

Apacer

The Most **Reliable**
Storage For Industries

PT25P-M280



Overview

Apacer PT25P-M280 is the fastest SSD designed with M.2 2280 mechanical dimensions, providing full compliance with PCIe Gen4 x4 interface and NVMe 2.0 specifications. This allows it to operate in power management modes, greatly saving on power consumption. Built with a powerful PCIe controller that supports on-the-module ECC as well as an efficient wear-leveling scheme, PT25P-M280 delivers exceptionally low latency and outstanding performance in data transfer. With its compact design and high-speed storage capabilities, PT25P-M280 is the ideal choice for larger, faster hosts deployed in a wide range of applications that demand outstanding performance.



Utilizing 3D NAND technology for higher capacities up to 2TB and offering superior power efficiency compared to 2D NAND, PT25P-M280 is equipped with advanced features to enhance SSD performance and reliability. It incorporates an LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and enhance data reliability. Additionally, the SSD is equipped with a built-in thermal sensor that utilizes S.M.A.R.T commands to monitor temperature, along with thermal throttling functionality that dynamically adjusts frequency scaling to maintain optimal performance and prevent overheating.

Featuring CorePower technology, PT25P-M280 ensures data integrity and stable transmission even during unexpected power loss. This is achieved through a backup power supply using tantalum capacitors, allowing sufficient time to transfer cached data to NAND flash. To enhance reliability in high-vibration environments and extreme conditions, Apacer integrates Sidefill technology, bolstering resistance to thermal and mechanical stress. Furthermore, the drive is equipped with dual heat spreaders that maintain low temperatures while allowing high-speed performance. For demanding applications, the PT25P-M280 includes End-to-End Data Protection, safeguarding data integrity throughout the transfer path to ensure reliable data delivery.

From a security standpoint, the Advanced Encryption Standard (AES) safeguards data, providing users with confidence that their data is protected against unauthorized access. PT25P-M280 incorporates various features, including flash block management, TRIM, page mapping, Hyper Cache technology, SMART Read Refresh, NVMe secure erase, and power saving modes.

With exceptional performance, trustable reliability, and enhanced data protection, PT25P-M280 is definitely the ideal storage or cache solution for a variety of applications ranging from industrial, imaging, computing to enterprise markets.

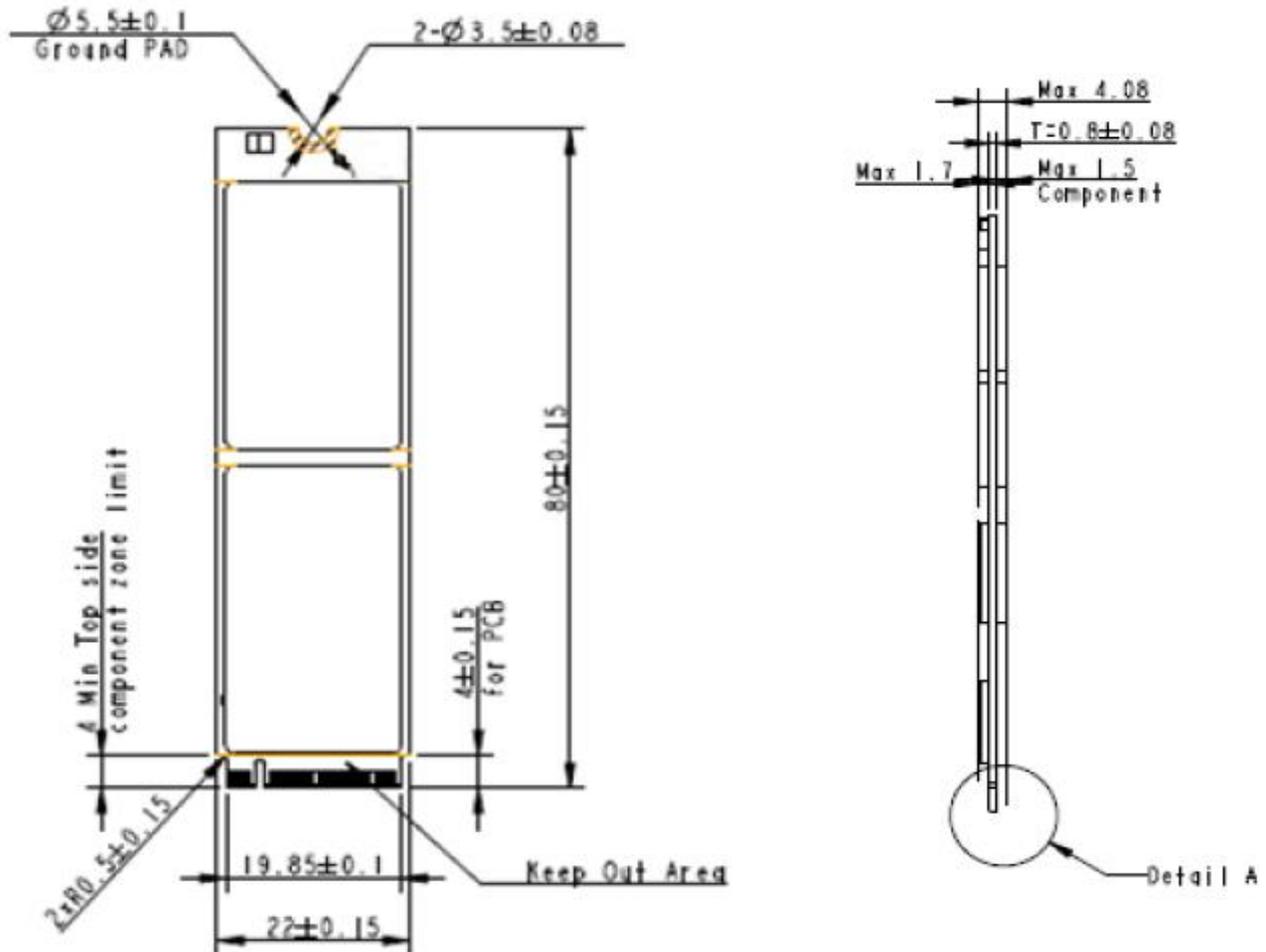
Feature

- Low-Density Parity-Check (LDPC) Code
- Global Wear Leveling
- Flash bad-block management
- Flash Translation Layer: Page Mapping
- S.M.A.R.T.
- TRIM
- Hyper Cache Technology
- Over-provisioning
- SMART Read Refresh™
- End-to-End Data Protection
- NVMe Secure Erase

Specifications

Model	PT25P-M280
Interface	PCIe Gen4 x4
Connector	Double-sided M.2 2280-M
Form Factor	M.2 2280
NAND Flash Type	3D TLC
Capacity	64GB-2TB
External DRAM	No
Sustained Read Performance (MB/sec)	Up to 3700
Sustained Write Performance (MB/sec)	Up to 3505
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPs (4K Random Write)	691K
Standard Operating Temperature (°C)	0 ~ + 70
Storage Temperature (°C)	-55 ~ + 100
Thermal sensor	Yes
Shock	Operation: Acceleration, 50(G)/11(ms)/half sine (compliant with MIL-STD-202G) Non-operation: Acceleration, 1500(G)/0.5(ms)/half sine (compliant with MIL-STD-883K)
Vibration	Operation:7.69 GRMS, 20~2000 Hz/random (compliant with MIL-STD-810G) Non-operation:4.02 GRMS, 15~2000 Hz/random (compliant with MIL-STD-810G)
Operating Voltage	3.3V ±5%
Power Consumption	Active mode: 1255 mA / Idle mode: 240mA
Dimension (L x W x H)	22.00 x 80.00 x 4.08(max.)
MTBF (hours)	>3,000,000

Mechanical Specification



For more information,
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