

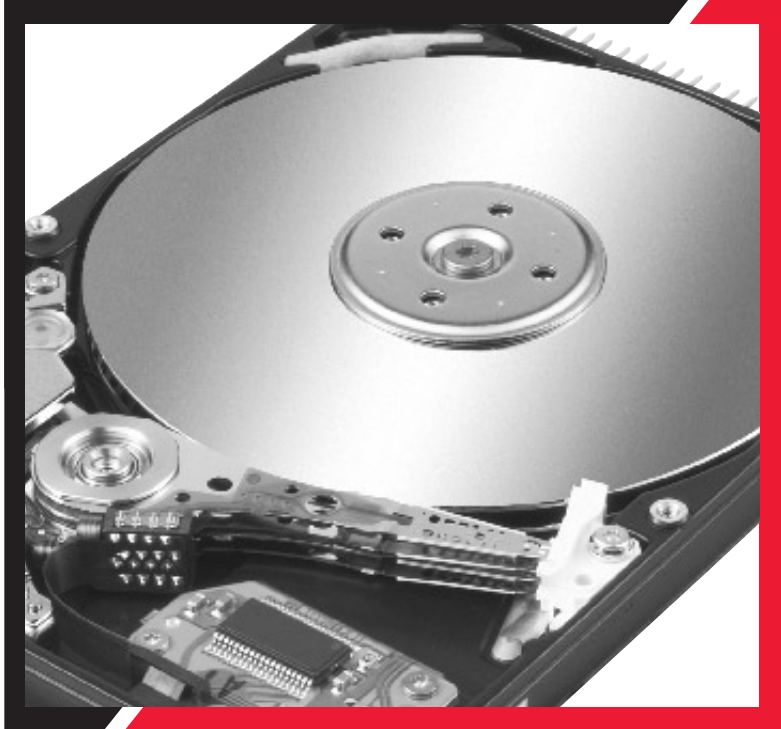
2.5 inch ATA-5 hard disk drives
Capacities: 10, 20, 30 & 40 GB

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Hitachi DK23DA series hard disk drives

Highlights

- ▶ *10, 20, 30 or 40 GB in 9.5mm high package for maximum capacity slimline portable applications*
- ▶ *ATA-5 interface with 2048kB read/write cache*
- ▶ *Ultra DMA mode 5 (100 MB/s max.) supported*
- ▶ *GMR head and MEEPRML read channel technology*
- ▶ *32-bit RISC microprocessor, Shock sensor, SMART*
- ▶ *Use of Fluid Dynamic Bearing Motor to improve Acoustic and shock characteristics*



Hitachi DK23DA series specifications

Product	Hitachi DK23DA series			
Model	DK23DA-40F	DK23DA-30F	DK23DA-20F	DK23DA-10F
Performance				
Total Capacity				
Formatted	40,007 GB	30,005 GB	20,003 GB	10,056 GB
Per Sector	512	512	512	512
Number of Cylinders	33,067	33,067	33,067	33,067
Number of Disks	2	2	1	1
Number of Heads	4	3	2	1
Seek Time (Nominal)				
1 Track	3ms	3ms	3ms	3ms
Average	13ms	13ms	13ms	13ms
Full Track	25 ms	25 ms	25 ms	25 ms
Average Latency				
Rotational Speed	4,200 rpm	4,200 rpm	4,200 rpm	4,200 rpm
Read Technology				
	ME ² PRML, ID-Less Format			
Internal Transfer Rate				
Recording Density	18.7 - 34.7 MB/s	18.7 - 34.7 MB/s	18.7 - 34.7 MB/s	18.7 - 34.7 MB/s
Track Density	Max. 600 kBPI	Max. 600 kBPI	Max. 600 kBPI	Max. 600 kBPI
	55.0 kTPI	55.0 kTPI	55.0 kTPI	55.0 kTPI
Interface Transfer Rate				
	16.6 MB/s max. (PIO mode 4/Multiword DMA mode 2) / 100 MB/s max. (Ultra DMA mode 5)			
Data Buffer	2048 kB	2048 kB	2048 kB	2048 kB
Physical Specifications				
Dimensions				
Height	9.5 mm	9.5 mm	9.5 mm	9.5 mm
Width	70 mm	70 mm	70 mm	70 mm
Depth	100 mm	100 mm	100 mm	100 mm
Weight	95 g	95 g	91 g	95 g
Power Requirements +5V +/-5%				
Seek	0.45 A (typ.)	0.45 A (typ.)	0.45 A (typ.)	0.45 A (typ.)
Spin-up	0.90 A (typ.)	0.90 A (typ.)	0.90 A (typ.)	0.90 A (typ.)
Idle	0.13 A (typ.)	0.13 A (typ.)	0.13 A (typ.)	0.13 A (typ.)
Read/Write	0.40 A (typ.)	0.40 A (typ.)	0.40 A (typ.)	0.40 A (typ.)
Sleep	0.020 A (typ.)	0.020 A (typ.)	0.020 A (typ.)	0.020 A (typ.)
Stand-by	0.050 A (typ.)	0.050 A (typ.)	0.050 A (typ.)	0.050 A (typ.)
Temperature				
Operating	5° to 55°C (41° to 131°F)			
Non-Operating	40° to 70°C (-40° to 158°F)			
Environmental Conditions				
Relative Humidity				
Operating	5% to 90%	5% to 90%	5% to 90%	5% to 90%
Non-Operating	5% to 95%	5% to 95%	5% to 95%	5% to 95%
Max. Wet Bulb				
Operating	29°C (84.2°F non-condensing)			
Non-Operating	40°C (84.2°F non-condensing)			
Shock				
Operating	1.764m/s ² (250G) or less, 2ms half sine wave			
Non-Operating	7.840m/s ² (800G) or less, 1 ms half sine wave			
Vibration				
Operating	9.8m/s ² (1.0G) or less (22-500Hz)			
Non-Operating	49m/s ² (5G) or less (22-500Hz)			
Acoustic Noise				
Idle	2.4 Bels (typ.)	2.4 Bels (typ.)	2.4 Bels (typ.)	2.4 Bels (typ.)
Seek	3.1 Bel (typ.)	3.1 Bel (typ.)	3.1 Bel (typ.)	3.1 Bel (typ.)
Reliability				
Preventive Maintenance	Not Required			
Error Rate (Unrecoverable Errors)	Less than 1 per 10 ¹³ bits read			
Identify Device Information for Setup (Addressing)				
Word 1 Number of CYL.	16383 (3FFFh)	16383 (3FFFh)	16383 (3FFFh)	16383 (3FFFh)
Word 3 Number of HD	16 (0010h)	16 (0010h)	16 (0010h)	16 (0010h)
Word 6 Number of SPT	63 (3Fh)	63 (3Fh)	63 (3Fh)	63 (3Fh)
Word 60 61 Total LBA	78140160(04A85300h)	58605120(037E3E40h)	39070080(02542980h)	19640880(012BB230h)

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For more information

Internet:

- www.hgst.com

For other Hitachi products:

- 1 800 HITACHI (800 448 2244)

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Hitachi Global Storage Technologies
5600 Cottle Road
San Jose, CA 95193

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