

BFX-UA300 FFC cable 8D report



Foxconn Industrial Internet
富士康工业互联网

FOXCONN CPEG JBD_VN
2022-March-10
Version 02

D2. Description of Problems

Issue Description

- 2021-Oct-21, ALT customer complain [BFX-UA300] defect 2 units BFX-AU300
Symptom : No turn on the LED, No button operation.

No.	MAC ID	Shipping SN	Production date	Failure Description Feedback from Customer	ALT Checked connections FFC cable
1	A8934AFE796F	2149695001202199000013	2021-Sep-27	Not turn on the LED	LED FFC : 14 Pin open
2	A8934AFE797E	2149695001202199000010	2021-Sep-27	Not operation the Button	Button FFC : 14, 15 Pin open



D3. Containment

Check FG stock status

- 2022-March-10, Check K18X001.00 product inventory. Have 824 units, Re-check function 48 units is normal .

MODEL_NAME	TOTAL_COUNT	VERSION_CODE	TA_VER
K18X001.00	1	05S5	
K18X001.00	820	07S7	
K18X001.00	3	03S3N	

Summary: Check inventory , products has been shipped, has 824 units inventory left. Check function at OBA 48 units (1 pallet) all normal.

D4. Root Cause

1. Check Customer feedback 02 units production function test record.

Number	Log Function test online result		
	MAC ID	Shipping SN	Log Data
1	A8934AFE796F	2149695001202199000013	 FT1_PASS.doc  FT2_PASS.doc  FT3_PASS.doc  RC_PASS.doc  RC1_PASS.doc  RC2_PASS.doc
2	A8934AFE797E	2149695001202199000010	 FT1_PASS.doc  FT2_PASS.doc  FT3_PASS.doc  RC_PASS.doc  RC1_PASS.doc  RC2_PASS.doc

Summary: Check log tested data is normal, LED and Button function working normal.

D4. Root Cause

2. Check Customer feedback 02 units production history

No.	MAC	SN	Carton ID	Pallet ID
1	A8934AFE796F	2149695001202199000013	214CYU91390017	PYU91390002
2	A8934AFE797E	2149695001202199000010	214CYU91390054	PYU91390002



2 Units SFC
production data.xls

Summary: Check production data of products detect FFC fail, two units was been rework 2 times , the first time cause button housing issue and 2nd time cause suspect gasket making AMP_SDA & GND short issue. Rework follow SFC control process , and OP re-assembly and function test follow SOP defined.

D4. Root Cause - FFC NG sample analysis

3. NG FFC cable 376.00043.005 cable return from Vender Checking VI and X-ray data

2022-Feb-07, Fii received 01 pcs FFC cable NG (From customer feedback in 2 units FPC_LED_BOARD defect)



Summary : Check visual inspection defect FFC cable had damage before Fii received (as picture)
Checking X-Ray connect zone of FPC_LED_BOARD Jack LED => **Not found out open.**

D4. Root Cause - FFC NG sample analysis

4. NG FFC button cable impedance measurement

- Measure connection of 2 points of FFC button NG cable, (compared with FFC button OK cable).

→ Find out Pin 13(KB_ PWR), Pin14(GND) of NG sample not connection(as Picture 2).

Pin14

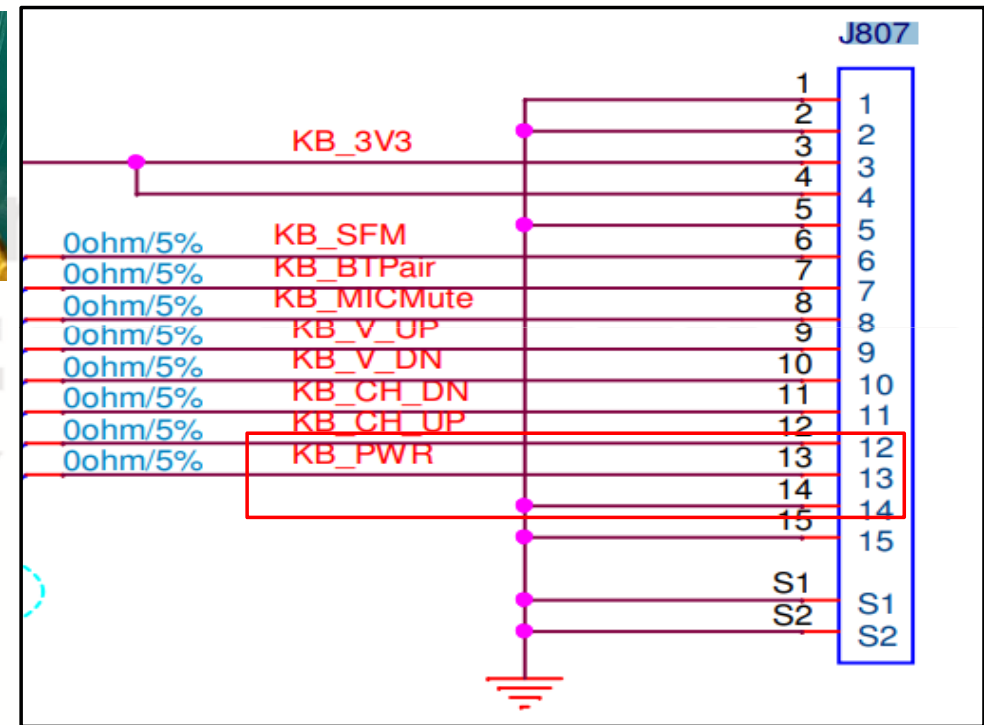
Pin13

OK sample

Pin14

Pin13

NG sample

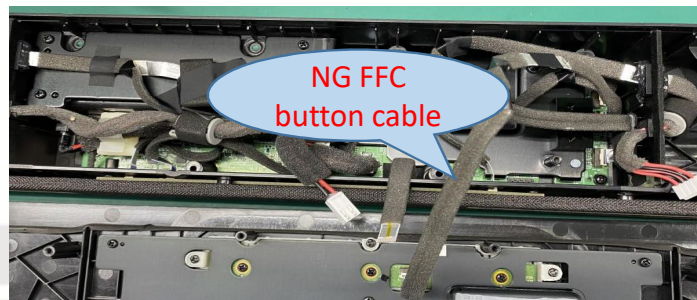
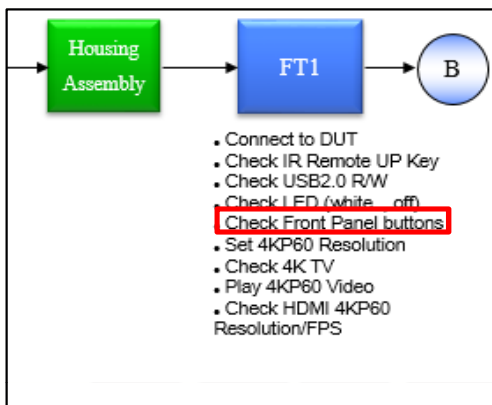


Summary: NG FFC cable has Pin13, Pin14 not connection.

D4. Root Cause - FFC NG sample analysis

5. Re-Assembly and function test station on line result

- Use NG FFC button cable assemble into OK product to test at FT1 station(Check Button function) at test machine FT1001.



Assemble to verify NG FFC button cable

No #	Station	Log Test	Result	Remark
1	FT1	 NG FFC cable _FT1_BUTTON1	Fail	Fail Button 0 (Power button)

2. Test Button function by hand

- Re test 3 times button function by hand, using command "*adb shell fac check_button BUTTON_0*", result fail at Power button (button 0), and other button is pass normally

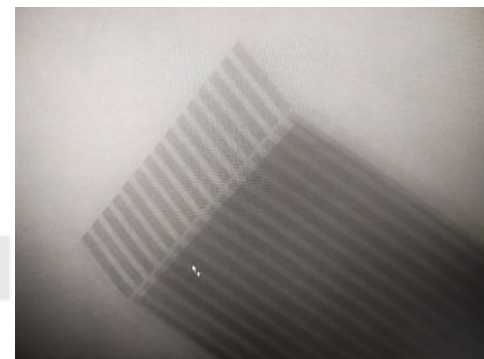
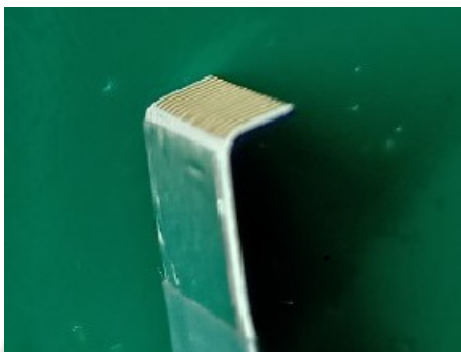
No #	Result	Remark
1	Fail	Fail Button 0 (power button), other button is pass
2	Fail	Fail Button 0 (power button), other button is pass
3	Fail	Fail Button 0 (power button), other button is pass

Summary: NG FFC button has Pin 13, Pin 14 not connection → test Power button fail at FT1 station.

Pin 13, Pin 14 of FFC button cable not connection. With test process on line, can cover FFC button cable NG sample at FT1 station.

D4. Verification Folded FFC Cable

6. Fii verify 01 units Fold FFC cable (OK sample) 3 times then check VI and Xray. Check .



Fii verify 1 units – FFC cable will folded 3 times (hand gold location) . Check visual , X-Ray defect all gold finger had broken.

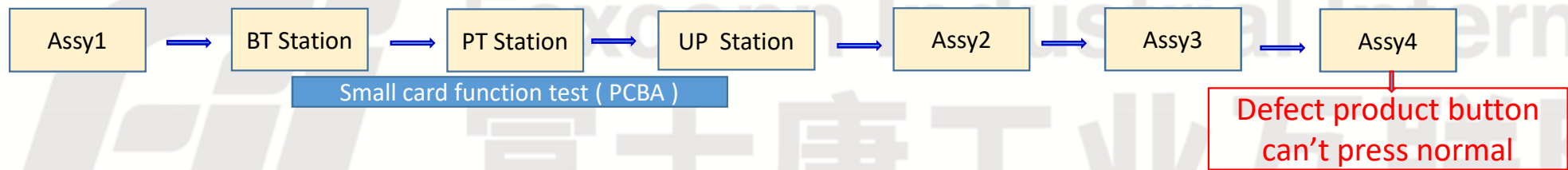


Summary: Base check NG FFC cable and Fii had verify folded FFC cable result all pin will open when we folded 2 times. **2 units failure at customer defect not by FFC folded issue**, cause if FFC cable folded will fail all pin open (NG FFC cable has Pin13, Pin14 not connection). Maybe cause fii rework **open housing take out FFC cable more 2 times, OP doing online make FFC cable head damage, but function test pass normal that time. So can not cover in production line.**

D4. Root Cause – Assembly Online process

7. Production normal process

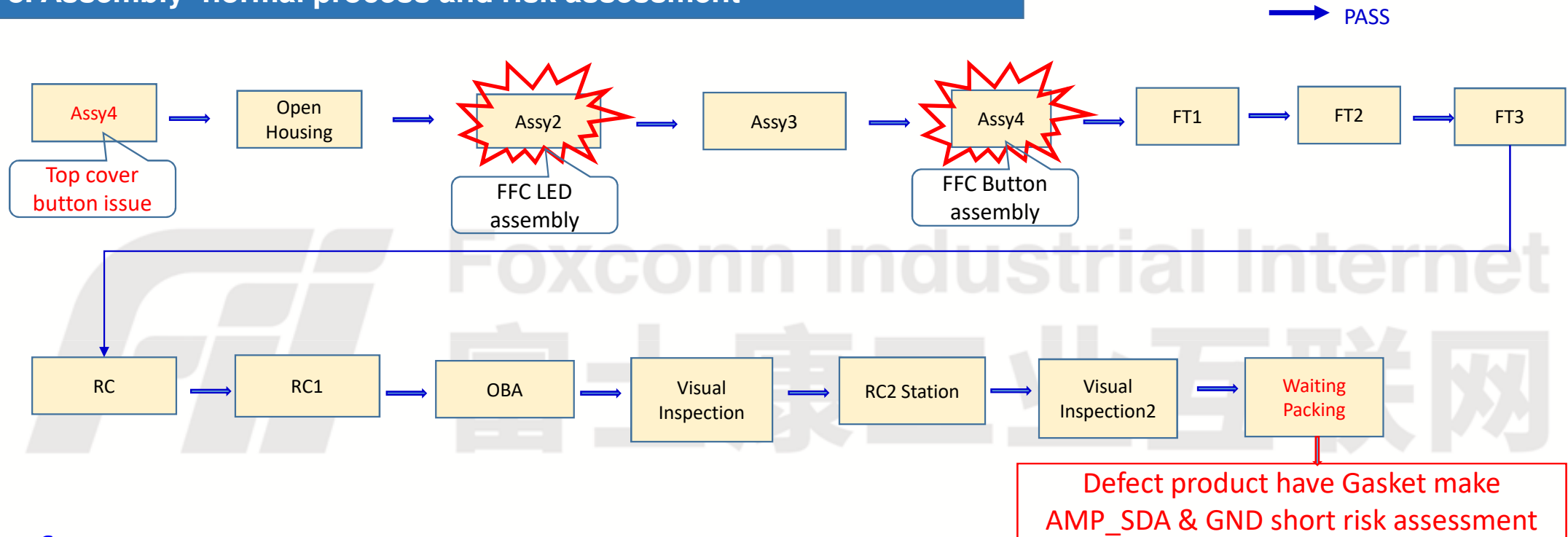
All normal production control by SFC system from the first station to packing then shipping. Operator doing follow SOP defined



Summary: But 2 NG units customer feedback has been rework open housing 2 times. The first time cause button housing issue and 2nd time cause suspect gasket making AMP_SDA & GND short issue. Rework follow SFC control process , and OP re-assembly and function test follow SOP defined.

D4. Root Cause – Assembly Online process and risk assessment

8. Assembly normal process and risk assessment



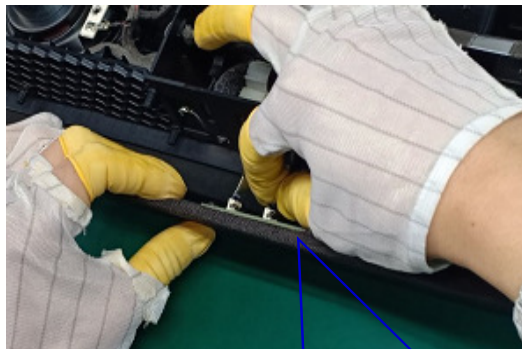
Summary:

Fii rework the 1st time back Assy2 repair housing top cover . After rework housing Top cover , product follow normal process doing to waiting Pack Box station.

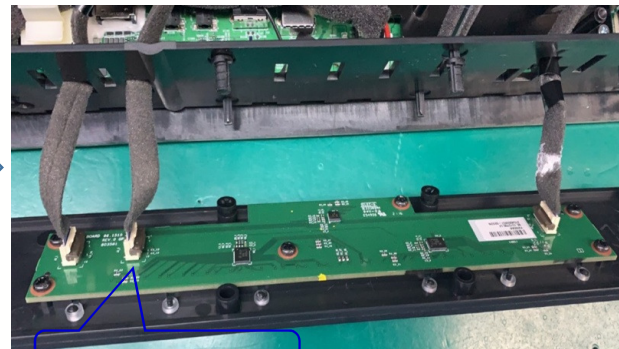
That time online product we testing defect some product had gasket making AMP_SDA & GND short issue. Then we decided rework open housing 2nd time for re-check gasket status .

D4. Root Cause – Assembly Online process and risk assessment

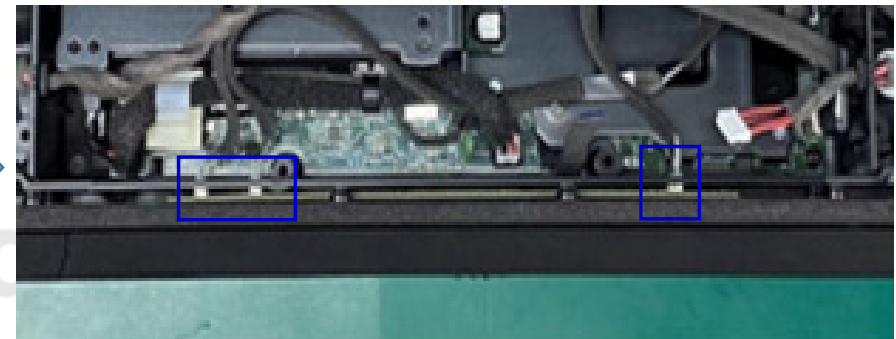
9. Assembly LED FFC cable risk assessment at Assy2 station



Risk assessment when OP put
FFC cable into LED main



LED FFC cable

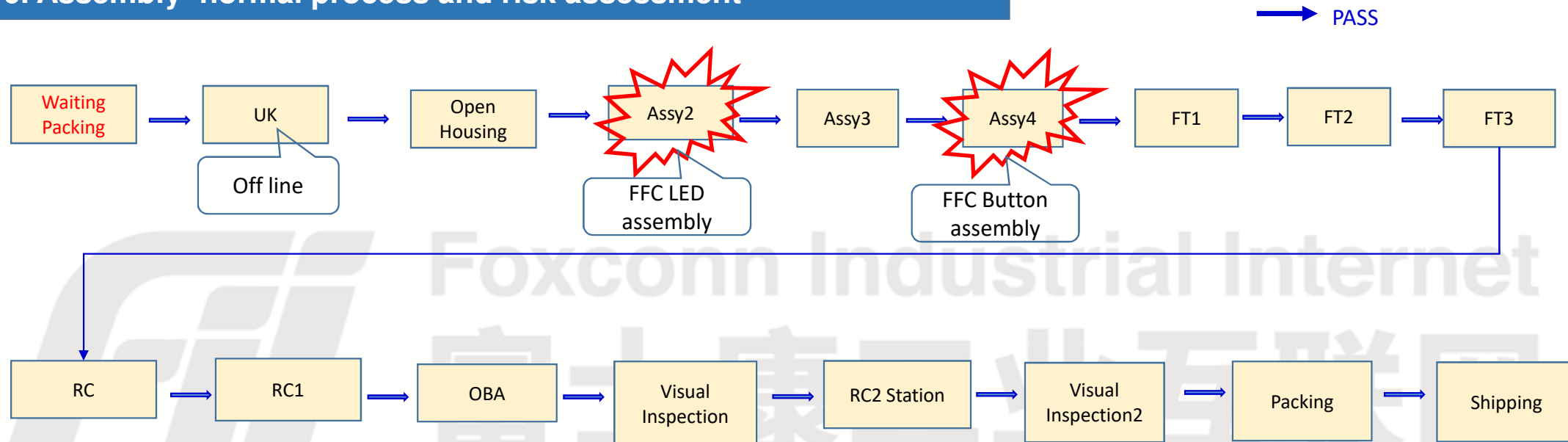


Summary:

The product doing to Assy4, We defect housing Top cover button can not press, We rework back Assy2 for open and repair housing Button issue. Due we re-assembly open housing maybe OP input FFC cable head in to LED main board make FFC cable head damage.

D4. Root Cause – Assembly Online process and risk assessment

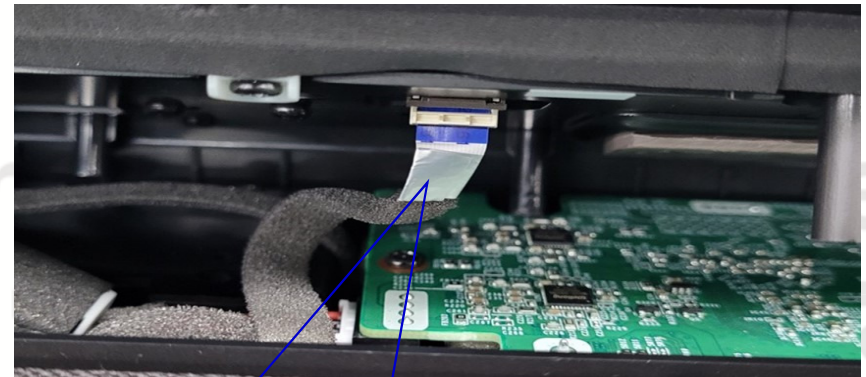
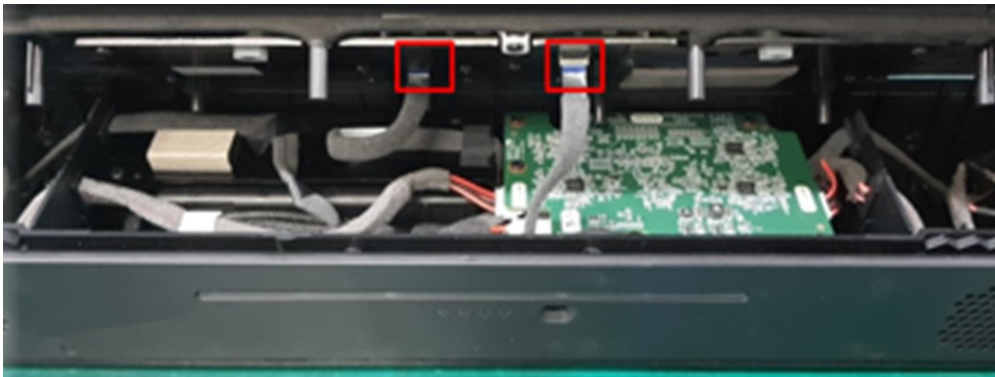
10. Assembly normal process and risk assessment



Summary: K18X001.00 open housing the 2nd times for checking gasket making AMP_SDA & GND short issue. All rework process control by SFC system, return product back first Assembly station. Doing follow normal process from Assy2 to shipping.

D4. Root Cause – Assembly Online process and risk assessment

11. Assembly Button FFC cable risk assessment at Assy4



Risk assessment when OP re-put in and put out FFC cable into Button main, make FFC damage.

Summary:

The product doing to final testing station, If want to rework or repair must be re-open housing and take out all main board and FFC cable out of housing. When we re-assembly housing maybe OP input FFC cable head in to LED main board make FFC cable head damage.

D5. Corrective Action

1. In online process:

Notice OP doing and re-check after doing when assembly FFC cable on each station, use hand put FFC cable into connector. Done: 2022-March-10

2. Make Quality Alarm

Make Quality Alarm notice OP doing assembly FFC cable follow each step. Done: 2022-March-10



ALT Quality
Arlam.pdf

Summary: - Notice and training OP online product use hand put FFC cable into connector .