to remove auxiliary power .

6.2.1.28 Power down entire fixture for ten seconds then reapply power by setting switch back to “ON W/FAN” position.

6.2.1.29 Allow unit to run for a minimum of one hour then re-verify pulse amplitude.

6.3 ***TEST COMPLETE ***

6.3.1 Reconnect jumper wire from TP6 to TP9.

6.4

7. Notes

7.1 None at the time.

8. Attachment

8.1 Picture of Test Fixture