

## Embedded Solutions

Half-Slim SSDs

# SATA III 6Gb/s HSD452T & HSD452T-I Half-Slim SSD

3K P/E cycles



Equipped with the SATA III 6Gb/s interface, a powerful controller, and state-of-the-art 96-layer 3D NAND flash, Transcend's HSD452T Half-Slim SSDs deliver outstanding transfer speeds in a compact form factor. Following the MO-297 standard set by JEDEC, SATA III 6Gb/s half-slim SSD modules undergo extensive reliability testing to ensure the utmost quality and performance, best suited to read-heavy applications and space-limited mobile devices such as industrial control systems, medical equipment, mobile devices, and POS terminals.

Transcend also offers the HSD452T-I with wide temperature(-40°C ~ 85°C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

## Features

- DRAM Cache embedded
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Wide-temperature model available: promised operational reliability in a wide temperature range (from -40°C ~ 85°C)
- Advanced Global Wear-Leveling and Block management for reliability
- Advanced Garbage Collection
- Security Command
- Built-in LPC ECC (Error Correction Code) functionality
- Enhanced S.M.A.R.T. function for durability
- Compliant with RoHS 2.0 standards
- Power-saving DevSleep (Device Sleep) mode (optional)

## Ordering Information

Standard (0°C~ 70°C)

64GB	TS32GHSD452T
128GB	TS64GHSD452T
256GB	TS128GHSD452T
512GB	TS512GHSD452T

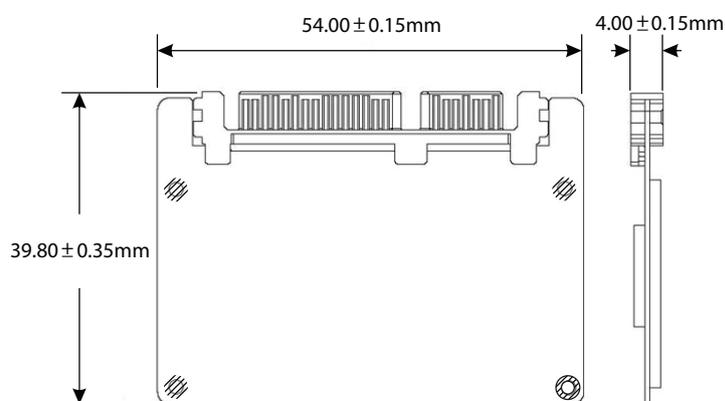
Wide Temp. (-40°C~ 85°C)

64GB	TS32GHSD452T-I
128GB	TS64GHSD452T-I
256GB	TS128GHSD452T-I
512GB	TS512GHSD452T-I

## Specifications

Appearance	Dimensions	54 mm x 39.8 mm x 4 mm (2.13" x 1.57" x 0.15")
	Weight	9 g (0.32 oz)
	mSATA Type	MO-297
	Pin	7+15 pin
	Form Factor	Half-slim
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	5V±5%
	Operating Temperature	Standard: 0°C (32°F) ~ 70°C (158°F)
		Wide Temp.: -40°C (-40°F) ~ 85°C (185°F)
	Storage Temperature	-40°C (-40°F) ~ 85°C (185°F)
	Humidity	0% ~ 95%
	Shock	1500 G, 0.5 ms, 3 axis
Vibration	20 G (peak-to-peak), 7 Hz ~ 2000 Hz (frequency)	
Power	Power Consumption (Operation)	2.7 watt(s)
	Power Consumption (Sleep)	0.6 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: 560 MB/s; write: 520 MB/s
	4K Random Read/Write (IOMeter)	Read: 90,000 IOPS; write: 85,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	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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