



## PRESS RELEASE

### FOR IMMEDIATE RELEASE

#### **Dage introduces 2<sup>nd</sup> generation cold bump pull for High-Speed Bondtester**

*July 9, 2007, Fremont, California* – Dage Precision Industries, the industry leader in digital x-ray inspection and bondtesting technology, announces enhanced cold bump pull bondtesting capability for its award winning 4000HS High-Speed Bondtester. Cold bump pull (CBP) offers several advantages over conventional shear testing and the loading closely mimics that of drop testing on the corner balls of area array devices.

High-speed testing offers more than traditional bondtesting and is particularly suitable for detecting brittle fracture failures, a phenomenon that can occur with the introduction of lead-free materials. High-speed bondtesting can also be used to evaluate different alloys, the influence of various pad finishes and the effects of aging upon solder joint reliability.

Especially important is the transition speed, the point at which the dominant failure mode changes from ductile failure to brittle fracture or pad lift. Studies recently completed using the 4000HS and high-speed CBP and high-speed shear testing have shown excellent correlation with board level drop testing.

JEDEC has recently published new standards for both high-speed shear and high-speed CBP. The Dage 4000HS High-Speed Bondtester with this new 2<sup>nd</sup> generation high-speed cold bump pull capability assures full compliance with these new JEDEC standards and offers world class analysis of microelectronic solder joint integrity and reliability.

With America's headquarters located in Fremont, California, Dage Precision Industries, Inc. manufactures and supports a complete range of award winning digital X-ray inspection systems and bond test equipment for the printed circuit board assembly and semiconductor industries. For more information, visit [www.dage-group.com](http://www.dage-group.com).

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