

# 5,400 RPM 2.5-Inch SATA Hard Disk Drives

**TOSHIBA**  
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*Capacity & power efficiency for data-intensive & energy-sensitive applications*



MQ01ABD025  
MQ01ABD032  
MQ01ABD050  
MQ01ABD075  
MQ01ABD100

Toshiba's MQ01ABD series offers capacity up to 1TB<sup>1</sup> storage capacity using 500GB per platter technology, enabling the MQ01ABD hard disk drives to speed data processing at higher performance than prior generation products. The 5400 RPM drive series is engineered for energy efficiency and quiet operation, contributing to longer and quieter operation on a single battery charge.

The 500GB-per-platter design, coupled with the benefits of power efficiency and acoustic performance allows PC and consumer electronics devices to provide up to 1TB of capacity with fast performance, minimal heat dissipation and enhanced power utilization in a compact, 2.5-inch form factor. The MQ01ABD series is ideal for notebook and desktop PCs, mobile workstations, gaming consoles, DVR set-top boxes, external storage solutions and other applications requiring high capacity, durability and cost-effective storage.

The MQ01ABD drive series continues Toshiba Corporation's global commitment to Environmentally Conscious Products (ECPs) that have minimal environmental impact.<sup>2</sup> As part of this voluntary initiative, Toshiba has reduced or eliminated additional hazardous substances<sup>3</sup> in the MQ01ABD drives.

- Up to 1,000GB<sup>1</sup> of Storage Capacity
- 5,400 RPM Rotational Speed
- Advanced Format 512e
- Eco-Conscious Design
- MTTF of 600,000 Hours

# Hard Drive

# 5,400 RPM

## 2.5-Inch SATA Hard Disk Drives

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### Series Overview

	MQ01ABD025	MQ01ABD032	MQ01ABD050	MQ01ABD075	MQ01ABD100
Drive Capacity	250GB <sup>1</sup>	320GB <sup>1</sup>	500GB <sup>1</sup>	750GB <sup>1</sup>	1,000GB <sup>1</sup>
Drive Interface	Serial ATA, Revision 2.6 / ATA-8				
Number of Platters (disks)	1	1	1	2	2
Number of Data Heads	2	2	2	4	4
Sector Size (bytes)	AF 512e <sup>1</sup>				
Transfer Rate to Host	3 Gb/sec				
RoHS Compliant	Yes				

### Performance

Areal Density (max)	744.1 Gb/in <sup>2</sup>
Track-to-track Seek	2 ms
Average Seek Time	12 ms
Rotational Speed	5,400 RPM
Average Latency	5.55 ms
Buffer Size	8 MB

### Power Requirements

Voltage	5V (+/- 5%)
Spin up (start) Power	4.5 watts
Seek Power	1.85 watts
Read/Write Power	1.5 watts
Low Power Idle	0.55 watts
Standby Power	0.18 watts
Sleep Power	0.15 watts

### Physical Size

Dimensions (W) x (D) x (H)	69.85 mm (2.75") x 100.0 mm (3.94") x 9.5 mm (0.37")				
Weight	102 g (3.60 oz)	102 g (3.60 oz)	102 g (3.60 oz)	112 g (3.95 oz)	112 g (3.95 oz)

### Environmental

Temp - Operating	5° to 55°C (41° - 131°F)
Temp - Non-Operating	-40° to 65°C (-40° - 140°F)
Vibration - Operating	9.8 m/s <sup>2</sup> (1.0G) 5 to 500 Hz
Vibration - Non-Operating	49 m/s <sup>2</sup> (5.0G) 15 to 500 Hz
Shock - Operating	3,920 m/s <sup>2</sup> (400G) 2ms
Shock - Non-Operating	8,820 m/s <sup>2</sup> (900G) 1ms

### Acoustics

Acoustics (idle)	17 dB	17 dB	17 dB	19 dB	19 dB
Acoustics (seek)	19 dB	19 dB	19 dB	24 dB	24 dB

### Limited Warranty

Limited Warranty	3 years (from date of purchase)
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<sup>1</sup>One Terabyte (1TB) = 1,000 Gigabytes (GB). One Gigabyte (1GB) means 10<sup>9</sup> = 1,000,000,000 bytes using powers of 10. 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 will also be less if the computer includes one or more pre-installed operating systems, pre-installed software applications, or media content. Actual formatted capacity may vary.

<sup>2</sup>Please refer this site for ECP information: <http://www.toshiba.co.jp/env/en/products/index.htm>.

<sup>3</sup>Concentrations of chlorine and bromine are below 900 ppm for each substance, surpassing the IEC61249-2-21:2003 criteria set for printed circuit boards by the International Electrotechnical Commission (IEC), in applying the criteria to all components in the HDD. IEC is the leading

global organization that defines internationally-recognized standards for electrical, electronic and associated technologies.

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, prices, system/component/options availability are all subject to change without notice. Product image may represent design model.

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