A-SAP™ Technology Reliability

D-Coupon Test Results
Multiple coupon configurations and process runs have been tested at multiple facilities on the OM Thermal Stress System with passing results.

Test conditions for Reflow Parameters: 6 cycles from 45 to either 230, 245, or 260°C followed by Thermal Shock Parameters of 100 cycles from -55 to 170°C

A total of 83 coupon sets from 6 different process runs were tested in the IPC TM-650-2.6.27b test with single vias, staggered vias and stacked vias (2)

Additional tests are ongoing to increase process sampling and via stack depth.

Interconnect Stress Testing – IST
Plated Through Vias: Passed testing at the 150°C condition for 500 cycles.
Micro via Circuits: Passed testing at the 190°C condition for 500 cycles following plated through via testing.
Per IPC TM-650-2.6.26a

Peel Strength Testing:

Type | Material | Manufacturer
--- | --- | ---
FR4 | 370 HR | Isola
N4000-29 | AGC MM
EM285 (HF) | EMC
EM370 (HF) | EMC
I-Speed | Isola
N4800-20 | AGC MM
EM526 (HF) | EMC
Mid Loss | I-Tera MT40 | Isola
TerraGreen | Isola
Meotron 6 | Panasonic
RO4350 | Rogers
MW2000 | AGC MM
EM891 | EMC
Low Loss | Tachyon100G | Isola
Meotron 7N | Panasonic
MW4000 | AGC MM
MW8000 | AGC MM
EM890 (HF) | EMC
EM890 (HF) | EMC
Very Low Loss | CS3379M | Risho

Type | Material | Manufacturer
--- | --- | ---
PTFE | RO3003 | Rogers
| CLTE-AT | Rogers
| FastRise TC | Taconic
| FastRise TC | Taconic
| EZ-IO F | Taconic
| F220D | NPP
| F300ASU | NPP
Polyimide | P96 | Isola
BT | N5000 | AGC MM
| R-F7055 | Panasonic
| EXSYLAM-N | Ube
Flex | | |
LCP | | |
Pyrax AP | Dupont
| Pyralux AG | Dupont
| R-F755 | Panasonic
| PXEO | Kaneka
| UPISEL-N | Ube
Polyimide | | |
BU Film | GX92 | AFT
| GL102 | AFT
| Zaristo125 | Taiyo Ink
| Zaristo500 | Taiyo Ink
| Zaristo700 | Taiyo Ink

Testing is ongoing, across a range of materials. For more information, contact Averatek.

More than 1000 panels have been processed with A-SAP™
The process is a proven and tested additive fabrication method to achieve next-generation advancements.

www.averatek.com

Manufacturing technology for next-generation electronics capabilities. The development of key chemistries and advanced manufacturing processes for very high-density printed circuit boards, semiconductor packaging, RF and millimeter-wave passive components, simplified assembly to aluminum. Contact our leadership team today at info@averatek.com.