Reliability and MTBF Demonstration Testing
For Solid State Drives

Because of DfR Solutions' in-depth understanding of solid state drive (SSD) technology, unique software and firmware expertise, knowledge of failure mechanisms and acceleration transforms, and state of the art test equipment, we have become an industry leader in third party testing and qualification and failure analysis of SSD and the underlying flash technology.

DfR Solutions testing capabilities include:
- Three (3) large scale state of the art test chambers capable of testing up to 1600 drives
- Computer array supporting Serial Attached SCSI (SAS) and Serial ATA (SATA) interfaces
    - Live recording of drive SMART data
    - Output of performance metric, i.e. read/write speeds
- Live monitoring of test status through web-based portal
- Adjustable racks for 3.5", 2.5" and 1.8" form factor drives
- Uniformly distributed temperature probes for in-situ monitoring of SSD array internal to the chamber on both test walls
    - Environment tolerance of $\pm3^\circ$C from slot-to-slot and bay-to-bay within chamber
- Capability to perform thermal-anemometer (wind speed) measurements along individual drives
    - Average wind-speed of 300 ft./min. across drive surfaces

Turn-key testing solution
- Dedicated personnel for test management, daily monitoring and reporting
- Personnel capable of performing firmware and driver updates
- Full in-house suite of failure analysis to perform analysis after test

Accelerated testing conditions
- Steady state or profile-based temperature exposure from -5°C to 55°C (or maximum operating temperature)
- Power cycling of drives under test
    - Simulates nominal shutdown and environmental interrupts
- Data payload in accordance with JEDEC standard JESD218A and JESD219 (Reliability and Endurance testing of SSD) or based on customer requirements
    - Client workload (40°C, 8 hr./day usage)
    - Enterprise workload (55°C, 24hr/day usage)
    - Pseudo-randomized raw data including file sizes and file quantities
    - Workload selection choices (read, write, random access and sequential access)

For More Information call DfR Solutions at 301-474-0607