3D WARPAGE & RELIABILITY SIMULATION SERVICE Do it right the first time Thank you for visiting the ATS& SOULE IN ITEM (Concave warpage) PCB / Substrate / Module Concave warpage PCB / Substrate / Module Convex warpage

ISSUE

Head

on pillow

Solder

ball

Assembly, asymmetric layer construction, incorrect core, prepreg, copper distribution or materials can result in warpage or reliability issues.

3D MATERIAL CHARACTERIZATION

AT&S has industry-leading 3D material characterization and modeling capabilities.

3D WARPAGE & RELIABILITY SIMULATION

With the support of AT&S warpage & reliability simulation services, issues with assembly yield or reliability can be identified in advance and statistical failure rates and life time predictions can be accurately determined

RELIABILITY SIMULATION

No stress

Stress in critical

solder ball

COPPER

Module solder balling

Indicated with the corresponding

stress level

Prediction of the stress & statistical failure rates of copper structures such as vias or traces.

SOLDER

Prediction of the stress & statistical failure rates of solder joints.

PCB test coupon

Reliability and stress prediction of a via stack.

GLOBAL PCBA Substrate Solder Ball

Reliability and stress prediction of solder joint connections on a module

WARPAGE SIMULATION

None

wet open

None

wet open

CopperSolder PCB/

ball Substrate

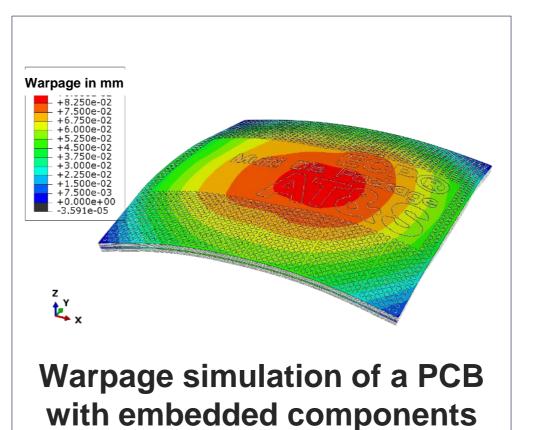
CARD (PCB)

Solder bridge

Prediction of the bare PCB warpage and identifying the key drivers.

ASSEMBLED SYSTEM (PCBA)

Prediction of the fully assembled PCB warpage and identifying the key drivers.



Warpage simulation of a fully assembled PCB