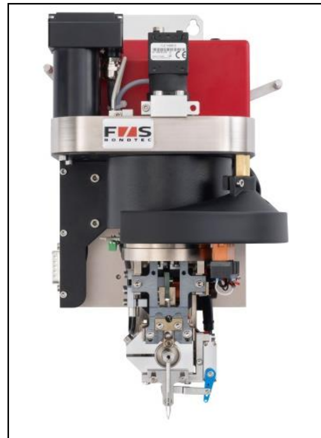
BONDiNG THE STARS

F&S BONDTEC



BAMFIT Bonder / Tester 5600

BAMFIT-Tester

The revolutionary **BAMFIT test** can easily be implemented on every base unit of the 56XX series by installing a dedicated test head.

The software is closely related to the standard versions for bonders and testers. It is capable of fully automatic testing of any number of bonds, employing automatic adjustments by pattern recognition.

Test results are recorded in a SQL data base and can be evaluated at any time in a variety of ways.

Test System

Test Head	The proprietary clamping tool grips the bond foot from the sides and at a defined height; a touchdown system automatically compensates height variations in the substrate
Test Tool	for heavy wires from 125 to 500 µm; for ball bonds from 50 µm wire diameter; user-exchangeable within minutes
Test Force	Pull force in Z direction, typically 20 to 40 cN
Test Frequency	60 and 80 kHz, programmable Ultrasonic Generator
Test Amplitude	Corresponds to temperature swing in PC test; programmable between 0 and 1 µm
Test Data	Tool position and ultrasonic data are registered continuously and stored in a SQL data base for subsequent evaluation

BAMFIT Reliability Test

BAMFIT (Bond Accelerated Mechanical Fatigue Interconnection Test) is an entirely novel test method for assessing the reliability of heavy-wire wedge bonds and thin-wire ball bonds. It is the perfect extension of the classic power cycling test (PC): the cyclic stress imparted to the wire bond by temperature changes is emulated by mechanical stress loading, but at a significantly higher cycle rate. This allows PC tests that can take weeks or months to be simulated within minutes.

The patent-pending BAMFIT tester thus permits a qualitative estimate of the lifetime and reliability of wire bonds, either as process diagnostics or for optimizing bond process parameters.

Machine Base

Work Area	X/Y axes 100x100 mm / Z axis 60 mm
Axes	Step resolution 0,25 µm; Repeatability <2 µm
Test Head	User-exchangeable bond and test heads with automatic identification
Hardware	Dual Core PC, 1.6 GHz processor, 4 GB RAM, Ethernet, 4x USB-Hub Front Firewire CCD color camera, 1.4 MPixel with programmable pattern recognition unit
Software	Manual or automatic measurements of any number of bonds CAD data import for easier programming
Dimensions	B x T x H – 70 x 65 x 70 cm, weight ca. 80 kg
Connections	100-240 VAC, single phase, 50/60 Hz, max. 500 VA Standard vacuum tube Ø 6 mm

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