



## Embedded Solutions



# SATA III M.2 SSDs MTS552T & MTS552T-I

3K P/E cycles

Transcend's MTS552T M.2 SSD features the SATA III 6Gb/s interface and state-of-the-art 3D NAND technology, which allows 96 layers of 3D NAND flash chips to be vertically stacked. Compared to BiCS3 NAND at 64 layers, this density breakthrough greatly improves storage efficiency. The MTS552T is built with DRAM cache for fast access, and is fully tested in-house to guarantee reliability in mission-critical applications, boasting an endurance rating of 3K Program/Erase cycles.

Transcend also offers the MTS552T-I with wide temperature (-40°C ~ 85°C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

## Features

- DDR3 DRAM Cache embedded
- Space-saving M.2 form factor (42mm) – ideal for mobile computing devices
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Wide-temperature model available: promised operational reliability in a wide temperature range (from -40°C to 85°C)
- Advanced Global Wear-Leveling and Block management for reliability
- Advanced Garbage Collection
- Built-in LDPC ECC (Error Correction Code) functionality
- Enhanced S.M.A.R.T. function for durability
- Compliant with RoHS 2.0 standards
- Supports Trim and NCQ command
- Power-saving DevSleep (Device Sleep) mode (optional)

## Ordering Information

Standard (0°C~ 70°C)

|       |               |
|-------|---------------|
| 64GB  | TS64GMTS552T  |
| 128GB | TS128GMTS552T |
| 256GB | TS256GMTS552T |
| 512GB | TS512GMTS552T |

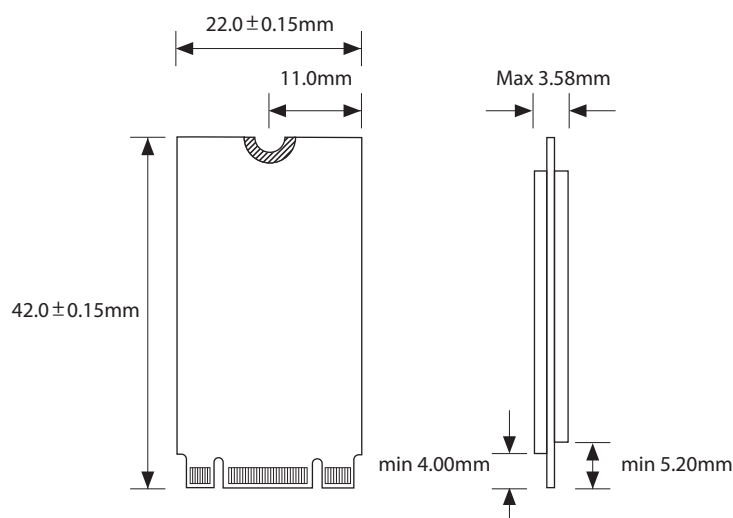
Wide Temp. (-40°C~ 85°C)

|       |               |
|-------|---------------|
| 64GB  | TS64GMTS552T  |
| 128GB | TS128GMTS552T |
| 256GB | TS256GMTS552T |
| 512GB | TS512GMTS552T |

## Specifications

|                       |   |   |
|-----------------------|---|---|
| Appearance            | Dimensions (Max.)   | 42.0 mm x 22.0 mm x 3.58 mm (1.65" x 0.87" x 0.14")                             |
|                       | Weight (Max.)   | 5 g (0.18 oz)   |
|                       | Form Factor   | M.2   |
|                       | M.2 Type  | 2242-D2-B-M   |
| Interface             | Bus Interface   | SATA III 6Gb/s  |
| Storage               | Flash Type  | 3D TLC NAND flash   |
|                       | Capacity  | 64 GB/128 GB/256 GB/512 GB  |
| Operating Environment | Operating Voltage   | 3.3V±5%   |
|                       | Operating Temperature   | Standard: 0°C (32°F) ~ 70°C (158°F)<br>Wide Temp.: -40°C (-40°F) ~ 85°C (185°F) |
|                       | Storage Temperature   | -40°C (-40°F) ~ 85°C (185°F)  |
|                       | Humidity  | 5% ~ 95%  |
|                       | Shock   | 1500 G, 0.5 ms, 3 axis  |
|                       | Vibration (Operating)   | 20 G (peak-to-peak), 5 Hz ~ 800 Hz (frequency)                                  |
| Power                 | Power Consumption (Operation)   | 1.6 watt(s)   |
|                       | Power Consumption (Sleep)   | 0.3 watt(s)   |
| Performance           | Sequential Read/Write (ATTO, max.)  | Read: 560 MB/s; write: 410 MB/s   |
|                       | Sequential Read/Write (CrystalDiskMark, max.)   | Read: 560 MB/s; write: 410 MB/s   |
|                       | 4K Random Read/Write (IOMeter, max.)  | Read: 55,000 IOPS; write: 75,000 IOPS   |
|                       | Mean Time Between Failures (MTBF)   | 1,000,000 hour(s)   |
|                       | Terabytes Written (Max.)  | 880 TB  |
|                       | Drive Writes Per Day (DWPD)   | 1.61 (3 yrs)  |
| Warranty              | Certificate   | CE/FCC/BSMI   |
|                       | Warranty  | Three-year Limited Warranty   |
| Note                  | <ul style="list-style-type: none"> <li>• Speed may vary due to host hardware, software, usage, and storage capacity.</li> <li>• The workload used to rate DWPD may be different from your actual workload, which may vary due to host hardware, software, usage, and storage capacity.</li> </ul> |   |

## Mechanical Dimensions



Product specifications are subject to change without notice. Pictures shown may differ from actual products. Total accessible capacity varies depending on operating environment. Due to the complexity and variety of industrial applications, Transcend cannot guarantee 100% compatibility with all platforms and under all scenarios. For special applications and environments, it is strongly suggested that you contact Transcend beforehand for clarification.



Please feel free to contact us with any special requests you might have.

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