g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DS3800XTFH**

Test Procedure for a DS3800XTFH

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

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Steve Pharris			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
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1. SCOPE

1.1 This is a functional testing procedure for a DS3800XTFH.

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)

6. Testing Process

6.1 Setup

6.1.1 Set all potentiometers fully CCW

6.1.2 Install all jumpers

6.1.3 Remove any components from saddle clamps

6.2 Testing Procedure

6.2.1 Verify less than 2 ohms between the following points

JA1-JB6

JA2-JB1

JA2-JB2

JA2-JB3

JA3-JB8

JA4-JB7

JA5-JB4

JA6-JB9

JA6-JB10

JA7-JE1

JA7-JE2

JA7-JE3

JA8-JE4

JA9-JE7

JA10-JE6

JA11-JE9

JA11-JE10

JA12-JE8

JA13-JD1

JA13-JD2

JA13-JD3

JA14-JD6

JA13-JD7

JA13-JD9

JA13-JD10

JA16-JD8

JA17-JG4
JA18-JD4
JA19-JG6
JA20-JG1
JA20-JG2
JA20-JG3
JA21-JG8
JA22-JG7
JA23-JF6
JA24-JG9
JA24-JG10
JA25-JF8
JA26-JF1
JA26-JF2
JA26-JF3
JA27-JF4
JA28-JF7
JA28-JF9
JA28-JF10
JA29-JC1
JA29-JC2
JA29-JC3
JA30-JC4
JA31-JC7
JA32-JC6
JA33-JC9
JA33-JC10
JA34-JC8
JR1-JS1
JR2-JS4
JR3-JS6
JR4-JS5
JR5-JS7
JR6-JS10

JT1-JU1

JT2-JU4

JT3-JU6

JT4-JU5

JT5-JU7

JT6-JU0

6.2.2 Set DMM to diode

6.2.3 Connect negative from meter to JA15

6.2.4 Verify proper diode voltage drop at the following points

JA5

JB5

JC5

JD5

JE5

JF5

6.2.5 Reverse the meter leads and repeat step **6.2.4** this time verifying meter reads open

6.2.6 Connect negative from meter to JH15

6.2.7 Verify proper diode voltage drop at the following points

JJ5

JK5

JL5

JM5

JN5

JP5

6.2.8 Reverse the meter leads and repeat step **6.2.7** this time verifying meter reads open

6.2.9 Measure resistance between the following points and verify all measurements are between 17.9K ohms and 18.5K ohms

JB4-JB5

JC4-JC5

JD4-JD5

JE4-JE5

JF4-JF5

JG4-JG5

JJ4-JJ5

JK4-JK5

JL4-JL5

JM4-JM5

JN4-JN5

JP4-JP5

6.2.10 Connect DMM across JR1 and JR2

6.2.11 Verify meter reads between 6 and 7 ohms

6.2.12 Remove BJ1 (As you remove these jumpers leave them off until told to replace them)

6.2.13 Verify meter reads between 8 and 9 ohms

6.2.14 Remove BJ2

6.2.15 Verify meter reads between 10 and 11 ohms

6.2.16 Remove BJ3

6.2.17 Verify meter reads between 13 and 14 ohms

6.2.18 Move meter to JR3 and JR4

6.2.19 Verify meter reads between 6 and 7 ohms

6.2.20 Remove BJ4

6.2.21 Verify meter reads between 8 and 9 ohms

6.2.22 Remove BJ5

6.2.23 Verify meter reads between 10 and 11 ohms

6.2.24 Remove BJ6

6.2.25 Verify meter reads between 13 and 14 ohms

6.2.26 Move meter to JR5 and JR6

6.2.27 Verify meter reads between 6 and 7 ohms

6.2.28 Remove BJ7

6.2.29 Verify meter reads between 8 and 9 ohms

6.2.30 Remove BJ8

6.2.31 Verify meter reads between 10 and 11 ohms

6.2.32 Remove BJ9

6.2.33 Verify meter reads between 13 and 14 ohms

6.2.34 Move meter to JT1 and JT2

6.2.35 Verify meter reads between 6 and 7 ohms

6.2.36 Remove BJ10

6.2.37 Verify meter reads between 8 and 9 ohms

6.2.38 Remove BJ11

6.2.39 Verify meter reads between 10 and 11 ohms

6.2.40 Remove BJ12

6.2.41 Verify meter reads between 13 and 14 ohms

6.2.42 Move meter to JT3 and JT4

6.2.43 Verify meter reads between 6 and 7 ohms

6.2.44 Remove BJ13

6.2.45 Verify meter reads between 8 and 9 ohms

6.2.46 Remove BJ14

6.2.47 Verify meter reads between 10 and 11 ohms

6.2.48 Remove BJ15

6.2.49 Verify meter reads between 13 and 14 ohms

6.2.50 Move meter to JT5 and JT6

6.2.51 Verify meter reads between 6 and 7 ohms

6.2.52 Remove BJ16

6.2.53 Verify meter reads between 8 and 9 ohms

6.2.54 Remove BJ17

6.2.55 Verify meter reads between 10 and 11 ohms

6.2.56 Remove BJ18

6.2.57 Verify meter reads between 13 and 14 ohms

6.2.58 Turn all pots fully CW

6.2.59 Verify the following points measure between 20 and 22 ohms

JR1-JR2

JR3-JR4

JR5-JR6

JT1-JT2

JT3-JT4

JT5-JT6

6.2.60 Replace all jumpers

6.2.61 Connect DMM across TC37 and TC38

6.2.62 Verify DMM reads 8 ohms

6.2.63 Connect a jumper wire across R67 saddle clamps

6.2.64 Verify DMM reads less than 2 ohms

6.2.65 Connect DMM across TC39 and TC40

6.2.66 Verify DMM reads 8 ohms

6.2.67 Connect a jumper wire across R68 saddle clamps

6.2.68 Verify DMM reads less than 2 ohms

6.2.69 Connect DMM across TC41 and TC42

6.2.70 Verify DMM reads 8 ohms

6.2.71 Connect a jumper wire across R69 saddle clamps

6.2.72 Verify DMM reads less than 2 ohms

6.2.73 Connect DMM across TC43 and TC44

6.2.74 Verify DMM reads 8 ohms

6.2.75 Connect a jumper wire across R70 saddle clamps

6.2.76 Verify DMM reads less than 2 ohms

6.2.77 Connect DMM across TC45 and TC46

6.2.78 Verify DMM reads 8 ohms

6.2.79 Connect a jumper wire across R71 saddle clamps

6.2.80 Verify DMM reads less than 2 ohms

6.2.81 Connect DMM across TC47 and TC48

6.2.82 Verify DMM reads 8 ohms

6.2.83 Connect a jumper wire across R72 saddle clamps

6.2.84 Verify DMM reads less than 2 ohms

6.2.85 If any resistors were removed from the saddle clamps before testing verify they are proper resistance according to resistor body

6.2.86 Reinstall any saddle clamped resistors

6.3 ***TEST COMPLETE ***

7. Notes

7.1 None at this time.

8. Attachments

8.1 None at this time.