

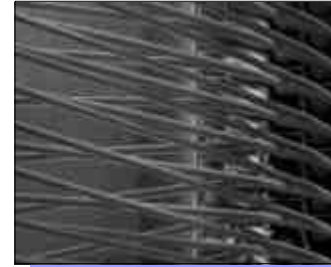
X-Wire™ Technology Insulated Bonding Wire



**X-Wire™
Free Air Ball**



**X-Wire™
Stitch Bond**



**X-Wire™
Crossing Wires**

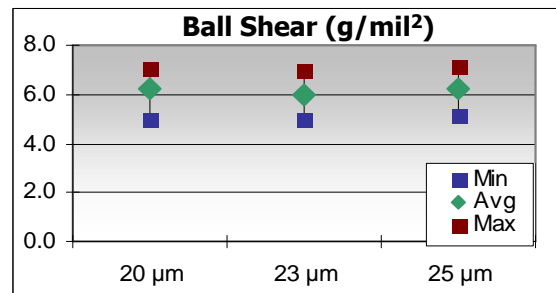
Target Applications

- ▶ Stack Die
- ▶ Multi-Row ICs
- ▶ Yield Improvement
- ▶ Engineering Changes
- ▶ Die Shrink
- ▶ Substrate Reduction

Performance Data

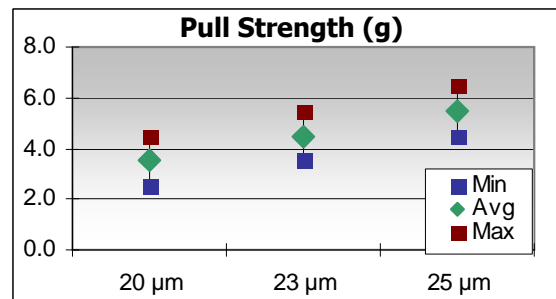
X-Wire™ Ball Bond

- ▶ Good Ball Shear Strength
- ▶ No Capillary Build Up
- ▶ Small FAB Capability



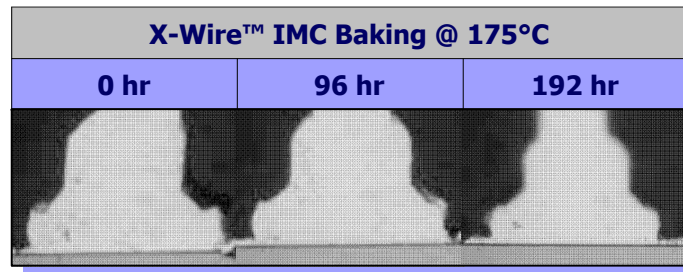
X-Wire™ Stitch Bond

- ▶ Good Pull Strength
- ▶ Laminate & Leadframe
- ▶ Reverse Stitch Bonding



X-Wire™ IMC

- ▶ Good IMC Coverage
- ▶ Passed 192 hr @ 175°C
- ▶ Comparable to Bare Wire



X-Wire™ Reliability

- ▶ MSL 3 – Pre-Condition
- ▶ Biased HAST (**HAST/B**):
 - ▶ 130°C, 85 RH, 4 V, 100 hr
- ▶ High Temp. Storage (**HTS**)
 - ▶ 150°C, 1500 hr
- ▶ Thermal Cycle (**T/C**)
 - ▶ -55 to 125°C, 1000 cycle

| X-Wire™ Reliability Test Summary | | | |
|----------------------------------|------------|------------|------------|
| BGA 503 | HAST/B | HTS | T/C |
| Lot 1 | 45/45 pass | 45/45 pass | 45/45 pass |
| Lot 2 | 45/45 pass | 45/45 pass | 45/45 pass |
| Lot 3 | 45/45 pass | 45/45 pass | 45/45 pass |

Additional Features

- ▶ Excellent Coating Adhesion
- ▶ High Temperature & Lead-Free Compatible

X-Wire™ 2.0 Head Start Kit

Wire Diameters

- ▶ 20 µm, 23 µm & 25 µm
- ▶ 200 m Sample Spools (2)
- ▶ Bare Wire from Tanaka

Wire Bonder Kit

- ▶ ASM Eagle & K&S Maxum Platform
- ▶ Capillaries

Documentation on CD-ROM

- ▶ Wire Bonder Setup Instructions
- ▶ Process Parameters & Wire Bond Design Rules

To Order Please Contact

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