

## HDD

### > MQ02ABxxxH SERIES CLIENT MOBILE & MOBILE THIN HDD

Toshiba's MQ02ABD100H (1TB) and MQ02ABF050H (500GB) 2.5-inch solid-state hybrid drives (SSHD) provide fast SSD-like performance combined with the high capacity of an HDD.

Toshiba's SSHD utilize a self-learning algorithm that enable the drive to identify the user's access patterns, allowing frequently used data to be stored in the NAND flash memory cache making it quickly accessible to the host. Likewise, data that is used less often is evicted from the NAND flash memory.

Suitable for high performance gaming, notebook, and mainstream PCs.



#### > KEY FEATURES

- Delivers SSD-Like Performance and HDD-Like Capacity
- Quiet Operation versus 3.5-inch HDDs (DT01ACA Series)
- Up to 1 TB of Storage Capacity
- 2.5-inch 9.5 mm and 7.0 mm Height Form Factor
- 5,400 rpm
- SATA 3 (Up to 6.0 Gbit/s) Interface
- Advanced Format 512e
- MTTF of 600,000 hours

#### > APPLICATIONS

- All-in-One Systems
- Laptop
- Gaming Consoles
- Notebook PC

#### > SPECIFICATIONS

Model Number		MQ02ABD100H	MQ02ABF050H
NAND Flash Memory		8 GiB MLC	
Interface		Serial ATA 3.0 / ATA-8 ( 1.5 Gbit/s, 3.0 Gbit/s, 6.0 Gbit/s )	
Formatted Capacity		1 TB	500 GB
Performance	Interface Speed	6.0 Gbit/s Max.	
	Rotation Speed	5,400 rpm	
	Average Latency Time	5.56 ms	
	Buffer Size	64 MiB	
Logical Data Block Length		HOST : 512 B, DISK : 4,096 B	
Supply Voltage	Allowable Voltage	5 V ± 5 %	
Power Consumption	Read / Write	3.30 / 3.00 W Typ.	
	Low Power Idle	0.75 W Typ.	
Acoustics (Sound Power)	Idle	25 dB	19 dB
	Seek	25 dB	21 dB

## > MECHANICAL SPECIFICATIONS

Model Number	MQ02ABD100H	MQ02ABF050H
Width	9.5 ± 0.2 mm Max.	7.0 mm Max.
Height	69.85 mm	
Length	100.45 mm Max	
Weight	117 g Max.	92 g Max.

## > ENVIRONMENTAL LIMITS

Item		Specification
Temperature	Operating	0 °C to 60 °C
	Non-Operating	- 40 °C to 65 °C
Humidity	Operating	8 % to 90 % R.H.
	Non-Operating	8 % to 90 % R.H.
Shock	Operating	3,920 m/s <sup>2</sup> { 400 G } ( 2 ms duration )
	Non-Operating	8,820 m/s <sup>2</sup> { 900 G } ( 1 ms duration )
Vibration	Operating	9.8 m/s <sup>2</sup> { 1.0 G } ( 5- 500Hz )
	Non-Operating	49 m/s <sup>2</sup> { 5.0 G } ( 15- 500Hz )
Altitude	Operating	- 300 m to +3,000 m
	Non-Operating	- 300 m to +12,000 m

Definition of capacity: Toshiba defines a megabyte (MB) as 1,000,000 bytes, a gigabyte (GB) as 1,000,000,000 bytes and a terabyte (TB) as 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1GB = 2<sup>30</sup> = 1,073,741,824 bytes and therefore shows less storage capacity. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

"2.5-inch" means the form factor of HDDs. They do not indicate drive's physical size.

Read and write speed may vary depending on the host device, read and write conditions, and file size.

A kibibyte (KiB) means 2<sup>10</sup>, or 1,024 bytes, a mebibyte (MiB) means 2<sup>20</sup>, or 1,048,576 bytes, and a gibibyte (GiB) means 2<sup>30</sup>, or 1,073,741,824 bytes.

Subject to Change: While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, and availability are all subject to change without notice.

Before creating and producing designs and using, customers must also refer to and comply with the latest versions of all relevant TOSHIBA information and the instructions for the application that Product will be used with or for.