## KVR1066D3E7/1G

1GB 1Rx8 128M x 72-Bit PC3-8500

## CL7 ECC 240-Pin DIMM

Important Information: The module defined in this data sheet is one of several configurations available under this part number. While all configurations are compatible, the DRAM combination and/or the module height may vary from what is described here.

## DESCRIPTION

This document describes ValueRAM's 128M x 72-bit (1GB) DDR3-1066 CL7 SDRAM (Synchronous DRAM), 1Rx8 ECC memory module, based on nine $128 \mathrm{M} \times 8$-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR3-1066 timing of 7-7-7 at 1.5 V . This 240 -pin DIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

## FEATURES

- JEDEC standard 1.5 V (1.425V ~1.575V) Power Supply
- $\mathrm{VDDQ}=1.5 \mathrm{~V}(1.425 \mathrm{~V} \sim 1.575 \mathrm{~V})$
- 533 MHz fCK for $1066 \mathrm{Mb} / \mathrm{sec} /$ pin
- 8 independent internal bank
- Programmable CAS Latency: 8, 7, 6
- Programmable Additive Latency: $0, \mathrm{CL}-2$, or CL-1 clock
- Programmable CAS Write Latency(CWL) $=6$ (DDR3-1066)
- 8-bit pre-fetch
- Burst Length: 8 (Interleave without any limit, sequential with starting address " 000 " only), 4 with tCCD $=4$ which does not allow seamless read or write [either on the fly using A12 or MRS]
- Bi-directional Differential Data Strobe
- Internal(self) calibration: Internal self calibration through ZQ pin (RZQ : 240 ohm $\pm 1 \%$ )
- On Die Termination using ODT pin
- Average Refresh Period 7.8 us at lower than TCASE $85^{\circ} \mathrm{C}$, 3.9 us at $85^{\circ} \mathrm{C}<$ TCASE $\leq 95^{\circ} \mathrm{C}$
- Asynchronous Reset
- PCB: Height 1.18 " $(30 \mathrm{~mm})$, single sided component


## SPECIFICATIONS

| CL(IDD) | 7 cycles |
| :--- | :--- |
| Row Cycle Time (tRCmin) | $50.63 \mathrm{~ns} \mathrm{(min)}$. |
| Refresh to Active/Refresh <br> Command Time (tRFCmin) | 110 ns (min.) |
| Row Active Time (tRASmin) | 37.5 ns (min.) |
| Power (Operating) | $1.147 \mathrm{~W}^{\star}$ |
| UL Rating | $94 \mathrm{~V} \mathrm{-} 0$ |
| Operating Temperature | $0^{\circ} \mathrm{C}$ to $85^{\circ} \mathrm{C}$ |
| Storage Temperature | $-55^{\circ} \mathrm{C}$ to $+100^{\circ} \mathrm{C}$ |

*Power will vary depending on the SDRAM used.

## MODULE DIMENSIONS:



