

Memory Module Specifications

KSM29RS4/16MEI

16GB 1Rx4 2G x 72-Bit PC4-2933

CL21 Registered w/Parity 288-Pin DIMM

DESCRIPTION

Kingston's KSM29RS4/16MEI is a 2G x 72-bit (16GB) DDR4-2933 CL21 SDRAM (Synchronous DRAM) registered w/ parity, 1Rx4, ECC, memory module, based on eighteen 2G x 4-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
- VDDQ = 1.2V
- VPP = 2.5V
- VDDSPD = 2.25V 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: PC4-2933, 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)	21 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

DRAM: MICRON (E-DIE)
RCD: IDT

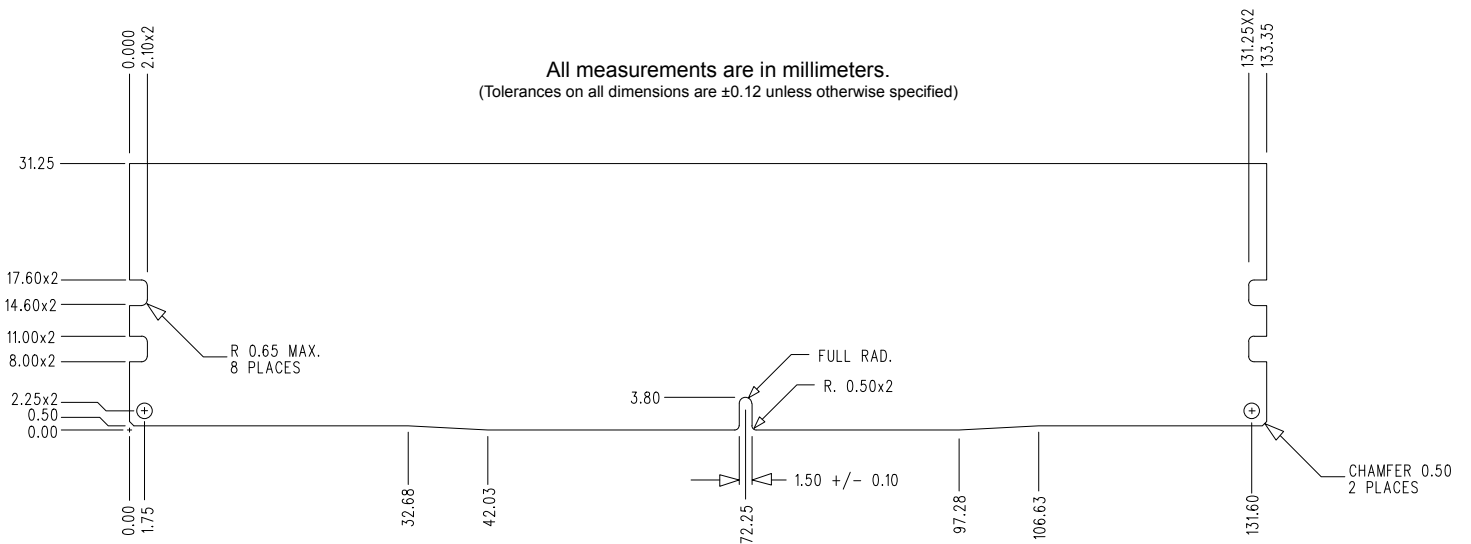
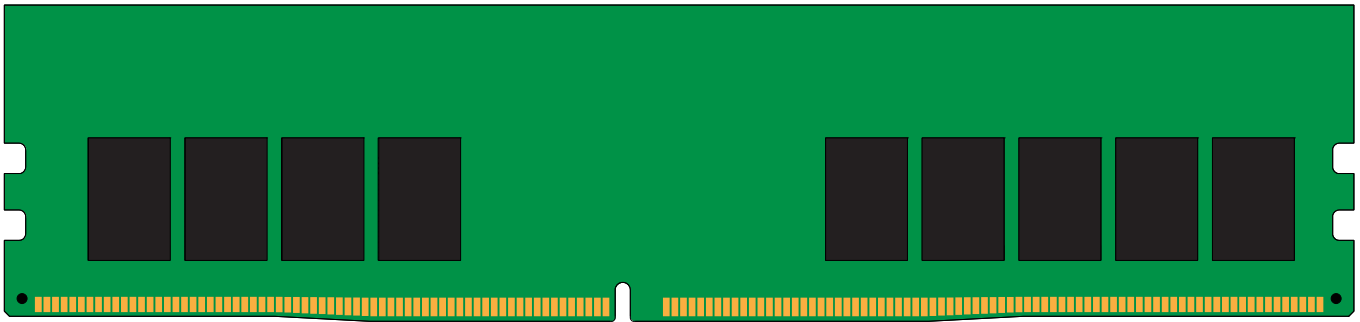
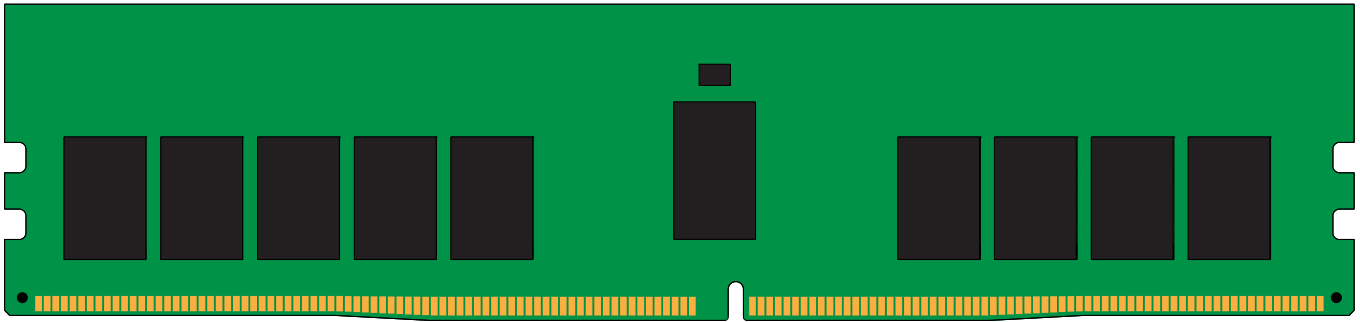
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IDD Specifications

Symbol	2933	Units
I_{DD0}^1	774	mA
I_{PP0}^1	54	mA
I_{DD1}^1	1008	mA
I_{DD2N}^2	576	mA
I_{DD2NT}^1	756	mA
I_{DD2P}^2	396	mA
I_{DD2Q}^2	468	mA
I_{DD3N}^2	720	mA
I_{PP3N}^2	54	mA
I_{DD3P}^2	558	mA
I_{DD4R}^1	2556	mA
I_{DD4W}^1	2214	mA
I_{DD5R}^1	882	mA
I_{PP5R}^1	90	mA
I_{DD6N}^2	612	mA
I_{DD6E}^2	1044	mA
I_{DD6R}^2	378	mA
I_{DD6A}^2	154.8	mA
I_{DD6A}^2	378	mA
I_{DD6A}^2	558	mA
I_{DD6A}^2	1044	mA
I_{PP6X}^2	90	mA
I_{DD7}^1	3870	mA
I_{PP7}^1	252	mA
I_{DD8}^2	324	mA

Notes: 1. One module rank in the active IDD/PP, the other rank in IDD2P/PP3N.
2. All ranks in this IDD/PP condition.

MODULE DIMENSIONS



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