

ISI Announces Worlds First Commercially available fully integrated Wafer Level STT-MRAM Analyzer WLA-3000

SANTA CLARA, CA – May 24, 2012: Integral Solutions International, ISI, the world's leading manufacturer of Quasi-Static testers for the data storage industry, announced today the release of WLA-3000 Wafer Level Analyzer for STT-MRAM characterization.

As STT-MRAM development progresses and major companies see it as a potential replacement technology for DRAM and NAND, the characterization of STT-MRAM wafers becomes more and more critical.

While every STT-MRAM development center has its own experimental test setups consisting of various off the shelf instruments, ISI has developed the world's first commercially available and fully integrated solution to address the needs of production level testing of STT-MRAM wafers. This ISI tester includes proprietary magnets, pulse generator module, probecard interfaces, and measurement electronics that are all specifically developed by ISI to meet the needs of the STT-MRAM market.

Regarding ISI's proprietary magnet portfolio, with current STT-MRAM manufacturers migrating from in-plane MTJ's to perpendicular MTJ's ISI has developed an interchangeable test platform for both types of devices utilizing either ISI's Quad-Pole InPlane or Perpendicular Magnet configurations. Both magnet configurations are designed to produce low remanent fields, high magnetic field strengths, and large uniformity across the MTJ device array under test.

ISI's proprietary pulse generator module is optimally matched with its proprietary probecard interface to produce programmable pulses as low as 5nS, with in-situ ability to perform measurements on the MTJs after pulsing. The tester can be equipped with either the single or dual-channel pulse generator modules for improved UPH. An optional RF probecard interface is also available for integration with external devices for RF engineering support.

The WLA-3000 Automated Wafer Level Analyzer can be integrated with a variety of industry standard Automated Wafer Probers to characterize magnetic properties of finished devices or test structures. The Automated Wafer Probers can be ordered with a variety of customized features including low-noise chucks, environmental chambers, and hot-chuck applications.

Leveraging ISI's vast depth of magnetic testing development within the HDD industry, combined with a dedicated effort of working closely with the STT-MRAM industry leaders, ISI's WLA-3000 has been developed to address all the testing needs of MTJ devices. ISI has shipped several of these testers which have now been qualified for high volume production testing of STT-MRAM devices.

The WLA-3000 offers the following turnkey portfolio of STT-MRAM tests:

- I-V and R-V Curves
- Breakdown Voltage
- Transfer Curve with variable sweep rate
- Switching Currents vs. Pulse Widths
- Endurance Testing
- Switching Probability vs. Applied Voltage
- Low/High State R-V Distribution
- Read Disturb
- Error Rate Testing
- Field Write Probability
- Voltage Back Hopping
- Sweeping Field Angle

About ISI

Integral Solutions International (ISI) is a privately held California based US Corporation, established in September 1995. ISI provides worldwide customer support from the United States, Japan, Korea, Singapore, Malaysia, Thailand, China, and Hong-Kong.