# Memory Module Specifications

## KVR29N21S6/8

8GB 1Rx16 1G x 64-Bit PC4-2933 CL21 288-Pin DIMM

#### DESCRIPTION

This document describes ValueRAM's KVR29N21S6/8 is a 1G x 64-bit (8GB) DDR4-2933 CL21 SDRAM (Synchronous DRAM), 1Rx16, memory module, based on four 1G x 16-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR4-2933 timing of 21-21-21 at 1.2V. Each 288-pin DIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

## **FEATURES**

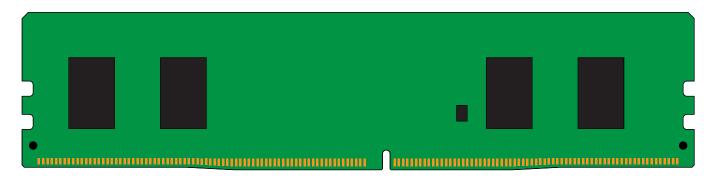
- Power Supply: VDD = 1.2V Typical
- VDDQ = 1.2V Typical
- VPP = 2.5V Typical
- VDDSPD = 2.2V to 3.6V
- Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals
- · Low-power auto self refresh (LPASR)
- Data bus inversion (DBI) for data bus
- On-die VREFDQ generation and calibration
- · Single-rank
- · On-board I2 serial presence-detect (SPD) EEPROM
- · 8 internal banks; 2 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 1.23" (31.25mm)
- · RoHS Compliant and Halogen-Free

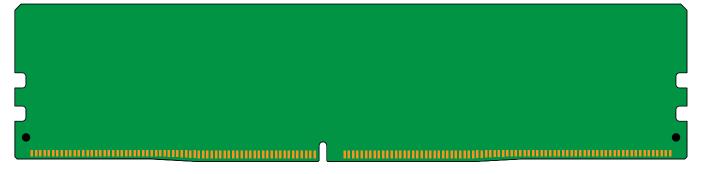
### **SPECIFICATIONS**

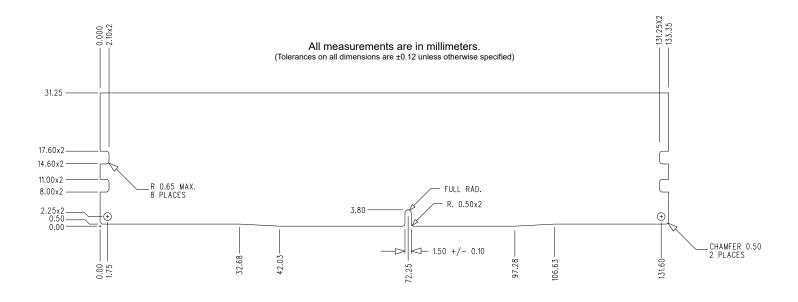
CL(IDD)	21 cycles
Row Cycle Time (tRCmin)	45.75ns(min.)
Refresh to Active/Refresh Command Time (tRFCmin)	350ns(min.)
Row Active Time (tRASmin)	32ns(min.)
	52115(11111.)
UL Rating	94 V - 0
	( )
UL Rating	94 V - 0

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#### MODULE DIMENSIONS







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