

# Memory Module Specifications

## KSM32RS8/8MEI

8GB 1Rx8 1G x 72-Bit PC4-3200

CL22 Registered w/Parity 288-Pin DIMM

### DESCRIPTION

Kingston's KSM32RS8/8MEI is a 1G x 72-bit (8GB) DDR4-3200 CL22 SDRAM (Synchronous DRAM) registered w/ parity, 1Rx8, ECC, memory module, based on nine 1G x 8-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR4-3200 timing of 22-22-22 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
- VDDQ = 1.2V
- VPP = 2.5V
- VDDSPD = 2.41V to 2.75V
- Functionality and operations comply with the DDR4 SDRAM datasheet
- 16 internal banks
- Bank Grouping is applied, and CAS to CAS latency (tCCD\_L, tCCD\_S) for the banks in the same or different bank group accesses are available
- Data transfer rates: PC4-3200, PC4-2933, PC4-2666, PC4-2400, PC4-2133, PC4-1866, PC4-1600
- Bi-Directional Differential Data Strobe
- 8 bit pre-fetch
- Burst Length (BL) switch on-the-fly BL8 or BC4(Burst Chop)
- Supports ECC error correction and detection
- On-Die Termination (ODT)
- Temperature sensor with integrated SPD
- This product is in compliance with the RoHS directive.
- Per DRAM Addressability is supported
- Internal Vref DQ level generation is available
- Write CRC is supported at all speed grades
- CA parity (Command/Address Parity) mode is supported

### 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.)        |
| Maximum Operating Power                          | *                 |
| UL Rating  | 94 V - 0          |
| Operating Temperature                            | 0° C to +85° C    |
| Storage Temperature                              | -55° C to +100° C |

\*See IDD Specifications (page 2)

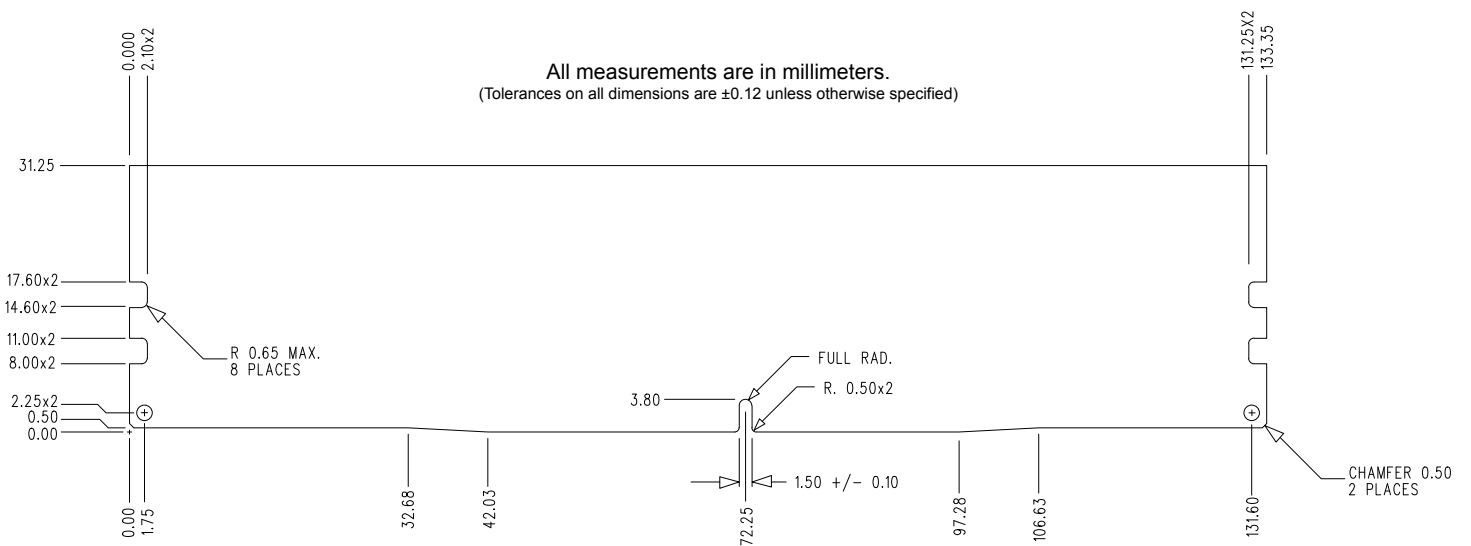
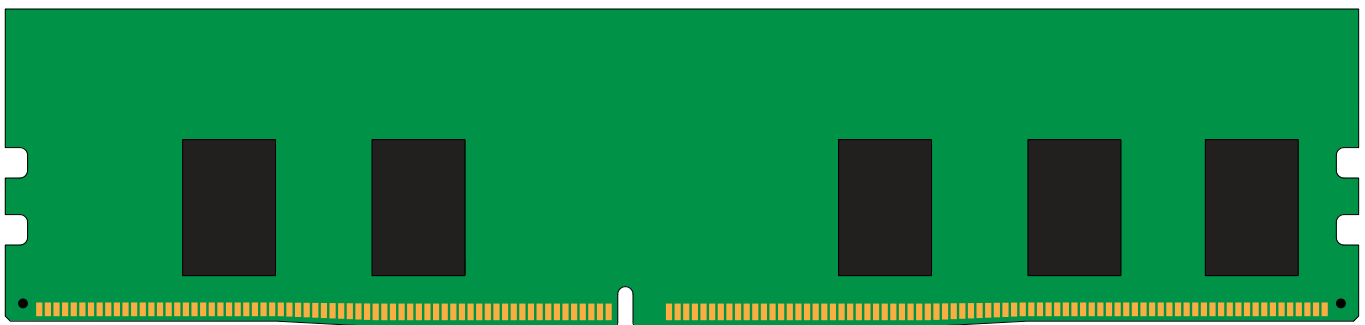
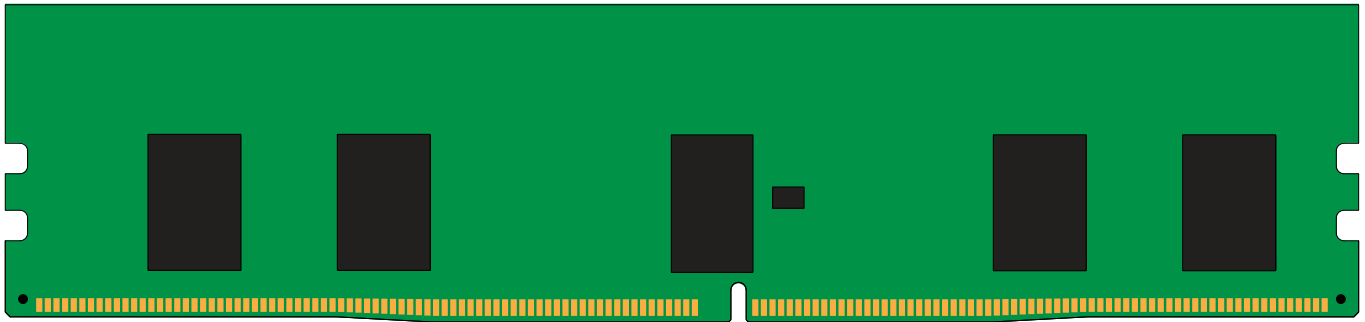
### Module Assembly

|                             |
|-----------------------------|
| <b>DRAM:</b> MICRON (E-DIE) |
| <b>RCD:</b> IDT             |

## IDD Specifications

| Symbol             | 3200 | Units |
|--------------------|------|-------|
| I <sub>DD0</sub>   | 423  | mA    |
| I <sub>PP0</sub>   | 27   | mA    |
| I <sub>DD1</sub>   | 567  | mA    |
| I <sub>DD2N</sub>  | 297  | mA    |
| I <sub>DD2NT</sub> | 396  | mA    |
| I <sub>DD2P</sub>  | 198  | mA    |
| I <sub>DD2Q</sub>  | 234  | mA    |
| I <sub>DD3N</sub>  | 387  | mA    |
| I <sub>PP3N</sub>  | 27   | mA    |
| I <sub>DD3P</sub>  | 297  | mA    |
| I <sub>DD4R</sub>  | 1602 | mA    |
| I <sub>DD4W</sub>  | 1350 | mA    |
| I <sub>DD5R</sub>  | 450  | mA    |
| I <sub>PP5R</sub>  | 45   | mA    |
| I <sub>DD6N</sub>  | 306  | mA    |
| I <sub>DD6E</sub>  | 522  | mA    |
| I <sub>DD6R</sub>  | 189  | mA    |
| I <sub>DD6A</sub>  | 77.4 | mA    |
| I <sub>DD6A</sub>  | 189  | mA    |
| I <sub>DD6A</sub>  | 279  | mA    |
| I <sub>DD6A</sub>  | 522  | mA    |
| I <sub>PP6X</sub>  | 45   | mA    |
| I <sub>DD7</sub>   | 1710 | mA    |
| I <sub>PP7</sub>   | 117  | mA    |
| I <sub>DD8</sub>   | 162  | mA    |

## MODULE DIMENSIONS



The product images shown are for illustration purposes only and may not be an exact representation of the product.  
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