

M-60 (MHV2040BS/MHV2060BS/MHV2080BS)

(1) STATUS

1. Availability (Month/B or M or E/Year) *1

<u>Qualification Unit:</u>	<u>Volume Shipment:</u>
<u>MAY/E/2005</u>	<u>JUL/E/2005</u>

2. Documentation (Month/B or M or E/Year) *1

	<u>Draft</u>	<u>Formal Release</u>
- Product Manual	<u>MAY/E/2005</u>	<u>MAY/E/2005</u>
- Maintenance Manual	<u>MAY/E/2005</u>	<u>MAY/E/2005</u>

3. Standard/Regulations (Month/B or M or E/Year) *1

		<u>Design Meet</u>	<u>Test</u>	<u>Approval</u>
3.1 Safety				
- UL 60950-1		<u>Yes</u>	<u>Completed</u>	<u>E133157 X67 A18-UL-1</u>
- CSA-C22.2 No.60950-1-03		<u>Yes</u>	<u>Completed</u>	<u>LR103019-1672413</u>
- TUV EN 60950-1		<u>Yes</u>	<u>Completed</u>	<u>R50061093</u>
3.2 EMI				
- FCC Part 15 Class	<u>B</u>	<u>No</u>	<u>-</u>	<u>-</u>
- VDE 0871 Class	<u>B</u>	<u>No</u>	<u>-</u>	<u>-</u>
- RRL		<u>Yes</u>	<u>MAY/E /2005</u>	<u>JUN/E/2005</u>
- BSMI		<u>Yes</u>	<u>MAY/E/2005</u>	<u>JUN/E/2005</u>
3.3 EMC				
- CE mark				
EN55022 class B / EN55024 / EN60950-1		<u>-</u>	<u>Completed</u>	<u>DOC-4477-001-05</u>
- C-Tick(AS/NZS 3548)		<u>-</u>	<u>Completed</u>	<u>DOCACA-044</u>
3.4 Microsoft Compatibility Test (PC99-Win 2000/ Win XP)			<u>MAY/E/2005</u>	<u>JUN/E/2005</u>

4. Product Training Course for OSC Engineers TBD

5. ODS (Used in Manufacturing/Included in the Products): Used : None, Included : None

Note: *1... B : Beginning
M : Middle
E : End

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(2) SPECIFICATIONS

FUNCTIONAL SPECIFICATIONS

		MHV2040BS	MHV2060BS	MHV2080BS
Storage Capacity	Formatted *1	40GB	60GB	80GB
Bytes/sectors		512		
Seek time	Track to track	1.5 ms typ.		
	Average	12 ms typ. (Read)/ 14 ms typ. (Write)		
	Maximum	22 ms typ.		
Average latency time		5.56 ms		
Rotational speed		5,400 rpm		
Transfer rate	to/from host	150 MB/s		
Interface		ATA-7, SATA 1.0a, SATAII Ext to 1.0a, SATA II Gen11/1m		
Head positioning method		ROTARY VCM (Embedded Servo)		
Start time *3		4 sec Typ.		
Others		-		
Buffer size		8MB		

PHYSICAL SPECIFICATIONS

MHV2040BS/MHV2060BS/MHV2080BS		
Power Requirements	Voltage	5V±5%
	Ripple	100mV P-P
	Spin-up	1.0A typ.
	Seek	2.1W typ.
	Read / Write	1.9W typ.
	IDLE *5	0.60W typ.
	Standby *5	0.13W typ.
	Sleep *5	0.13W typ.
Dimensions	Height	9.5mm (0.37 in)
	Width	70mm (2.8 in)
	Depth	100mm (3.9 in)
Weight		≤101g(3.57 oz)
Ambient Temperature	Operating	5°C to 40°C (41°F to 116°F)
	Non operating	-40 °C to 65°C (-40°F to 149°F)
	Gradient	20°C (68°F)/H
Relative Humidity	Operating	8% to 90% RH (non condensing)
	Non operating	5% to 95% RH (non condensing)
	Max. wet bulb	29°C(Op.)/ 40°C(Non Op.)
Vibration	Operating	9.8m/s ² (1.0G) (5 to 500Hz)
	Non operating	49m/s ² (5.0G) (5 to 500Hz)
Shock	Operating	2,940m/s ² (300G) 2ms
	Non operating	8,820m/s ² (900G) 1ms 1,176m/s ² (120G) 11ms
Altitude	Operating	-300 to 3,000m (-1,000 to 10,000ft)
	Non operating	-300 to 12,000m (-1,000 to 40,000ft)
Acoustic Noise *4		28 dBA at 30cm (Typ.) 2.6 bels (Typ.)

RELIABILITY SPECIFICATIONS

MHV2040BS/MHV2060BS/MHV2080BS		
MTTR*2		Less than 30 min.
Error rates	Recoverable errors	-
	Unrecoverable errors	1 per 10 ¹³ bits read
	Seek errors	1 per 10 ⁶ seek
Load/Unload cycles		600,000 cycles
Emergency Unload cycles		20,000 cycles

Note:

- *1: Not including alternates, and typical sparing at 512 Bytes per sector.
- *2: Mean-Time-To-Repair
- *3: Start time indicates the time from power-on or start direction by command to HDD READY.
- *4: HDD READY
- *5: SATA PHY is Slumber mode.