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Reliability Test Report

for BFX-AT100 (T99X171.00)

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Revision Change History

Revision	Description of Change	Date
1.0	Initial Release	06/13/2023

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Purpose:

1. Provide a formal functional demonstration of the product design reliability.
2. Identify any design discrepancies.
3. Reliability assurance of trial samples which are designed and fabricated in accordance with the customer's product specifications.
4. Conduct robustness testing on early production samples in accordance to customer's product environmental testing specification.

Scope:

This document describes the performance requirements, validation criteria, and the validation tests which focus on BFX-AT100 MP stage product.

The DUT H/W version is V025 and S/W revision is 15.520.8.

long-term solution:

New mold + Btv part modified + ABS material.

The summary of test items:

NO.	Item	Test Condition	Q'ty	Period	Pass Criteria	Refer Standard	Test result
1	Logo/Printing Abrasion Test	Alcohol Abrasion Test Alcohol concentration: > 95%, load: 200gf, cycle: 150 cycles (one cycle= forward + backward),	2 units	2 days	No physical defect and functional failure after this test.	Foxconn's Spec	PASS
2	Pencil hardness test	1. 45-degree between pencil and testing surface 2. load force: 500gf 3. Pencil type: Mitsubishi, 'UNI' 4. Test speed: 10mm/sec, 5. Pencil hardness classification: HB 6. Scratch the testing surface, until it appears visual scratch-trace .	2 units	1 day	No physical defect and functional failure after this test.	Foxconn's Spec	PASS
3	Chassis Static Load	1. Applied position: TOP on the enclosure 2. Weight and time: 5Kg/ diameter 9mm area/apply 30 seconds	2 units	1 day	There is no damage of Mechanical material (for examples Cover's crack, breakdown	Foxconn's Spec	PASS

Panel Drawing:

Front



Rear



Bottom



I/O Port



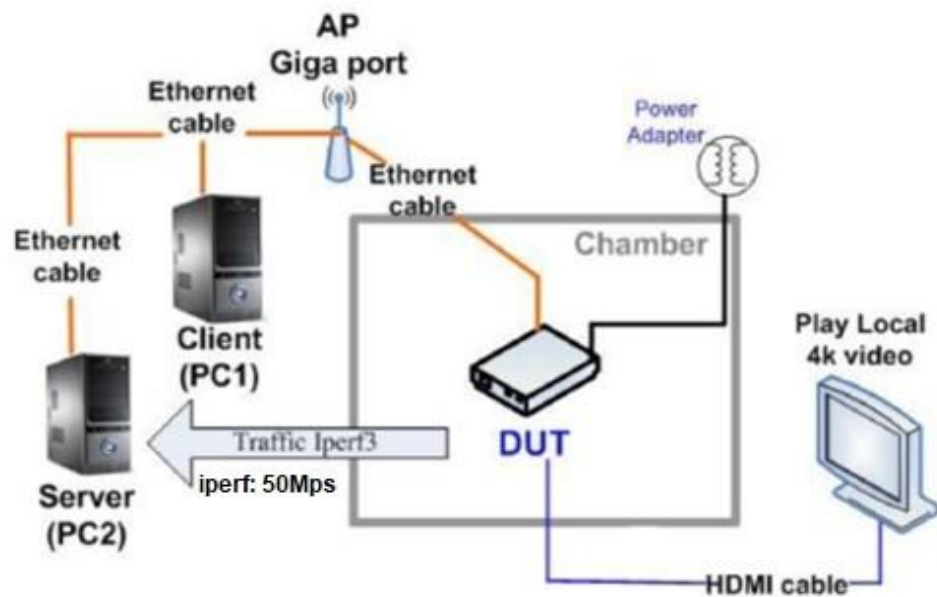
Adapter



RCU



Test setup and function test:



Connection:

Interface	Connection	Operation
AC power	The AC adapter is connected to the AC source	Powered on
DUT	DUT HDMI connected to Monitor	Play the local video
LAN	DUT, LAN connect to AP run iperf packet between PC	Continue to run iperf packet between PC, throughput 50 Mbps

1. Logo/Printing Abrasion Test

Purpose:

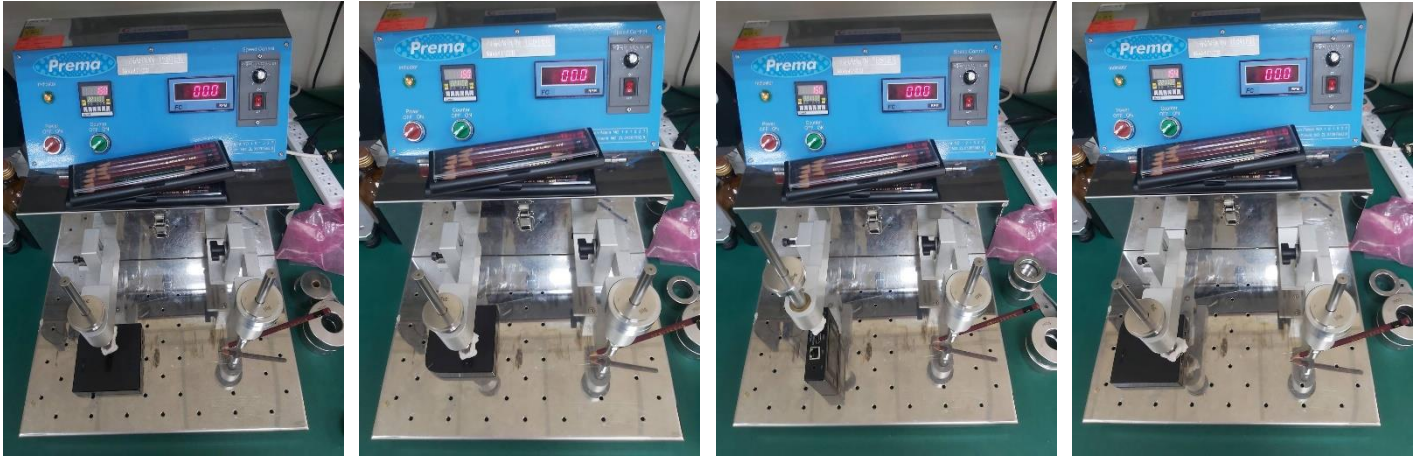
To demonstrate that products can be deformed or disfigured in any way by the chemical solvents.

Quantity: 2 unit

Test Objective: Alcohol Abrasion Test

Alcohol concentration: > 95%, load: 200gf, cycle: 150 cycles (one cycle= forward + backward),

Test Profile:



Test Procedure:

1. Fixed the DUT on the abrasion Tester
2. Alcohol concentration: 95%
3. Load: 200g for cycle: 150 cycles (one cycle= forward + backward)

Pass Criteria:

No physical defect and functional failure after this test.

Basis for Profile: Foxconn's Spec

Test Result: **PASS**



Sample1



Sample2

2. Pencil hardness test

To demonstrate that products can be deformed or disfigured in any way by the chemical solvents.

Quantity: 2 unit

Test Objective: 1. 45-degree between pencil and testing surface

2. load force: 500gf

3. Pencil type: Mitsubishi, 'UNI'

4. Test speed: 10mm/sec,

5. Pencil hardness classification: HB

6. Scratch the testing surface, until it appears visual scratch-trace .

Test Profile:



Test Procedure:

1. Pencil 1HB, weight 500g.

2. Pencil (1HB) is ground flat on 200# sandpaper.

3. Place the test pencil head in the area to be tested, push forward 3CM or more to check the surface damage of the pencil (more than 3 lines are tested, and 0.3MM is not judged at the bottom of the pen. The angle between the pencil and the horizontal plane is 45°).

Pass Criteria:

No physical defect and functional failure after this test.

Basis for Profile: Foxconn's Spec

Test Result: **PASS**

Sample	Test Profile	After	Test result
Sample1	 A black square component labeled 'Btv' with a red pencil pointing to its top right corner. The component has a small 'CH' logo at the bottom.	 The same black square component labeled 'Btv' after testing, showing a small white mark on the top right corner. The component has a small 'CH' logo at the bottom.	PASS
Sample2	 A black square component labeled 'Btv' with a red pencil pointing to its top right corner. The component has a small 'CH' logo at the bottom.	 The same black square component labeled 'Btv' after testing, showing a small white mark on the top right corner. The component has a small 'CH' logo at the bottom.	PASS

3. Chassis Static Load

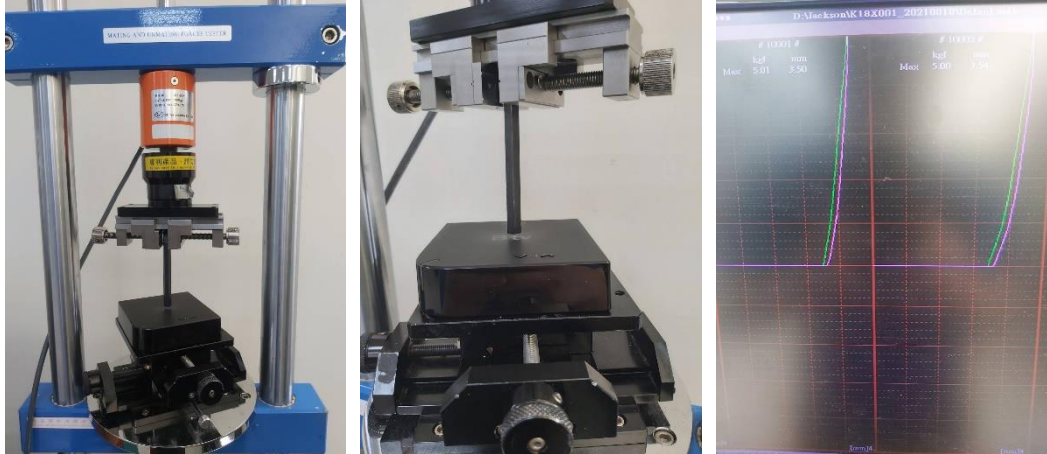
Purpose:

To demonstrate the product can meet worst case condition.

Quantity: 2 unit

Test Objective: 1. Applied position: TOP on the enclosure.

2. Weight and time: 5Kg/diameter 9mm area, apply 30 seconds.

Test Profile:**Test Procedure:**

1. Perform functional test and visual inspection on DUTs before test.
2. Place and fix the DUT on Precision Loading Tester.
3. Use diameter 9mm area, start test for this orientation by add the push force to 5kg, and hold on for 30s.
4. Released the force, and visual inspect the DUT to make sure no any damage of Mechanical material.

Pass Criteria:

There is no damage of Mechanical material (for examples Cover's crack, breakdown

Basis for Profile: Foxconn's Spec

Test Result: **PASS**



Sample 1



Sample 2