# Memory Module Specifications



## KVR32S22D8/16

16GB 2Rx8 2G x 64-Bit PC4-3200 CL22 260-Pin SODIMM

#### DESCRIPTION

This document describes ValueRAM's KVR32S22D8/16 is a 2G x 64-bit (16GB) DDR4-3200 CL22 SDRAM (Synchronous DRAM), 2Rx8, non-ECC, memory module, based on sixteen 1G x 8-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR4-3200 timing of 22-22-22 at 1.2V. This 260-pin DIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

### **FEATURES**

- Power Supply: VDD = 1.2V Typical
- VDDQ = 1.2V Typical
- VPP = 2.5V Typical
- VDDSPD = 2.2V to 3.6V
- Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals
- · Low-power auto self refresh (LPASR)
- · Data bus inversion (DBI) for data bus
- · On-die VREFDQ generation and calibration
- · Dual-rank
- On-board I2 serial presence-detect (SPD) EEPROM
- 16 internal banks; 4 groups of 4 banks each
- Fixed burst chop (BC) of 4 and burst length (BL) of 8 via the mode register set (MRS)
- Selectable BC4 or BL8 on-the-fly (OTF)
- Fly-by topology
- · Terminated control command and address bus
- PCB: Height 1.18" (30.00mm)
- · RoHS Compliant and Halogen-Free

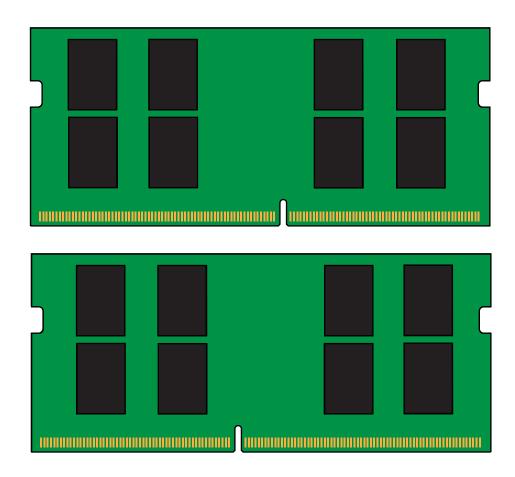
### **SPECIFICATIONS**

CL(IDD)	22 cycles
Row Cycle Time (tRCmin)	45.75ns(min.)
Refresh to Active/Refresh Command Time (tRFCmin)	350ns(min.)
Row Active Time (tRASmin)	32ns(min.)
UL Rating	94 V - 0
Operating Temperature	0° C to +85° C
Storage Temperature	-55° C to +100° C

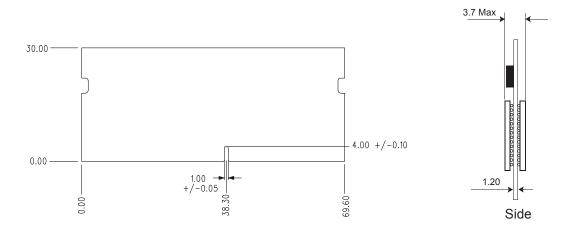
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## **MODULE DIMENSIONS**



All measurements are in millimeters. (Tolerances on all dimensions are  $\pm 0.12$  unless otherwise specified)



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