

BFX-UA300 WRONG SCREW ISSUE REPORT



FOXCONN CPEG JBD_VN

Sep-2-2021

Version 03

Team Leader

Team Member

Foxconn

- MFG Manager : David Yin
- QA Manager : Charlie Su/ CB Lin

PM: Ben Zheng, Lam Zhou

PD: Ruan Wen Yong

QA: Rachel Nguyen, Cheng Da

IT: Akira Wen Dao

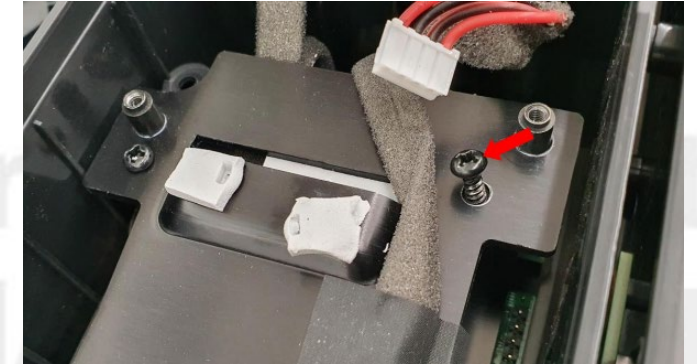
IE: Hai Ly

RD: Jim Chen

✓ Issue Description



- 31-August-2021, Customer complained BFX-UA300 use wrong screw when assembly



D3. Contain the Problems

✓ Containment action

- Check product MO running status: All MO are close
- Check product stocking status: Product out of stock

Table **Z** MODEL K18X001.00 VERSION ALL GROUP ALL Location ALL ☒ WHS ☐ CQA ☐ PC

QTY:

 Query(Q)

 SAVE

 SAVE TO CSV(C)

 EXIT(X)

MO:

☐ By Mo ☐ MOTECH

MODEL_NAME	TOTAL_COUNT	VERSION_CODE	TA_VER

Conclusion: No risky contain product in factory.

✓ Check BFX-UA300 production data



● Production data : Doing follow normal process , no abnormal issue.

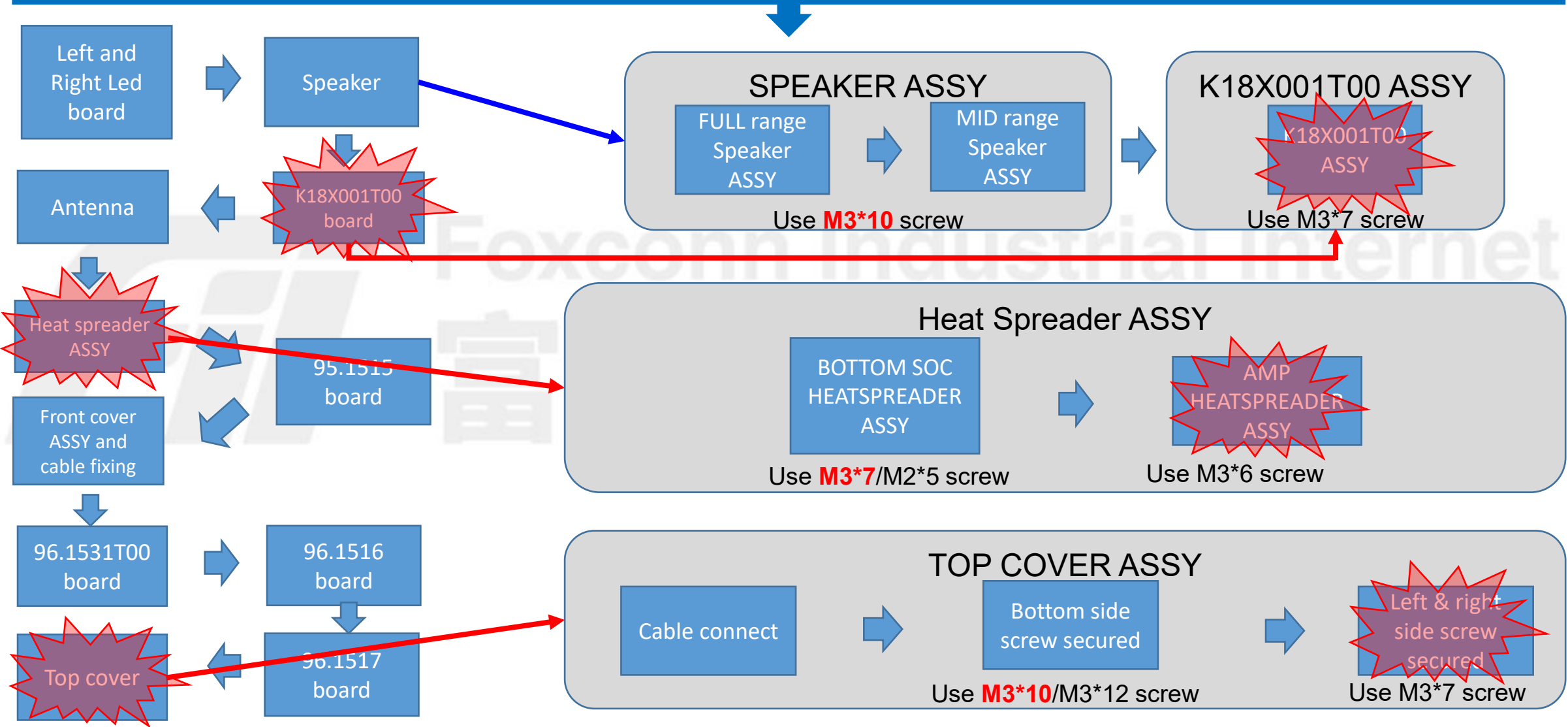
Serial Number	2149695001202099000194	2149695001202099000180	2149695001202099000232	2149695001202099000218	2149695001202099000197
Stage					
BT	7/5/2021 10:57	7/5/2021 22:32	7/6/2021 2:22	7/6/2021 1:04	7/6/2021 0:01
PT	7/6/2021 18:13	7/6/2021 22:47	7/7/2021 1:20	7/7/2021 1:07	7/7/2021 0:09
ASSY	7/7/2021 14:43	7/8/2021 4:43	7/9/2021 5:06	7/9/2021 5:09	7/7/2021 14:41
FT1	7/7/2021 17:19	7/8/2021 9:38	7/9/2021 12:41	7/9/2021 12:17	7/7/2021 15:29
FT2	7/7/2021 21:33	7/8/2021 9:46	7/9/2021 12:52	7/9/2021 12:23	7/7/2021 22:17
FT3	7/7/2021 21:48	7/8/2021 9:55	7/9/2021 13:21	7/9/2021 12:29	7/7/2021 22:23
RC	7/8/2021 15:00	7/8/2021 10:56	7/9/2021 13:22	7/9/2021 12:30	7/8/2021 13:55
RC1	7/8/2021 15:07	7/8/2021 13:37	7/9/2021 22:41	7/9/2021 12:38	7/8/2021 14:04
OBA	7/8/2021 20:41	7/8/2021 15:58	7/10/2021 1:00	7/9/2021 13:11	7/8/2021 22:10
RC2	7/8/2021 21:58	7/8/2021 18:22	7/10/2021 1:19	7/9/2021 13:57	7/8/2021 22:28



Result : Defect unit have not rework data => All issue happens during Assembly process

D4. Root Cause

Check Assembly process

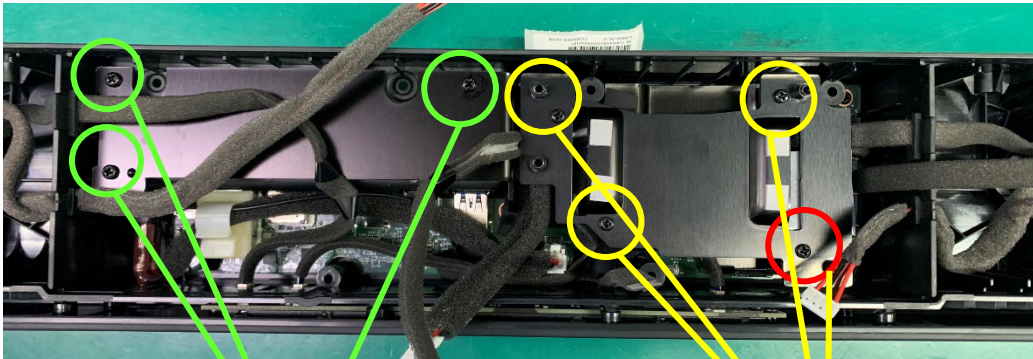


● Conclusion: Operator use wrong screw type in their assembly stage / previous stage

1. Reason analysis for occurrence



- Check the reality screw using in K18X001T00, heat spreader, Top COVER ASSY



M3*7 screw of Bottom
SOC heat spreader

M3*6 screw of
AMP heat spreader



M3*7 screw

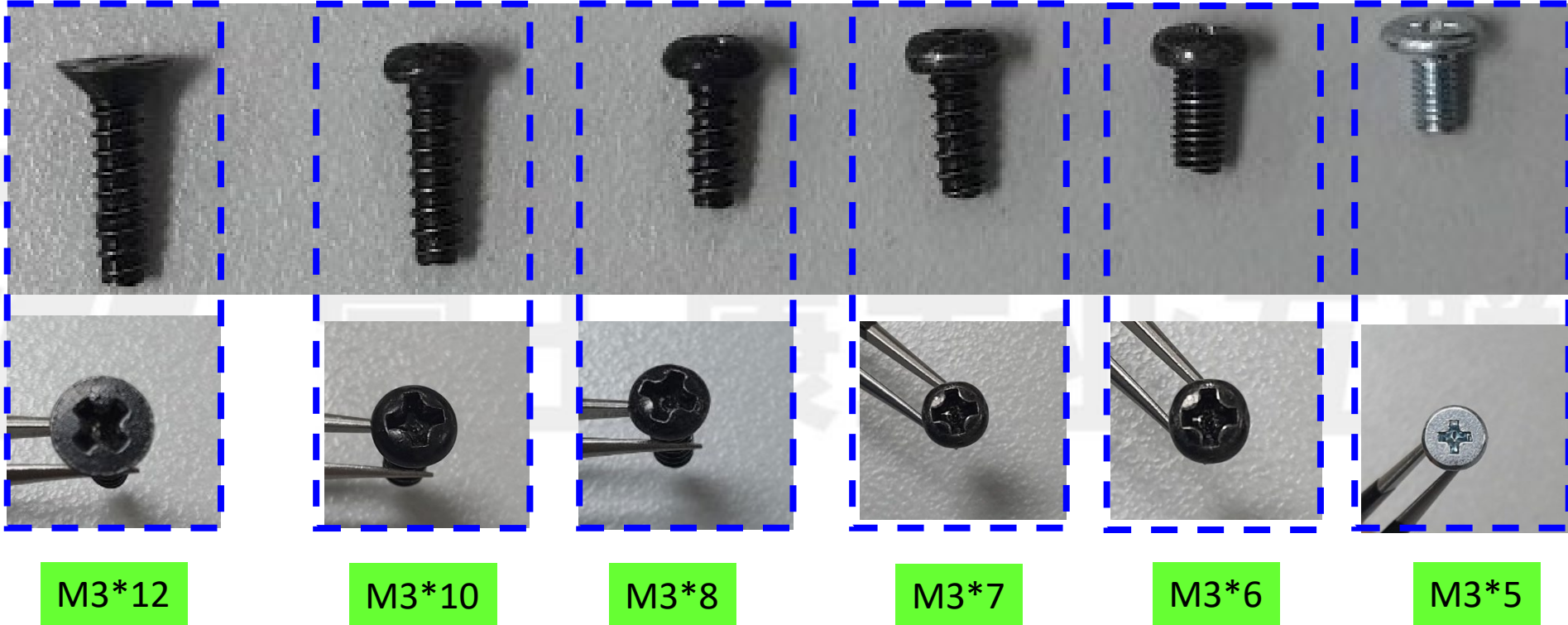


M3*7 screw

Conclusion: Operator use screw of their work stage/ previous work step to secure

1. Reason analysis for escape

- Check screw use in BFX-UA300 product



Summary: BFX-UA300 screw use same design(cross screw), same color from M3*6 -> M3*10 => OP hard to define wrong screw assembly

2. Reason analysis for escape



- Check housing using in BFX-UA300 product of DVT 3 build:



Summary: Housing use in DVT3 build is not final version and contain defect, RD & customer waive use these housing
=> VI operator misjudge two type failure – incoming material issue/assembly failure defect.

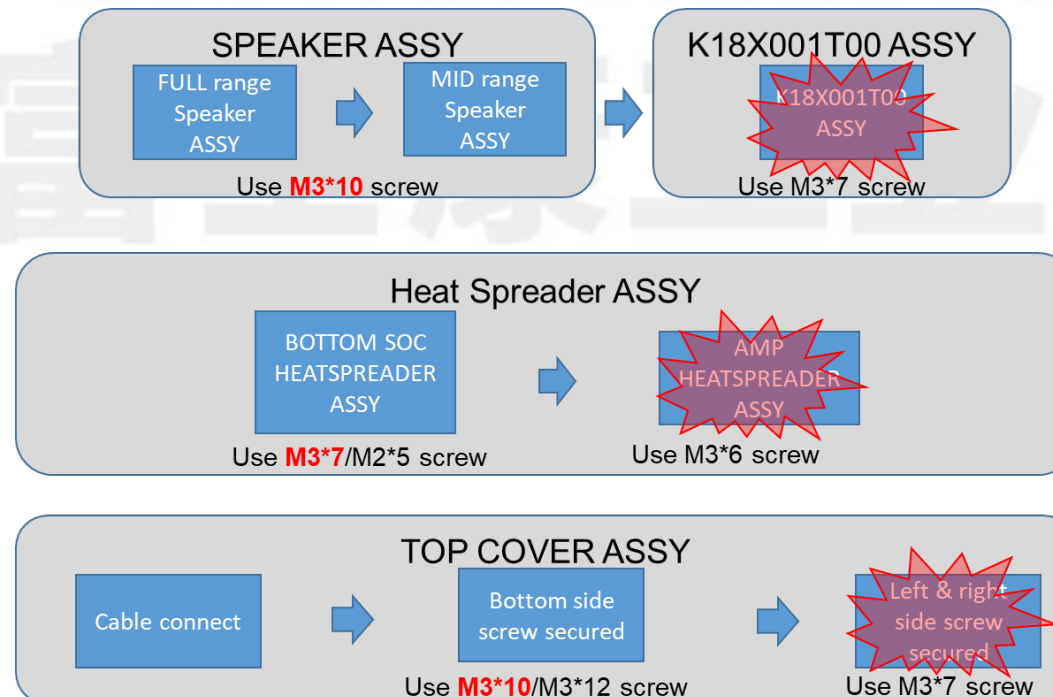
3. Reason analysis for occurrence



- Checks material library => The housing use in DVT3 build is not final version and housing still contain defect
- Per tracking and online simulator we have found these scenario below:

❖ Reason for occurrence:

- ✓ Working step was not separate clearly, one operator doing secure two different screw type in a work step.
- ✓ Two different screw material of two assembly step layout too close, operator could use wrong screw when assembly product



4. Reason analysis for escape



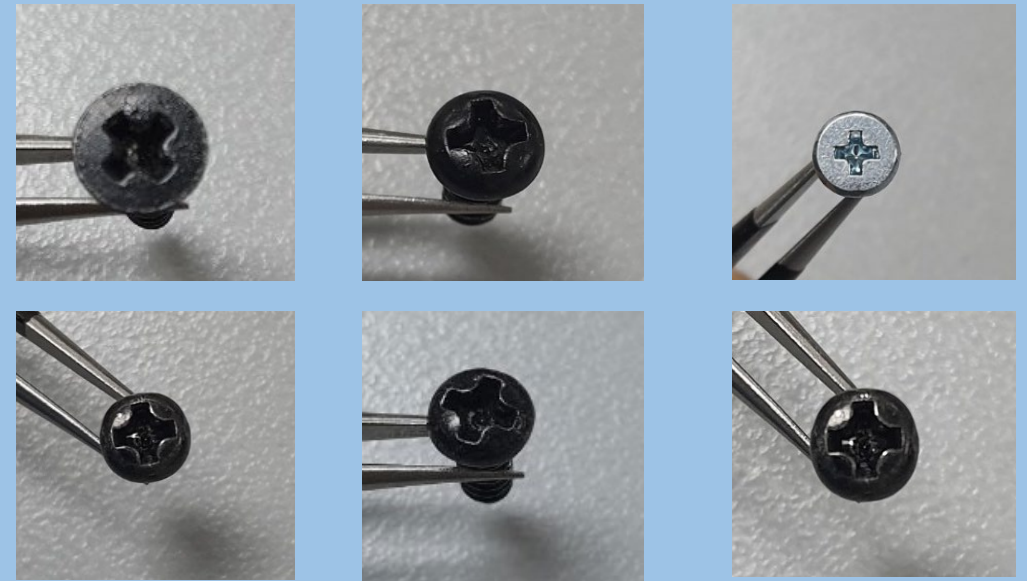
- Checks material library => The housing use in DVT3 build is not final version and housing still contain defect
- Per tracking and online simulator we have found these scenario below:

❖ Reason for escape:

- ✓ Housing using in DVT3 build is not final version and its containing defect. VI operator cannot define the defect from incoming material and the defect cause by assembly process => VI operator take PASS defect product.
- ✓ Different screw type using same design(cross screw), same color(black) => Operator cannot define which screw type of previous step to makes cross check.



Housing Defect



Screw with same design/color

D5. Corrective Action

No.	Subject	Root cause	Corrective action	Status	Owner	Due date
1	Reason I for occurrence	Working step was not separate clearly, one operator doing secure two different screw type in a work step	1. Separate screw assembly in assembly stage, one operator is only secure one screw type in an assembly step.	Done	IE: Huyen Trang SI: Wen Yong	1-Sep

D5. Corrective Action

No.	Subject	Root cause	Corrective action	Status	Owner	Due date
2	Reason II for occurrence	Two different screw material of two assembly step layout too close, operator could use wrong screw when assembly product	1. Locate screw box using in two different screw step direction more than 50cm. 2. Fixed screw machine holder string with maximum 30cm length 3. Use different color, , different screw label color to locate layout screw keeping boxes.	Done	IE: Huyen Trang SI: Wen Yong	1-Sep

D5. Corrective Action

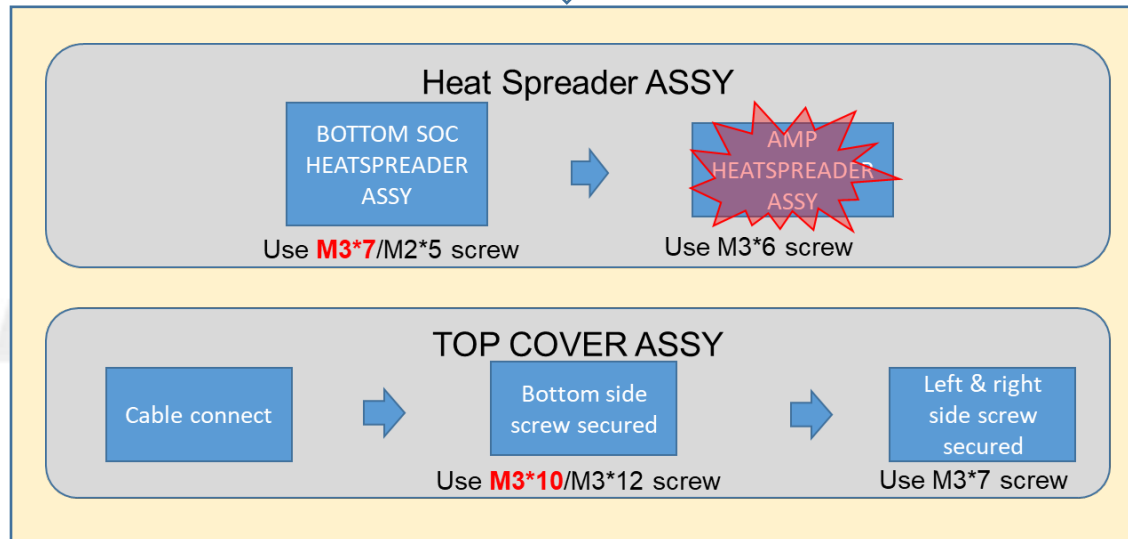
No.	Subject	Root cause	Corrective action	Status	Owner	Due date
2	Reason I for escape	Different screw type using same color(black) => Operator cannot define which screw type of previous step to makes cross check.	Design DFM (Fool-proofing) : 1. Request RD to change screw color for each screw type. 2. After the correction, need RD to update the product manufacture document/ assembly guide.	Open	RD: Jim Chen	TBD

D5. Corrective Action

No.	Subject	Root cause	Corrective action	Status	Owner	Due date
2	Reason II for escape	Housing using in DVT3 build is not final version and its containing defect. VI operator misjudge defect from incoming material and defect cause by assembly process	1. Need ALT to provide final version of housing as golden sample for VI station. 2. Fii to use golden sample on OP VI training for defects detecting. 3. Qualified OP are assigned to fixed workstations (Done/1-Sep)	Open	ALT SI: Wen Yong	TBD (Shall before pre-MP)

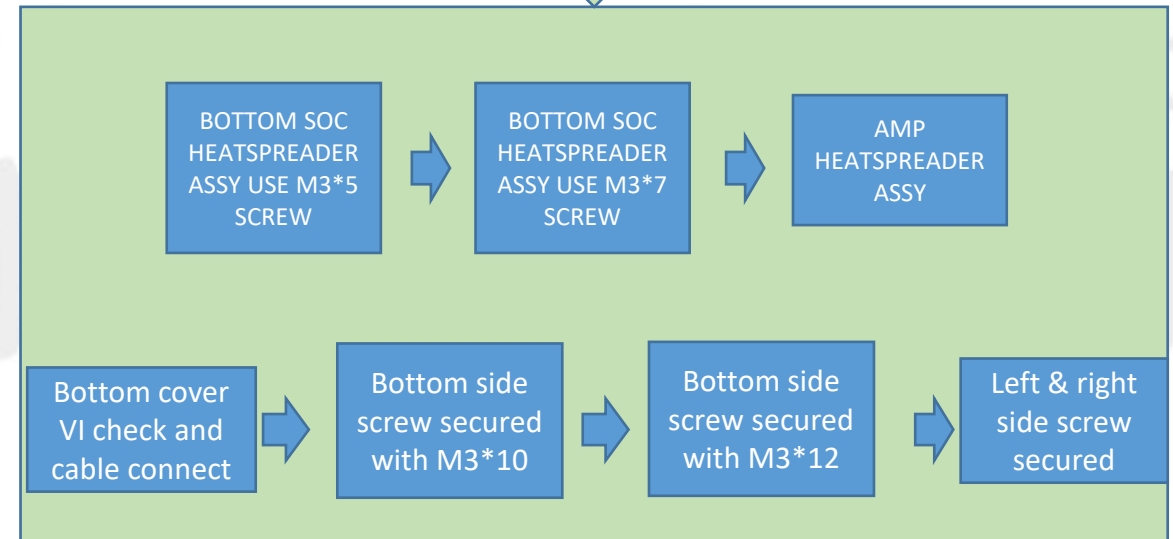
1. Verification of Effectiveness for occurrence

Before Separate Screw Secure Stage



One operator doing 3 work step with more than 2 screw type. Risky contain

After Separate Screw Secure Stage



One operator doing 1 work step with 1screw type. No risky contain

1. Verification of Effectiveness for escape



Waiting for RD update in DVT4 build



Foxconn Industrial Internet
富士康工业互联网