

Memory Module Specifications

KSM32RD8/32HAR

32GB 2Rx8 4G x 72-Bit PC4-3200

CL22 Registered w/Parity 288-Pin DIMM

DESCRIPTION

Kingston's KSM32RD8/32HAR is a 4G x 72-bit (32GB) DDR4-3200 CL22 SDRAM (Synchronous DRAM) registered w/ parity, 2Rx8, ECC, memory module, based on eighteen 2G 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 Table (page2)

Module Assembly

DRAM: HYNIX (A-DIE)

RCD: Rambus

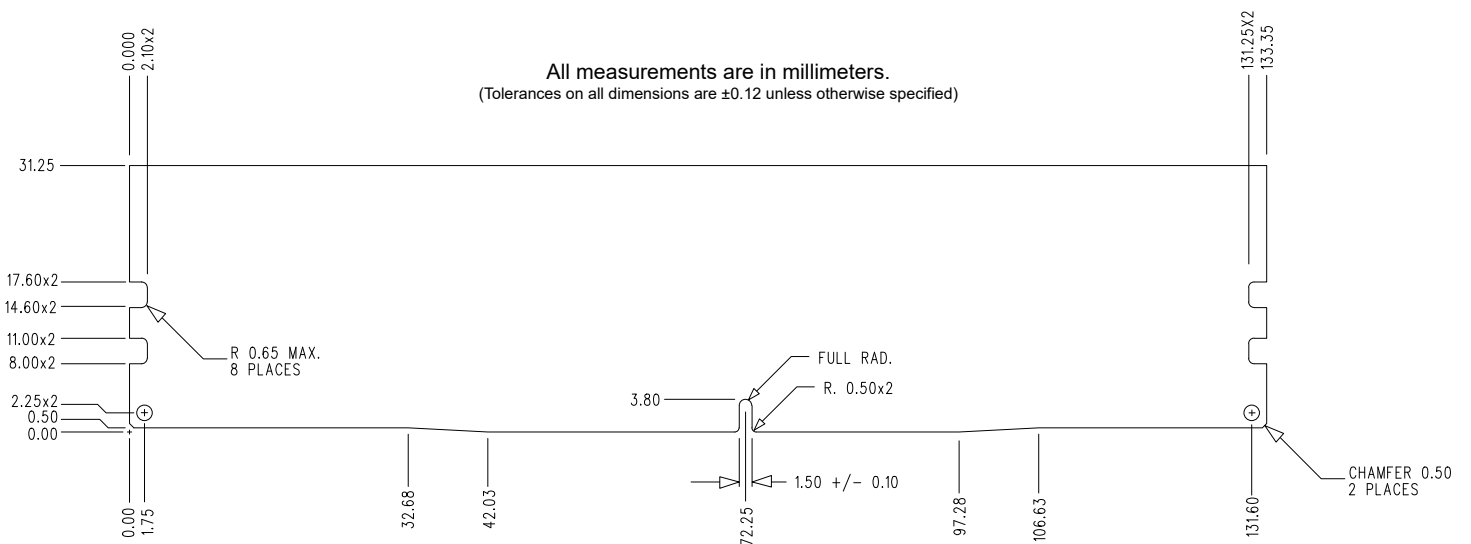
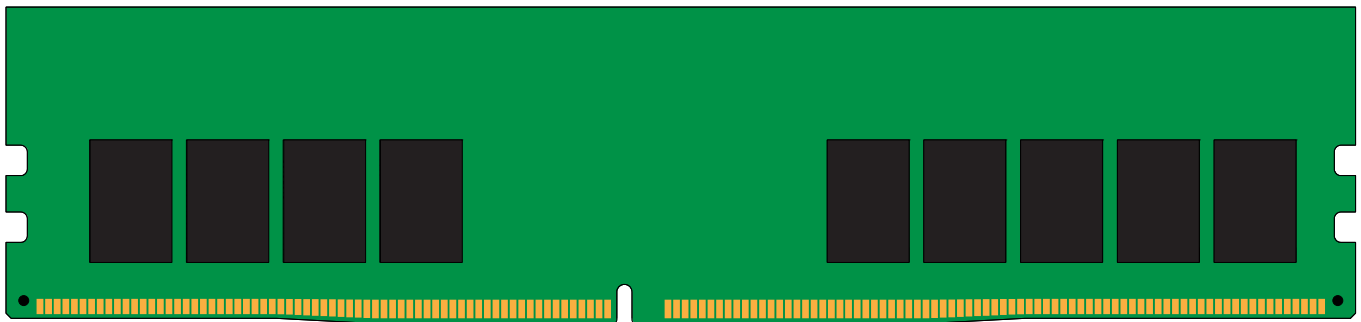
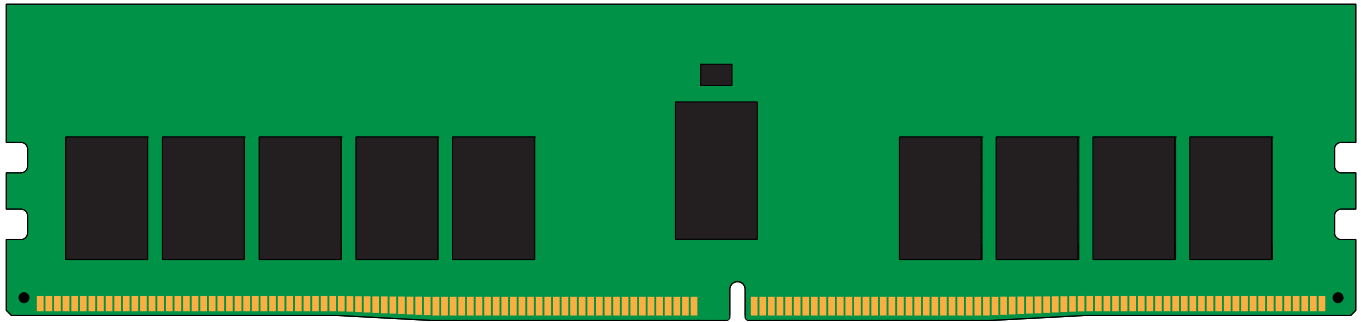
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IDD Specifications

IDD		unit
Symbol	3200	
IDD0	1199	mA
IDD0A	1200	mA
IDD1	1317	mA
IDD1A	1350	mA
IDD2N	1119	mA
IDD2NA	1120	mA
IDD2NT	1254	mA
IDD2NL	906	mA
IDD2NG	1107	mA
IDD2ND	1089	mA
IDD2NP	1141	mA
IDD2P	727	mA
IDD2Q	1054	mA
IDD3N	1446	mA
IDD3NA	1446	mA
IDD3P	1075	mA
IDD4R	2182	mA
IDD4RA	2191	mA
IDD4RB	2195	mA
IDD4W	1970	mA
IDD4WA	2020	mA
IDD4WB	1907	mA
IDD4WC	1969	mA
IDD4WP	2295	mA
IDD5B	4317	mA
IDD5F2	3287	mA
IDD5F4	2912	mA
IDD6N	597	mA
IDD6E	895	mA
IDD6R	339	mA
IDD6A	895	mA
IDD7	2131	mA
IDD8	258	mA

IPP		unit
Symbol	3200	
IPP0	31	mA
IPP1	31	mA
IPP2N	24	mA
IPP2P	25	mA
IPP3N	35	mA
IPP3P	35	mA
IPP4R	30	mA
IPP4W	30	mA
IPP5B	599	mA
IPP5F2	405	mA
IPP5F4	338	mA
IPP6N	76	mA
IPP6E	129	mA
IPP6R	39	mA
IPP6A	114	mA
IPP7	87	mA
IPP8	25	mA

MODULE DIMENSIONS



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