ABB	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-UTS-DS200DCFBG1B**

Test Procedure for DS200DCFB card tested on the UTS Test 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	1/2/2008
B	Transferred procedure from a general group to a specific single document. Also added asset numbers to section 5. Added part number to note section.	J. Hardin	7/1/2010
C	Added burn in procedure	L. Groves	1/10/14
D	Added picture of fixture	C. Wade	1/28/2014
E	Updated parts replacement list	J.Hardin	06/30/2020
F	Removed the mandatory replacement of +15 and -15 regulators as well as optocouplers , Change these components on an as needed basis.	J. Morgan	2/25/2021

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Eric Rouse	J. Hardin		Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
1/2/2008	7/1/2010		1/2/2008

Functional test procedure for a DS200DCFB card tested on the UTS Test System and in a functional drive.

1. SCOPE

1.1 This is a functional testing procedure for a DS200DCFB card on UTS3000.

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 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	H188701	UTS3000 Tester
1	H188809	DCFB Fixture
1	H190112	DCFB Drive

6. TESTING PROCESS

6.1 Setup

6.1.1 As required by UTS3000 instructions.

6.2 UTS Testing

6.2.1 Identify the test to be used on the UTS3000 by matching the model number with the ones on the system and follow the instructions given after execution.

6.3 ***UTS TEST COMPLETE ***

6.4 Drive Testing

6.4.1 After UTS tes1t is complete, place card in the DC2000 "DCFB" drive, H190112 test fixture for burn in.

6.4.2 Connect the following cables to card:

V1, V2, V3, P1A, P2A, VM1A, VM1B, 1A1PL, 1F1PL, 1CPL, 1PL, MACPL, 1FPL, 5PL, 2PL, CPTPL, FAPL, 4PL, CNPL, PPL, NPL.

6.4.3 Verify all jumpers and dip switches match test card.

6.4.4 On Control Panel measure from COM to all red test jacks and verify no shorts are on the Power Supplies. If any shorts or low ohm readings are found, correct before powering Drive

6.4.5 Apply power by pulling E-stop out

6.4.6 Verify LDCC card displays "INITIALIZATION" then "MS 0 % I 0 %".

6.4.7 Check power supply voltage at Control Panel

+5 VDC	**+/-0.1**
+15 VDC	**+/-0.2**
-15 VDC	**+/-0.2**
+24 VDC	**+25-28**
-24 VDC	**-25-28**

6.5 Execute TEST 12 "SCR TEST".

6.6 This can be done by entering the following in on the programmer: ([set], [drv], [7], [7], [Enter], [Reset],[Reset], [test], [1], [2], [Enter]

6.7 LDCC will display "CELL TEST PASSED".

6.8 Press **RESET** on Control Panel, this will take you out DIAGNOSTIC MODE.

6.9 Push **RUN** switch up on Control Panel

6.10 Burn card in 15 minutes each direction: use the POL switch to change from FWD to REV.

7. NOTES

7.1 Please replace the capacitors if over 5 years old, C44, C87-C89, C91, C92. As well as replace Relay K2.

Location	Part Number
C44	104X122AA372
C87	104X122AA362
C88	104X122AA362
C89	104X122AA362
C91	68A7188P330X
C92	104X122AA362
K2	104X166AA075

8. Attachments

8.1 Picture of test fixture located on wall.