

# Memory Module Specifications

## KSM26SED8/16ME

16GB 2Rx8 2G x 72-Bit PC4-2400

CL17 260-Pin ECC SODIMM

### DESCRIPTION

Kingston's KSM26SED8/16ME is a 2G x 72-bit (16GB) DDR4-2666 CL19 SDRAM (Synchronous DRAM) w/ parity, 2Rx8, ECC, memory module, based on eighteen 1G x 8-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR4-2666 timing of 19-19-19 at 1.2V. Each 260-pin SODIMM 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 = 2.20V to 3.60V
- 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: PC4-2666, 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
- RoHS Compliant and Halogen-Free

### SPECIFICATIONS

|  |                   |
|--|-------------------|
| CL(IDD)  | 19 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 |

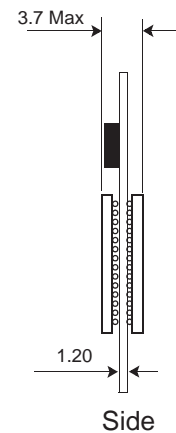
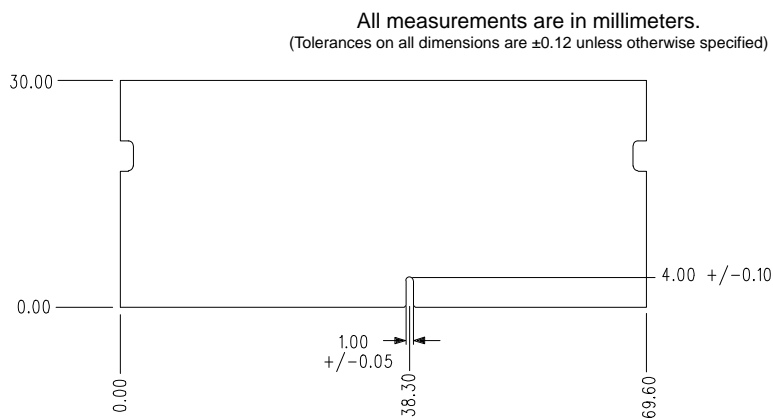
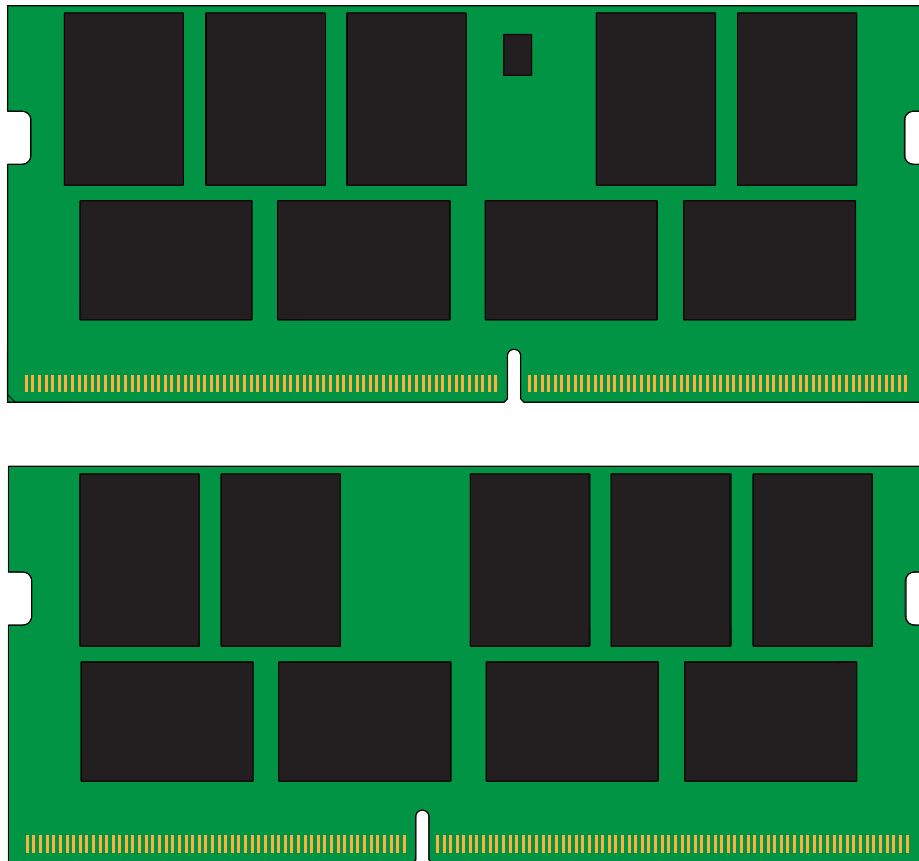
\*See IDD Specifications (page 2)

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## IDD Specifications

| Symbol      | 2666  | Units |
|-------------|-------|-------|
| $I_{DD0}$   | 684   | mA    |
| $I_{PP0}$   | 54    | mA    |
| $I_{DD1}$   | 792   | mA    |
| $I_{DD2N}$  | 630   | mA    |
| $I_{DD2NT}$ | 675   | mA    |
| $I_{DD2P}$  | 450   | mA    |
| $I_{DD2Q}$  | 540   | mA    |
| $I_{DD3N}$  | 918   | mA    |
| $I_{PP3N}$  | 54    | mA    |
| $I_{DD3P}$  | 702   | mA    |
| $I_{DD4R}$  | 1629  | mA    |
| $I_{DD4W}$  | 1458  | mA    |
| $I_{DD5R}$  | 774   | mA    |
| $I_{PP5R}$  | 72    | mA    |
| $I_{DD6N}$  | 612   | mA    |
| $I_{DD6E}$  | 828   | mA    |
| $I_{DD6R}$  | 378   | mA    |
| $I_{DD6A}$  | 154.8 | mA    |
| $I_{DD6A}$  | 378   | mA    |
| $I_{DD6A}$  | 558   | mA    |
| $I_{PP6X}$  | 90    | mA    |
| $I_{DD7}$   | 1881  | mA    |
| $I_{PP7}$   | 162   | mA    |
| $I_{DD8}$   | 450   | mA    |

## MODULE DIMENSIONS



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