GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-TOFFEE-IS220PDIOH1**

Test Procedure for an IS220PDIOH1 card tested on the Toffee System

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	E. Rouse	2/23/2010
B	Transferred procedure from a general group to a specific single document. Also added asset numbers to section 5.	F. Howard	6/28/2010
C	Added comment to step 6.1.1 on upgrades to AF revision	C. Wade	10/26/2012
D	Added Functional Testing and Burn-In.	J.Francis	12/15/2017

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DATE	**DATE**	**DATE**	**DATE**
02/23/2010	6/28/2010		02/23/2010

Functional test procedure for an IS220PDIOH1A card tested on the Toffee Test system

1. SCOPE

1.1 This is a functional testing procedure for the IS220PDIOH1A Discrete I/O Module.

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 the 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 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	H188818	Toffee Test System #14
1	H188882	Toffee test fixture for IS220PDIOH1A
1	H190121	Mark Vie TMR Test Rack

6. TESTING PROCESS

6.1 Setup

6.1.1 All units should be upgraded to AF revision, due to intermittent alarms issues, as a minimum.

6.1.2 Install IS220PDIO fixture H188882 onto TOFFEE test System.

6.1.1 Install Unit Under Test into test fixture. Plug the black and white wire into back of unit. Plug the red Ethernet cable into the receptacle on the left and the blue Ethernet cable into the right.

6.2 TOFFEE Testing Procedure

6.2.1 Double click on the OPERATOR INTERFACE icon on screen.

6.2.2 On the user name dialogue box, choose either administrator or technician. If administrator password is NGTF2008*, technician password is KISS, case sensitive. The next window should say configuration management and you should always click on no.

6.2.3 Screen will flicker and box marked single pass will be highlighted. Click on it and it should put up another dialogue box that says Orange book is old. Click o.k. If Orange book needs to be updated, there is an icon for that but I would let Paul or Eric do it until user is familiar with system.

6.2.4 The next dialogue box should say select DUT (device under test). Detected fixture should have the model number being tested and family name should say MVIe. Click the drop-down box DUT and your model number should be the only option. Select it and it should appear in the DUT model number. Put your revision level of unit being tested in DUT REV and click ok.

6.2.5 A delay dialogue box appears, counts down and then asks for a serial number, enter 14 and check the boxes marked RUN UPLOADS and DELETED LOGS. Click ok. If you logged on as an administrator, you will not get this dialogue box. The test will automatically run these.

6.2.6 A delay dialog box appears and counts down, do not stop it and then system runs test. You will get either a pass or fail message.

6.3 Functional Testing

6.3.1 Install unit into Mark Vie TMR Test rack on appropriate terminal board.

6.3.2 Toolbox is setup to automatically configure and start using PAC Module. See note 7.2 for any questions.

6.4 Burn-In

6.4.1 Let unit run in test rack for 48 hours.

6.4.2 Testing is complete when unit successfully runs in test rack with no errors for 48 hours.

6.5 ***TEST COMPLETE ***

7. NOTES

7.1 Changes to the electronic Toffee test are recorded in the Software Control Database

7.2 Using this test procedure assumes you are familiar with ToolboxST. If assistance is needed, a knowledgeable person will be willing to assist.

8. ATTACHEMENTS

8.1 Picture of the Toffee Test System