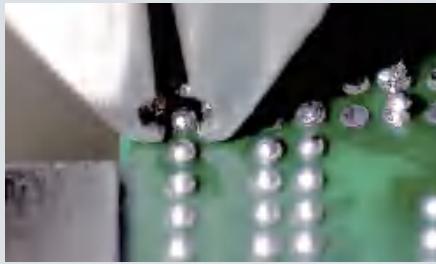




# MFM1500HS

High Speed Bond Tester

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## High-speed Shear Test

The high speed test regime requires an area in which the tool can accelerate before contacting the BGA ball. This is achieved by retracting the sample holder to an automatically calculated distance according to the speed chosen. Thus, non-test balls must be cleared prior to the test.

## High-speed Cold Bump Pull Test

Using the TRY-PRECISION patent technology, a special clamping device, to achieve the energy conversion in the horizontal direction to the vertical direction of the high-speed force test;

## Data Analysis

High sampling with wide bandwidth, high accuracy measurement; providing Force VS Distance Graph, Force VS Time Graph, Fracture Energy and other indicators.

## MFM1500HS | Specifications

Equipment	Machine Size(W* D*H)	700mm x 900mm x 880mm
	Weight	85kg
	Power supply	110V AC 60Hz or 220V AC50Hz. 10A
	CDA	0.4MPa-0.6Mpa
	System	Win10 64Bit
	Protector	Standard & Protected test area
	Test tool	Customization
Test module	Highspeed shear force test	BS 5kg (Precision: ± 1% FS)
	Test module	CBP 5kg (Precision: ± 1% FS)
	Other specification test module	Customized
Test speed	Highspeed shear force test	Adjustable, 50 mm/s-2m/s
	Highspeed pull force test	Adjustable, 50 mm/s -1 m/s
Axis	X axis travel	100mm
	Y axis travel	400mm
	Z axis travel	70mm

## High-speed Bond Tester

Traditional bondtesting is carried out at relatively low speeds (less than a 800um/sec for shear and 5mm/sec for pull) and the principal failure mode is rupture of the solder itself. Thus there is little information available on the strength of the bond. With the enforced introduction of Pb-free solder and the accompanying higher risk of interfacial brittle fracture failures, there is an urgent need to find quick and accurate methods for testing the bond interface. High speed bondtesting offers a viable alternative to cumbersome and expensive board level drop testing. Essentially, high speed bondtesting reproduces the configuration of drop testing by applying high strain rates to the solder bump, thereby hardening the solder and largely transferring the load to the bond interface. The MFM1500HS can be used to examine the influence of different materials on bond strength, the effects of thermal aging, and monitor process improvements in device bumping. Furthermore, many reports show a strong correlation of high speed bondtesting with drop testing.

## Application

- Brittle fracture joint analysis
- Alternative to drop testing
- Lead-free solder joint evaluation
- BGA, CSP, PiP, PoP, SiP solder joint testing
- Impact testing applications
- Pad finish and substrate evaluation
- Zone shear-testing multiple ball bonds simultaneously



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