

# S500K4-xxxxTLxxI

3D NAND / wide temp.

Rev. 1.00

Hagiwara Solutions M.2 2242 SATA SSD (Solid State Disk) is fully compliant with the Serial ATA I/II/III interface. It consumes less power than traditional hard disks and is designed based on the M.2 2242 standard, offering a maximum capacity of 1024GB.

## Specification

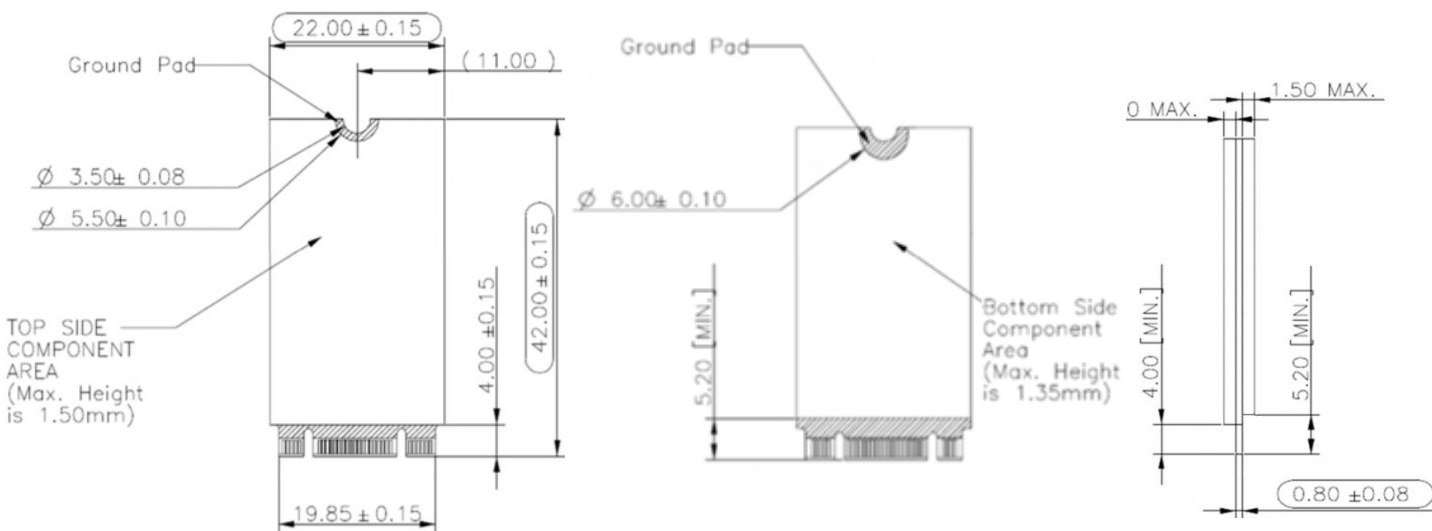
|                              |                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Number               | S500K4-xxxxTL00N                                                                                                                                                                                                                                                                                                                                                                                                          |
| Capacity                     | 64GB~1024GB                                                                                                                                                                                                                                                                                                                                                                                                               |
| Functions                    | <ul style="list-style-type: none"> <li>• Error Correction Code (ECC)</li> <li>• Wear Leveling</li> <li>• TRIM</li> <li>• S.M.A.R.T</li> <li>• Thermal Throttling</li> <li>• Secure Erase</li> <li>• Write Protect</li> <li>• DIPM/HIPM Mode</li> <li>• Read Refresh</li> <li>• Page Mapping Method adopted</li> <li>• NCQ support</li> <li>• Temperature monitoring function</li> <li>• Internal RAID function</li> </ul> |
| Operating Temperature        | 0°C~70°C                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Storage Temperature          | -40°C~85°C                                                                                                                                                                                                                                                                                                                                                                                                                |
| Sequential Read/Write (MB/S) | 550/510 (1024GB)                                                                                                                                                                                                                                                                                                                                                                                                          |
| Random Read/Write (IOPS)     | 65,000/61,000 (1024GB)                                                                                                                                                                                                                                                                                                                                                                                                    |
| Compliance standards         | CE/FCC/VCCI/UKCA                                                                                                                                                                                                                                                                                                                                                                                                          |
| Environmental specifications | RoHS directive compliance                                                                                                                                                                                                                                                                                                                                                                                                 |
| TBW (Total Bytes Written)    | 2,150 (1024GB)                                                                                                                                                                                                                                                                                                                                                                                                            |
| PE Cycles                    | 3,000                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Data Retention               | 10years@Initial ( $\leq 100$ PE cycles) /Ta=55degC<br>1year@Life end (3,000 PE cycles) /Ta=55degC                                                                                                                                                                                                                                                                                                                         |

## Device Capacity

| Model Number     | Capacity | Number of Total LBA |                | User Available Bytes |
|------------------|----------|---------------------|----------------|----------------------|
|                  |          | 512Bytes/Sector     | 4KBytes/Sector |                      |
| S500K4-064GTL00N | 64GB     | 125,045,424         | 15,630,678     | 64,023,257,088       |
| S500K4-128GTL00N | 128GB    | 250,069,680         | 31,258,710     | 128,035,676,160      |
| S500K4-256GTL00N | 256GB    | 500,118,192         | 62,514,774     | 256,060,514,304      |
| S500K4-512GTL00N | 512GB    | 1,000,215,216       | 125,026,902    | 512,110,190,592      |
| S500K4-1024TL00N | 1024GB   | 2,000,409,264       | 250,051,158    | 1,024,209,543,168    |

# Physical Dimension

Dimension:42mm(L) \*22mm(W) \*3.8mm(H)



# Performance

| Capacity | Sequential(MB/s) |       | Random 4KB(IOPS) |        |
|----------|------------------|-------|------------------|--------|
|          | Read             | Write | Read             | Write  |
| 64GB     | 390              | 270   | 37,000           | 50,000 |
| 128GB    | 550              | 470   | 53,000           | 59,000 |
| 256GB    | 550              | 500   | 65,000           | 60,000 |
| 512GB    | 550              | 510   | 65,000           | 61,000 |
| 1024GB   | 550              | 510   | 65,000           | 61,000 |

Notes:

Use CrystalDiskMark.

This value is based on measurements from our evaluation environment and method. Therefore, it may vary depending on the environment and method.

# Consumption Current

| Capacity | Operating Read (mA) | Operating Write (mA) | Idle(mA) |
|----------|---------------------|----------------------|----------|
| 64GB     | 235                 | 220                  | 50       |
| 128GB    | 295                 | 285                  | 50       |
| 256GB    | 300                 | 285                  | 50       |
| 512GB    | 305                 | 295                  | 50       |
| 1024GB   | 320                 | 305                  | 50       |

Notes:

This value is at a voltage of 3.3V.

This value is based on measurements from our evaluation environment and method. Therefore, it may vary depending on the environment and method.

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