

Memory Module Specifications

KSM32ED8/32HC

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

CL22 288-Pin DIMM

DESCRIPTION

Kingston's KSM32ED8/32HC is a 4G x 72-bit (32GB) DDR4-3200 CL22 SDRAM (Synchronous DRAM), 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 Typical
- VDDQ = 1.2V Typical
- VPP = 2.5V Typical
- VDDSPD = 2.2V to 3.6V
- Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals
- Low-power auto self refresh (LPASR)
- Data bus inversion (DBI) for data bus
- On-die VREFDQ generation and calibration
- Dual-rank
- On-board I2 serial presence-detect (SPD) EEPROM
- Temperature sensor with integrated SPD
- 16 internal banks; 4 groups of 4 banks each
- Fixed burst chop (BC) of 4 and burst length (BL) of 8 via the mode register set (MRS)
- Selectable BC4 or BL8 on-the-fly (OTF)
- Fly-by topology
- Terminated control command and address bus
- PCB: Height 1.23" (31.25mm)
- RoHS Compliant and Halogen-Free

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 Specifications (page 2)

Module Assembly

DRAM: HYNIX (C-DIE)

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IDD Specifications

IDD		unit
Symbol	3200	
IDD0	608	mA
IDD0A	608	mA
IDD1	673	mA
IDD1A	705	mA
IDD2N	519	mA
IDD2NA	520	mA
IDD2NT	594	mA
IDD2NL	366	mA
IDD2NG	519	mA
IDD2ND	479	mA
IDD2NP	535	mA
IDD2P	354	mA
IDD2Q	478	mA
IDD3N	958	mA
IDD3NA	958	mA
IDD3P	814	mA
IDD4R	1390	mA
IDD4RA	1408	mA
IDD4RB	1401	mA
IDD4W	1348	mA
IDD4WA	1390	mA
IDD4WB	1277	mA
IDD4WC	1341	mA
IDD4WP	1571	mA
IDD5B	5006	mA
IDD5F2	3531	mA
IDD5F4	2971	mA
IDD6N	679	mA
IDD6E	1083	mA
IDD6R	290	mA
IDD6A	1151	mA
IDD7	1575	mA
IDD8	179	mA

IPP		unit
Symbol	3200	
IPP0	29	mA
IPP1	33	mA
IPP2N	16	mA
IPP2P	16	mA
IPP3N	19	mA
IPP3P	19	mA
IPP4R	53	mA
IPP4W	53	mA
IPP5B	491	mA
IPP5F2	323	mA
IPP5F4	269	mA
IPP6N	65	mA
IPP6E	115	mA
IPP6R	28	mA
IPP6A	101	mA
IPP7	139	mA
IPP8	16	mA