

Memory Module Specifications

KSM29RD4/32HCI

32GB 2Rx4 4G x 72-Bit PC4-2933

CL21 Registered w/Parity 288-Pin DIMM

DESCRIPTION

Kingston's KSM29RD4/32HCI is a 4G x 72-bit (32GB) DDR4-2933 CL21 SDRAM (Synchronous DRAM) registered w/ parity, 2Rx4, ECC, memory module, based on thirty-six 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 = 2.41V 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: PC4-2933, 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)	46.32ns(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 Table (page2)

Module Assembly

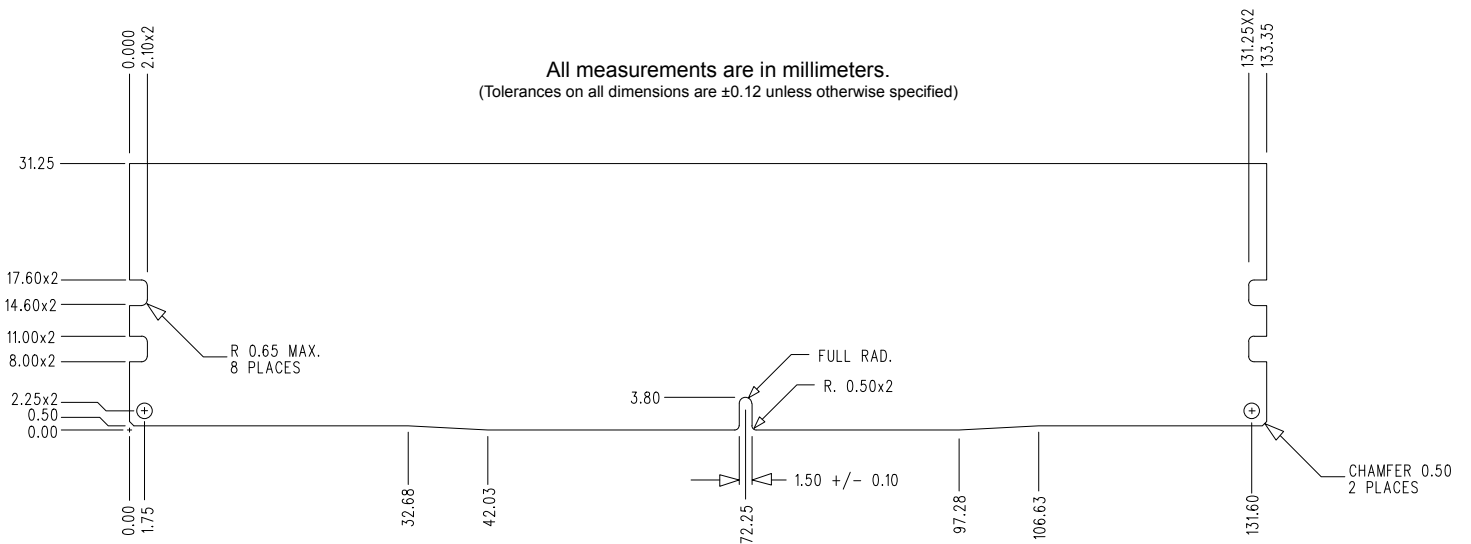
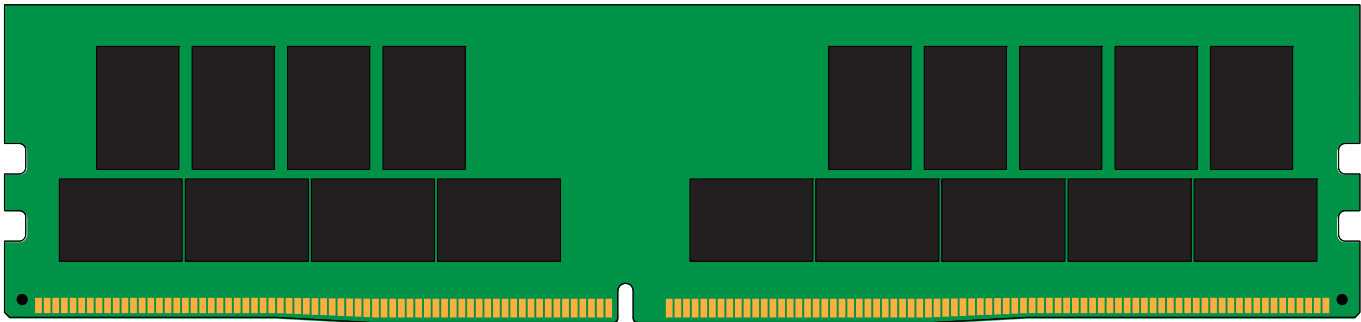
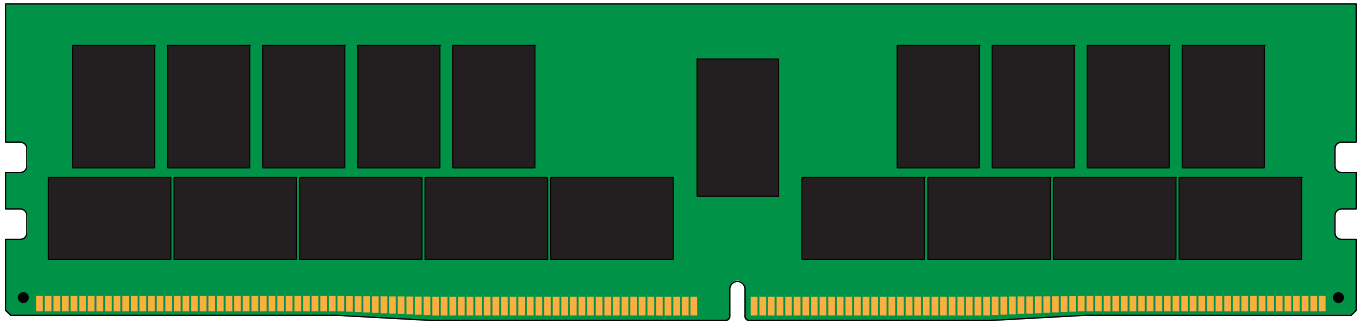
DRAM: HYNIX (C-DIE)
RCD: IDT

IDD Specifications

IDD		unit
Symbol	2933	
IDD0	1642	mA
IDD0A	1660	mA
IDD1	1850	mA
IDD1A	1832	mA
IDD2N	1462	mA
IDD2NA	1462	mA
IDD2NT	1642	mA
IDD2NL	1210	mA
IDD2NG	1462	mA
IDD2ND	1426	mA
IDD2NP	1462	mA
IDD2P	1030	mA
IDD2Q	1318	mA
IDD3N	1858	mA
IDD3NA	1858	mA
IDD3P	1426	mA
IDD4R	2894	mA
IDD4RA	2948	mA
IDD4RB	2912	mA
IDD4W	2804	mA
IDD4WA	2894	mA
IDD4WB	2588	mA
IDD4WC	2822	mA
IDD4WP	3146	mA
IDD5B	4504	mA
IDD5F2	3568	mA
IDD5F4	3298	mA
IDD6N	771	mA
IDD6E	1023	mA
IDD6R	519	mA
IDD6A	1023	mA
IDD7	4766	mA
IDD8	447	mA

IPP		unit
Symbol	2933	
IPP0	157	mA
IPP1	175	mA
IPP2N	115	mA
IPP2P	115	mA
IPP3N	576	mA
IPP3P	576	mA
IPP4R	400	mA
IPP4W	400	mA
IPP5B	1192	mA
IPP5F2	814	mA
IPP5F4	688	mA
IPP6N	180	mA
IPP6E	252	mA
IPP6R	148	mA
IPP6A	252	mA
IPP7	562	mA
IPP8	115	mA

MODULE DIMENSIONS



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