

SOLID STATE DRIVE TESTING 101

Testing is a cornerstone of our commitment to deliver the most reliable products on the market. We perform rigorous tests on all of our products during each stage of production. These tests ensure quality control throughout the entire manufacturing process.

This same commitment to quality testing applies to our Solid-State Drives. Our multi-tiered SSD testing process guarantees that each SSD functions with the same high level of quality that customers have come to expect from an industry leader like Kingston.



THREE-FOLD SSD TESTING



Our comprehensive SSD testing process comprises three phases. These phases guarantee product **functionality**, **reliability**, and **quality** – the hallmarks of excellence that have allowed us to remain a trusted provider of products to the Fortune 500 and beyond.



FUNCTIONALITY

PHASE 1: SSD FUNCTIONAL TEST

This phase verifies that all SSDs function the way they were designed to, and that all standard parts of the SSD are manufactured and operating properly. **During this phase, we:**

- Identify the SSD controller
- Check the Flash and DRAM (if required) configuration and functionality
- Run I/O bus connectivity test
- Scan SSD for NAND Flash configuration
- Download testing firmware for drive
- Program SSD information



RELIABILITY

PHASE 2: PRODUCTION BURN-IN TESTING

This phase utilizes the bathtub curve, a graph widely used in reliability engineering. The bathtub curve literally resembles the shape of a bathtub, with two sloping sides and a flat-centered bottom. If a product has a defect, failures will typically occur at the beginning of that product's life cycle. The first slope of the bathtub curve represents these failures, known as early life failures. This phase of stress testing screens out these malfunctions, which occur early in a product's life. **During this phase, we:**

- Stress test SSD at elevated temperature
- Test DRAM, Flash, SSD Controller using series of patterns designed to stress the drive
- Repeat for predefined cycles to verify reliability



QUALITY

PHASE 3: QC TESTING

During the concluding phase of SSD production testing, we perform a final layer of quality checks on each SSD. This phase of testing certifies that each product is exactly what we say it is. Thanks to QC Testing, customers can rest assured knowing that they are receiving the precise product they ordered. **This phase includes:**

- Verification of SKU
- Verification of FW version
- LBA count (Capacity Verification)
- Verification of the Serial Number
- Interface check



SSD TESTING: A TRADITION OF EXCELLENCE

We have developed solid testing plans for all of our memory products because we're committed to providing customers with the highest quality products available.

Our Solid-State Drives are no exception.

Our multi-layered SSD testing that each SSD performs with the functionality, reliability and quality that our customers have come to expect.

Contact your Kingston representative for a complete line of SSD products



COMMITTED TO MEMORY®