Averatek A-SAP™ Process

25µm (0.001”) Line Width and Spacing after Plating
Copper Thickness 20.8µm (0.00082”)
“25μm (0.001”) Line Width, 50μm (0.002”) Spacing after Plating and Etching – Copper Thickness 23.6μm (0.00093”)
Averatek A-SAP™ Process
6 layer Build Up Design

25µm (0.001”) Line Width, 50µm (0.002”) Spacing after Plating and Etching – Copper Thickness 23.6µm (0.00093”)
Reliability – Coupon Design

- A 6 layers - 400µm (16mil) thick ‘D’ coupon using build up technology.
- Material: Panasonic R1755V/R1650V
- Design was a build up technology using 100µm (4mil) microvias (0.33 to 1 aspect ratio)
- Only internal Microvias were copper plated shut.
- Surface finish- ENIG
Thermal Stress Testing

- Coupons were sent to CAT Inc. for Om testing
- Test Parameters:
  - 6X Reflow @ 265°C
  - Thermal Shock – 100 Cycles @ (-)45°C – 150°C
- Acceptance criteria – Change in resistance <5%
- No visual delamination
Averatek A-SAP™ Etch Capability
Thermal Stress Testing

Pre-conditioning – Reflow 6X @265°C
Thermal Stress Testing

Thermal Shock Profile
Change in Resistance during Thermal Shock