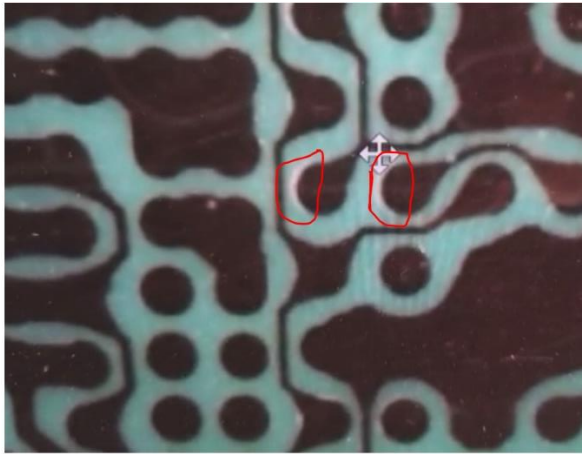


- **CRU Description:**

JESD cannot communication

Cross section observed suspected substrate crack at row A1



- **ATE Result:**

All 3 return units passed ATE test at room and high temperature at 90°C.

- **Bench Result:**

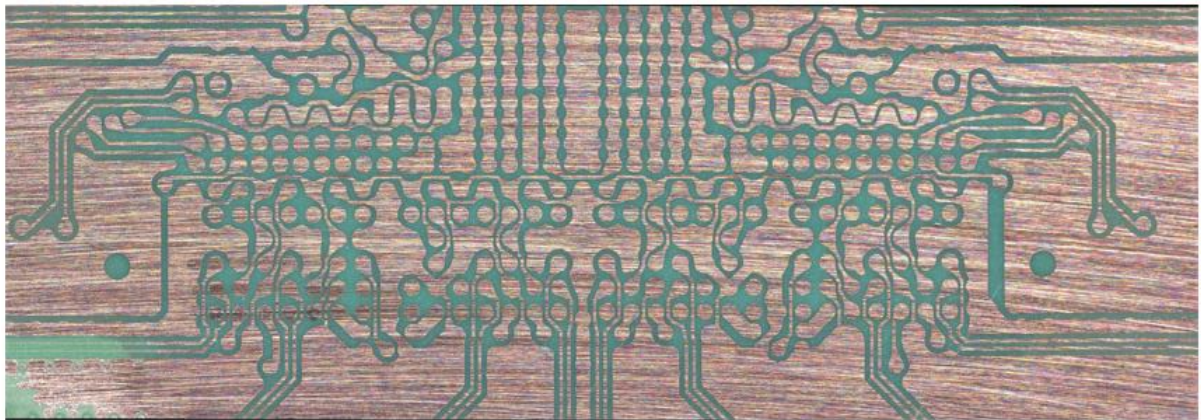
2pcs return units performed bench test. Customer reported fails cannot be replicated at DVDD max(0.95V) and high temperature at 100°C, but the fails duplicated only when applied DVDD higher (0.965-0.97V) than datasheet spec.

- **FA Result:**

2pcs fail unit + 1pcs good unit ship to shDAO for FA

Cross section in shDAO didn't observe any abnormal

Customer reported suspected substrate crack issue is not verified.



- **Reliability Result:**

This device has quarterly package level reliability monitor tests, and all passed without any issue notified.

data code	Sample size	Precondition	TC250x (- 55 ~ 125°C)	TC700x (- 55 ~ 125°C)
2004	20	0/20_All pass electrical test	0/20_All pass for electrical test 0/2_No delamination	0/18_All pass for electrical test 0/2_No delamination
2007	20	0/20_All pass electrical test	0/20_All pass for electrical test 0/2_No delamination	0/18_All pass for electrical test 0/2_No delamination
2010	20	0/20_All pass for electrical test	0/20_All pass for electrical test 0/2_No delamination	0/18_All pass for electrical test 0/2_No delamination
2011	20	0/20_All pass for electrical test	0/20_All pass for electrical test 0/2_No delamination	0/18_All pass for electrical test 0/2_No delamination

- **Conclusion:**

In conclusion, TI could not verify the customer reported issue within TI datasheet spec and all customer returns have been deemed Trouble Not Identified (TNI).

Since the fails were duplicated only when applied DVDD higher than datasheet spec, TI recommended customer to check application conditions to ensure units were used within datasheet spec.

### **Appendix 1 (TI Notice and Disclaimer):**

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES “AS IS” AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](#) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.