

# Voyager 6 SV0432A

## FEATURES

- Formatted Capacity 4.3 Gbytes
- 9.5 msec average seek time
- 5,400 rpm Spindle Speed
- EPR4 Read Channel with 16/17 rate code
- 200 Mbits/sec Maximum Data Rate
- Ultra ATA/EIDE Interface
- PIO Mode 4/Multi-Word DMA Mode 2/Ultra DMA
- Error Correction on the Fly (Multi-Burst)
- 512 KB Segmented Read/Write Cache Buffer
- S.M.A.R.T. 3 compliant

## DRIVE ARCHITECTURE

|                       |           |
|-----------------------|-----------|
| Formatted Capacities  |           |
| Gbytes per Drive      | 4.3       |
| Megabytes per Surface | 2150      |
| Bytes per Sector      | 512       |
| Physical Organization |           |
| Disks                 | 1         |
| Data Surfaces         | 2         |
| Read/Write Heads      | 2         |
| Cylinder              | 12,257    |
| Sectors per Track     | 252 - 396 |

## FUNCTIONAL SPECIFICATIONS

|                                  |                       |
|----------------------------------|-----------------------|
| Actuator Type                    | Rotary Voice Coil     |
| Interface                        | Enhanced IDE          |
| Servo                            | Embedded Sector Servo |
| Recording Method                 | 16/17 EPR4            |
| Recording Density (kbpi,max.)    | 260                   |
| Flux Density (kfcpi,max.)        | 276                   |
| Track Density at Zero Skew (tpi) | 12,500                |

## PERFORMANCE SPECIFICATIONS

|                           |                     |
|---------------------------|---------------------|
| Seek Time (RD/WT typical) |                     |
| Track to Track            | 2.0/2.0 ms          |
| Average                   | 9.5/10.5 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      | 124 - 200 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                     | 11 ms      10 G                          |
| (2 ms)                        | 63 G REF)                                |
| Non-operating                 | 11 ms      75 G                          |
| (2 ms)                        | 200 G REF)                               |
| Non-operating Rotational      | 2 ms      12,000<br>RAD/SEC <sup>2</sup> |

|                                     |                           |
|-------------------------------------|---------------------------|
| Vibration (swept sine)              |                           |
| Operating (1/2 octave per minute)   |                           |
| 5 ~ 21 Hz                           | 0.034" (double amplitude) |
| 22 ~ 300 Hz                         | 1.5 Gp-p                  |
| 300 ~ 500 Hz                        | .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.) | 800/1550 MA       |
| Read/Write (typical)    | 6.7 watts         |
| Seek (30%) typical      | 7.4 watts         |
| Idle (typical)          | 6.7 watts         |
| Standby (typical)       | 1.3 watts         |
| Sleep (typical)         | 1.3 watts         |

## ACOUSTIC NOISE

|                             |         |
|-----------------------------|---------|
| Sound Power                 |         |
| Idle (typical)              | 3.9 BEL |
| Random Read/Write (typical) | 4.3 BEL |

## PHYSICAL DIMENSION

|        |             |
|--------|-------------|
| Height | 1 inch      |
| Width  | 4 inches    |
| Depth  | 5.75 inches |
| Weight | 1.2 pounds  |

*Specifications are subject to change without notice*

**SAMSUNG**

NORTH AMERICA Voyager 6 Product Specification Rev. 2 (9/30/98)