

## KVR18L13Q4/32

32GB 4Rx4 4G x 72-Bit PC3-14900

CL13 Load Reduced DIMM

### DESCRIPTION

ValueRAM's KVR18L13Q4/32 4G x 72-bit (32GB) DDR3-1866 CL13 SDRAM (Synchronous DRAM), 4Rx4, load reduced, ECC memory module, based on thirty-six DDP 2G x 4-bit components. The SPD is programmed to JEDEC standard latency DDR3-1866 timing of 13-13-13 at 1.5V. This 240-pin LRDIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

### FEATURES

- JEDEC standard 1.5V (1.425V ~ 1.575V) Power Supply
- VDDQ = 1.5V (1.425V ~ 1.575V)
- 933MHz fCK for 1866Mb/sec/pin
- 8 independent internal banks
- Programmable CAS latency: 13, 11, 10, 9, 8, 7, 6
- Programmable Additive Latency: 0, CL - 2, or CL - 1 clock
- 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 ± 1%)
- On Die Termination using ODT pin
- On-DIMM thermal sensor (Grade B)
- Average Refresh Period 7.8us at lower than TCASE 85°C, 3.9us at 85°C < TCASE < 95°C
- Asynchronous Reset
- PCB: Height 1.195" (30.35mm), double sided component

### SPECIFICATIONS

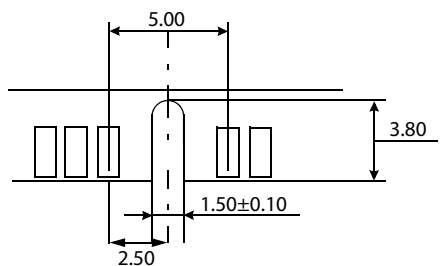
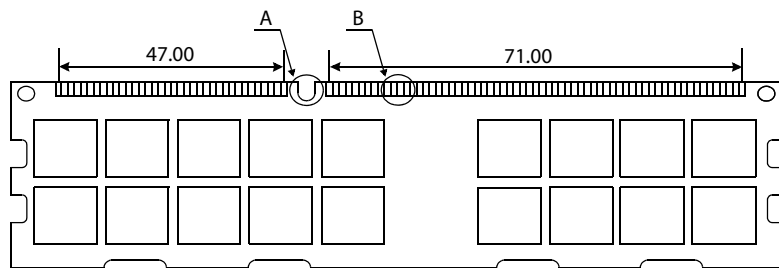
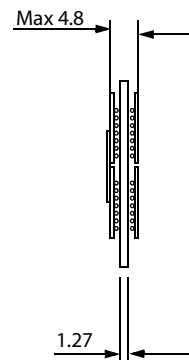
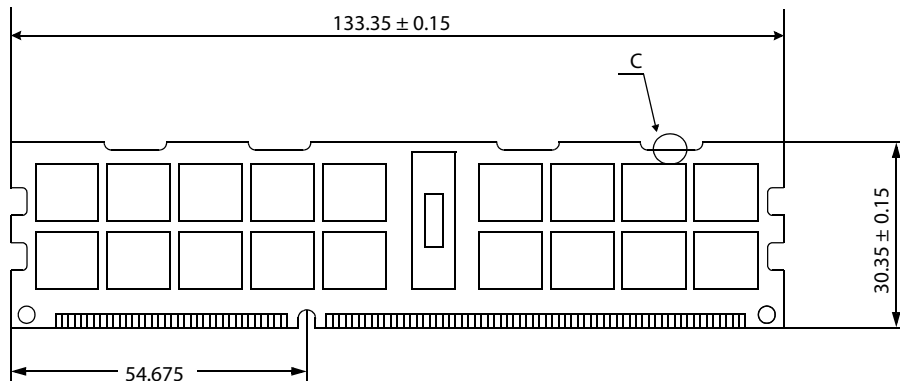
CL(IDD)	13 cycles
Row Cycle Time (tRCmin)	47.91ns(min.)
Refresh to Active/Refresh Command Time (tRFCmin)	260ns(min.)
Row Active Time (tRASmin)	34ns(min.)
Maximum Operating Power	11.070 W*
UL Rating	94 V - 0
Operating Temperature	0° C to +85° C
Storage Temperature	-55° C to +100° C

\*Power will vary depending on the SDRAM and Register/PLL used.

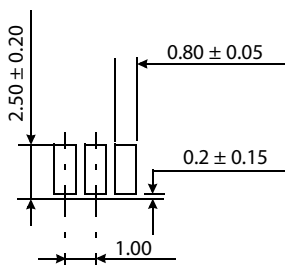
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# MODULE DIMENSIONS

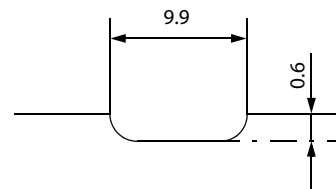
Units : Millimeters



Detail A



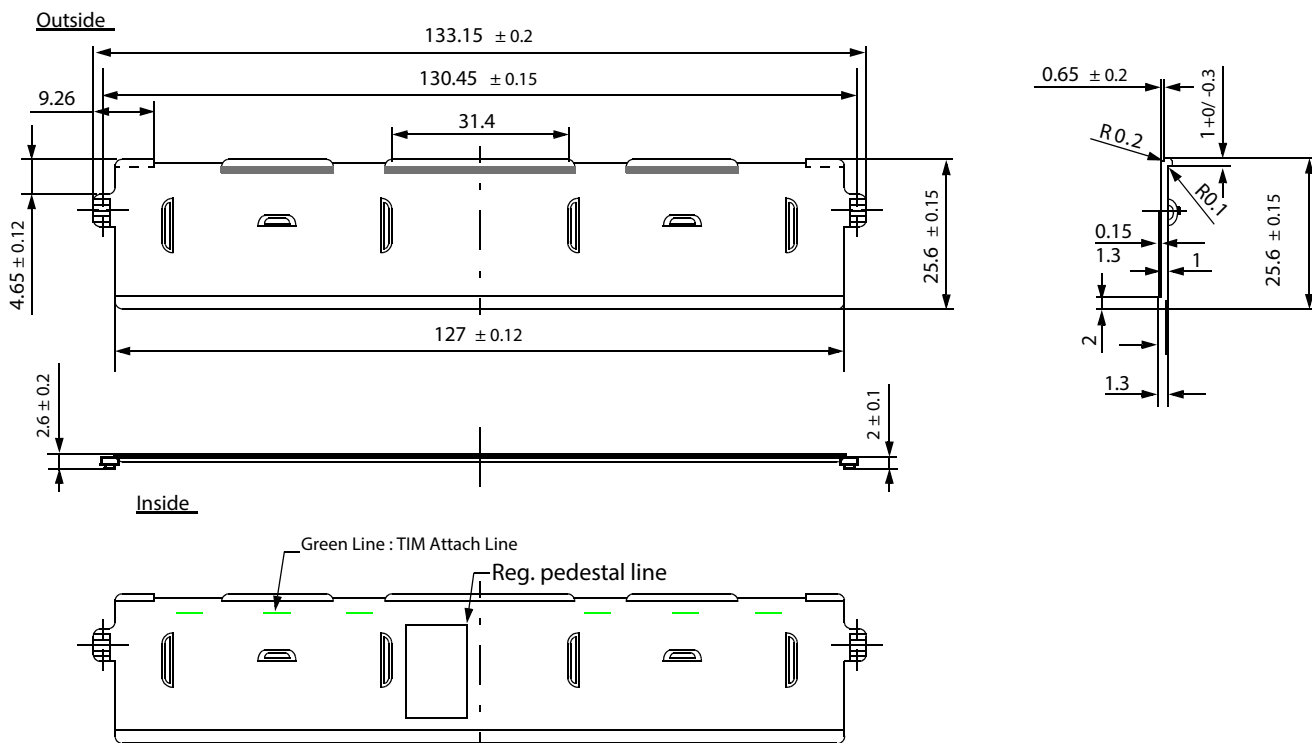
Detail B



Detail C

### MODULE DIMENSIONS

#### 1. FRONT PART



#### 2. BACK PART

