

# Voyager 4A VA38454A

## FEATURES

- Formatted Capacity 8.4 Gbytes
- 10 m/s average seek time
- 5,400 rpm Spindle Speed
- EPR4 Read Channel with 16/17 rate code
- PIO Mode 4/Multi-Word DMA Mode 4/Ultra DMA
- Error Correction on the Fly (Multi-Burst)
- 512 KB Segmented Read/Write Cache Buffer
- S.M.A.R.T. compliant
- ATA-4 Host Protected Area Feature

## DRIVE ARCHITECTURE

Formatted Capacities	
Gbytes per Drive	8.4
Megabytes per Surface	1437
Bytes per Sector	512
Logical Organization	
LYCL	16383
LHD	16
LSCT	63
Bytes / SCT	512

## FUNCTIONAL SPECIFICATIONS

Actuator Type	Rotary Voice Coil
Interface	Enhanced IDE
Servo	Embedded Sector Servo
Recording Method	16/17 EPR4
Recording Density (kbp, max.)	197
Flux Density (kfcpi, max.)	209
Track Density at Zero Skew (tpi)	10,300

## PERFORMANCE SPECIFICATIONS

Seek Time (RD/WT typical)	
Track to Track	2.0/3.0 ms
Average	10/11 ms
Full Stroke	20/22 ms
Average Latency	5.56 ms
Spindle Speed	5,400 ± 0.1% rpm
Data Transfer Rate	
Media to/from Buffer	160 Mbits/sec
Buffer to/from Host	16.6/33 Mbytes/s
Start Time	
Typical	15 sec
Stop Time	
Typical	7 sec
Buffer Size	512 Kbytes

## RELIABILITY SPECIFICATIONS

Recoverable Read Error	1 in 10 <sup>10</sup> bits
Non-recoverable Read Error	1 in 10 <sup>14</sup> bits
MTBF (POH)	500,000 hours
MTTR (typical)	5 minutes
Start/Stop Cycles	50,000
Component Design Life	5 years

## ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating	5 ~ 55 °C
Non-operating	-40 ~ 70 °C
Thermal/Humidity Grad.(max.)	20°C/15%/hr
Humidity (non-condensing)	
Operating	8 ~ 80 %
Non-operating	8 ~ 95 %
Maximum Wet Bulb(OP/NOP)	29/40 °C
Altitude (relative to sea level)	
Operating	-200 to 10,000 feet
Non-operating	-1,000 to 40,000 feet

## SHOCK AND VIBRATION

Linear Shock (1/2 sine pulse)	
Operating	11ms 10G
Non-operating	11 ms 75G

Vibration (swept sine)	
Operating (1/2 octave per minute)	
5 ~ 21 Hz	0.034" (double amplitude)
22 ~ 400 Hz	1.5 Gp-p
Non-operating (1 octave per minute)	
5 ~ 21 Hz	0.195" (double amplitude)
22 ~ 500 Hz	8 Gp-p

## POWER CONSUMPTION

Power supply tolerance	+5V/±5%, +12V/±10%
Power Up Current (max.)	800/1400 MA
Read/Write (typical)	6.0 watts
Seek (30%) typical	9.5 watts
Idle (typical)	6.2 watts
Standby (typical)	1.3 watts
Sleep (typical)	1.3 watts

## ACOUSTIC NOISE

Sound Power	
Idle (typical)	3.2 BEL
Random Read/Write (typical)	3.6 BEL

## PHYSICAL DIMENSION

Height	1 inch
Width	4 inches
Depth	5.75 inches
Weight	1.3 pounds

*Specifications are subject to change without notice*

