

# The Most **Reliable** Storage For Industries

**SH240-M280**



## Overview

### SH240-M280

Apacer SH240-M280 is the next generation Solid State Drive (SSD) with compact size and exceptional performance. Designed with a SATA 6 Gb/s interface, SH240-M280 fully complies with the latest SATA Revision 3.2 specifications, delivering remarkable read/write speeds. Its random performance is further enhanced by the integration of DRAM in the internal controller, establishing it as the leading add-in storage solution for future host computing systems.



Utilizing 3D NAND technology for higher capacities up to 640GB and providing greater power efficiency than 2D NAND, SH240-M280 is built with a powerful SATA controller that supports on-the-module ECC and an efficient wear leveling scheme. It also features an LDPC (Low Density Parity Check) ECC engine and SLC-liteX technology with P/E cycles support of up to 100,000 times, extending SSD endurance and enhancing data reliability. Additionally, SH240-M280 includes a built-in thermal sensor to monitor the SSD's temperature via S.M.A.R.T commands, preventing overheating. To enhance product durability and resilience against thermal and mechanical stresses, it is equipped with Sidefill technology, enabling it to operate smoothly even in environments with high vibration and extreme temperature fluctuations. For highly-intensive applications, End-to-End Data Protection ensures data integrity at multiple points in the path, enabling reliable data transfers.

In terms of security, SH240-M280 offers robust data protection with Advanced Encryption Standard to safeguard against unauthorized access. It also includes numerous advanced features such as flash block management, DataDefender, ATA secure erase, TRIM, page mapping, device sleep, power-saving modes, DataRAID, and SMART Read Refresh.

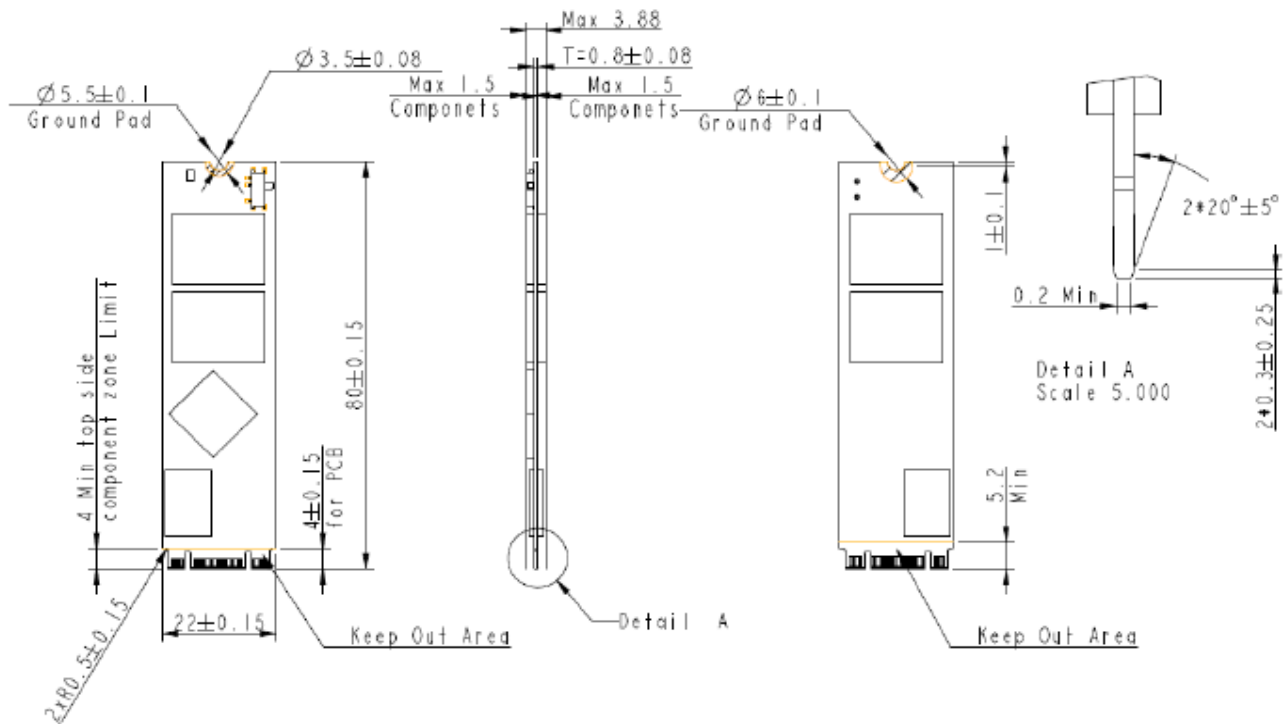
## Features

- Low-Density Parity-Check (LDPC) Code
- Global Wear-leveling
- Flash Bad Block Management
- Flash Translation Layer: Page Mapping
- DataDefender™
- S.M.A.R.T.
- TRIM
- SMART Read Refresh™
- ATA Secure Erase
- Device Sleep
- SATA Power Management
- SLC-liteX (P/E cycles: 100K)
- DataRAID™

## Specifications

<b>Model Name</b>	SH240-M280
<b>Interface</b>	SATA 3.2 (6Gb/s)
<b>Connector</b>	M.2 B & M Key
<b>Form Factor</b>	M.2 2280-D5-B-M
<b>NAND Flash Type</b>	3D TLC
<b>Capacity</b>	40GB~640GB
<b>External DRAM</b>	Yes
<b>Sustained Read Performance (MB/sec.)</b>	Up to 560
<b>Sustained Write Performance (MB/sec.)</b>	Up to 495
<b>ECC Engine</b>	Low-Density Parity-Check (LDPC) Code
<b>IOPS (4K Random Write)</b>	82K
<b>Standard Operating Temperature ( °C )</b>	0°C ~ 70°C
<b>Extended Operating Temperature ( °C )</b>	-40°C ~ 85°C
<b>Storage Temperature ( °C )</b>	-55°C ~ 100°C
<b>Housing</b>	-
<b>Thermal Sensor</b>	-
<b>Shock</b>	Operation: 50G/11ms (Compliant with MIL-STD-202G) Non-operation: 1500G/0.5ms (Compliant with MIL-STD-883K)
<b>Vibration</b>	Operation: 7.69 Grms, 20~2000 Hz/random (Compliant with MIL-STD-810G) Non-operation: 4.02 Grms, 15~2000 Hz/sine (Compliant with MIL-STD-810G)
<b>Operating Voltage</b>	3.3V ±5%
<b>Power Consumption</b>	Active Mode: 620 mA / Idle Mode: 85mA
<b>Dimension (L x W x H )</b>	80.00 x 22.00 x 3.88, unit: mm
<b>MTBF (Hours)</b>	>3,000,000

## Mechanical Specifications



**For more information,  
contact your Apacer representative**

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