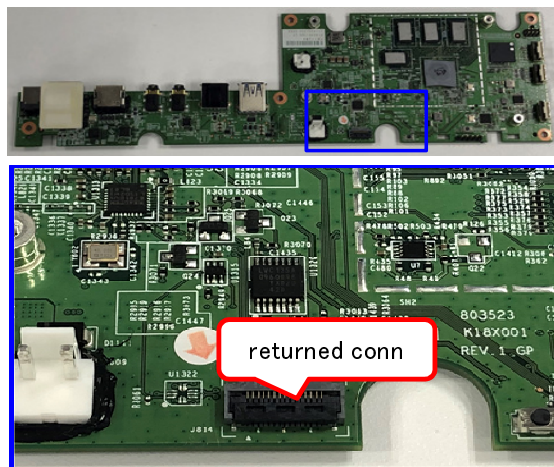


FH41-15S-0.5SH(05) contact failure analysis report

1. Basic information

- 1) Foxconn –
HRS P/N FH41-15S-0.5SH(05)
- 2) Date 2021/12/14
- 3) Lot No. 1A163
(Produced on 1/16, 2021. Line 3)
- 4) # of defectives 3 out of 10
of returned conn: 1
FFC: 1
- 5) Where found
after end user's inspection

- 6) content of claim
contact failed and FFC was pierced thru



- 7) Request
- ① To check returned conn and FFC
 - ② HRS's production and QC process
 - ③ Same-lot HRS factory kept sample check

2. Summary

① Checks on returned connector and FFC

Returned connector's dimensions

Measured returned conn's GND contact point height and gap dimension
Met our criteria
See appendix 1 for details

Results of checks on returned FFC

FFC's GND plate has been pierced thru
And on mother board side, GND pin has touched conductive layer
In addition, the thickness of returned FFC's GND layer is only 40um, thinner than HRS's recommendation 70um
See appendix 2 for details

Suspected root cause

The thinner GND plate is prone to be pierced thru when assembling FFC
In addition, as the issue seemed only to be found on mother board side
we assumed there was a additional force applied on conn when assembling
The AMC board, on the other hand, the FFC was almost been pierced thru, there is a risk for contact failure, too
See appendix 3 for details

2. Summary-2**②HRS production procedure**

For GND pin's shape and dimensions, they are HRS's key inspection items so HRS conducts checks every lot
Besides, CCD full inspection is applied on pin's contact tip height
See appendix 4 for details

③Checks on production record

No abnormal record found on the same and close lot

3. HRS's suggestion

The returned FFC's GND plate thickness is only 43-44um
It's too thin compare to HRS's suggestion(70um)
It would make the FFC more prone to be pierced thru after inserting
Advised to increase the GND plate thickness
In addition, prevent applying additional downward force on FFC when inserting/assembling

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