

Memory Module Specifications

KSM32RS4/32HCR

32GB 1Rx4 4G x 72-Bit PC4-3200

CL22 Registered w/Parity 288-Pin DIMM

DESCRIPTION

Kingston's KSM32RS4/32HCR is a 4G x 72-bit (32GB) DDR4-3200 CL22 SDRAM (Synchronous DRAM) registered w/ parity, 1Rx4, ECC, memory module, based on eighteen 4G x 4-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)	22cycles
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: HYNIX (C-DIE)

RCD: Rambus

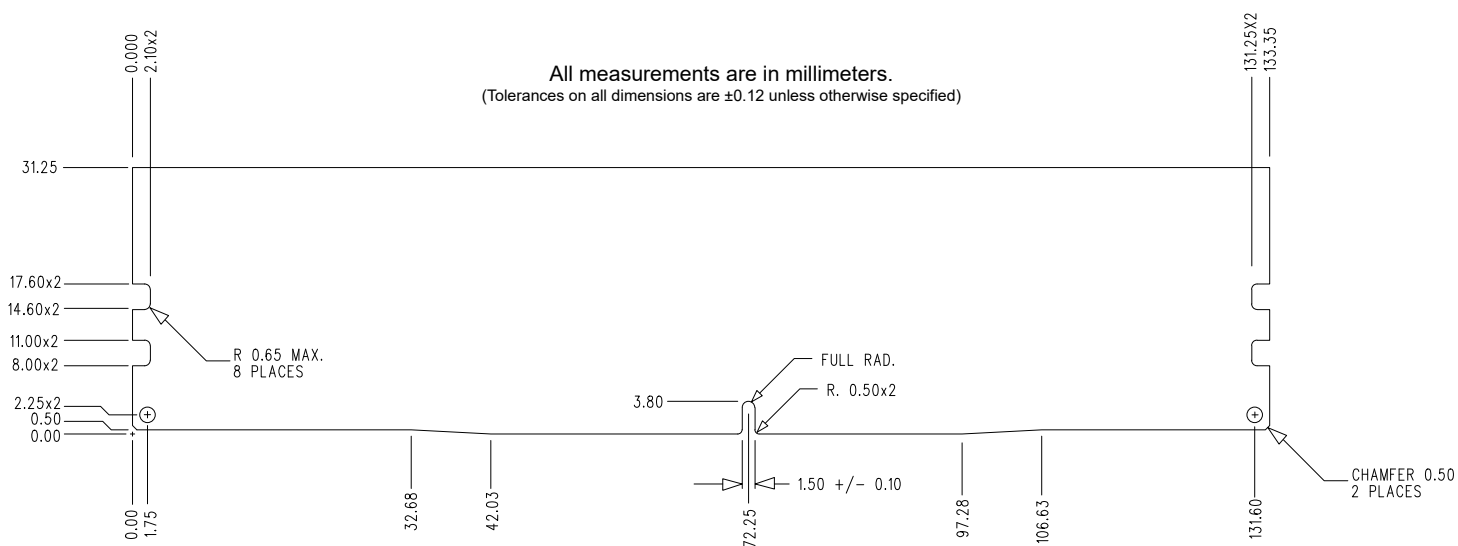
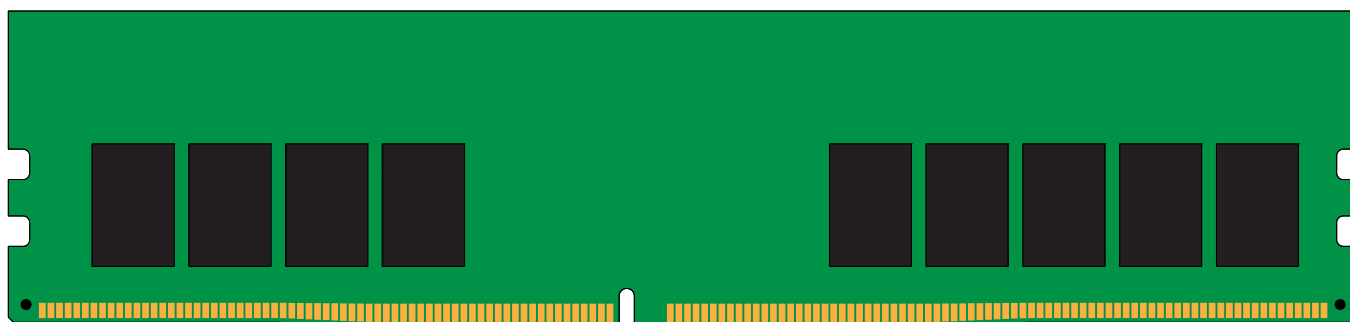
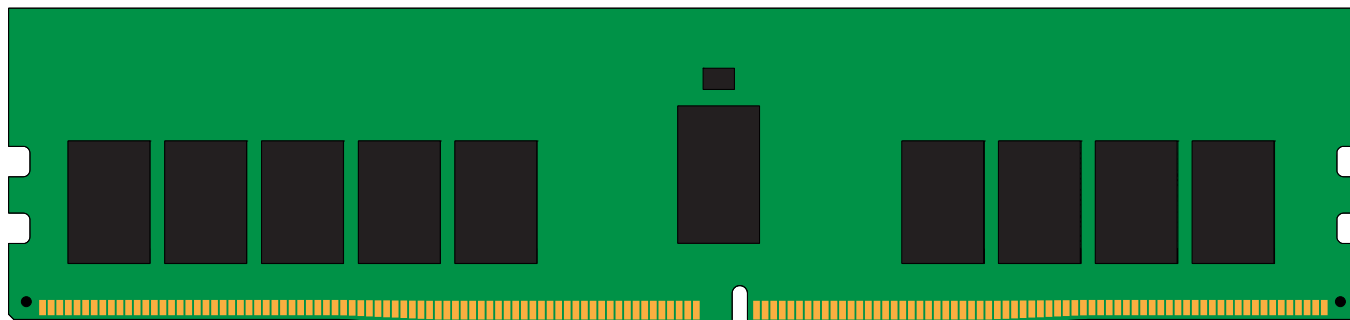
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IDD Specifications

IDD		unit
Symbol	3200	
IDD0	1158	mA
IDD0A	1159	mA
IDD1	1327	mA
IDD1A	1396	mA
IDD2N	1014	mA
IDD2NA	1015	mA
IDD2NT	1093	mA
IDD2NL	856	mA
IDD2NG	1005	mA
IDD2ND	973	mA
IDD2NP	1034	mA
IDD2P	673	mA
IDD2Q	974	mA
IDD3N	1147	mA
IDD3NA	1177	mA
IDD3P	834	mA
IDD4R	2192	mA
IDD4RA	2237	mA
IDD4RB	2192	mA
IDD4W	2122	mA
IDD4WA	2206	mA
IDD4WB	2010	mA
IDD4WC	2133	mA
IDD4WP	2588	mA
IDD5B	9552	mA
IDD5F2	6738	mA
IDD5F4	5688	mA
IDD6N	625	mA
IDD6E	1057	mA
IDD6R	298	mA
IDD6A	1058	mA
IDD7	3764	mA
IDD8	191	mA

IPP		unit
Symbol	3200	
IPP0	40	mA
IPP1	41	mA
IPP2N	24	mA
IPP2P	24	mA
IPP3N	28	mA
IPP3P	28	mA
IPP4R	51	mA
IPP4W	51	mA
IPP5B	965	mA
IPP5F2	663	mA
IPP5F4	541	mA
IPP6N	73	mA
IPP6E	121	mA
IPP6R	39	mA
IPP6A	107	mA
IPP7	414	mA
IPP8	24	mA

MODULE DIMENSIONS



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