Kingston TECHNOLOGY

Value RAM

KVR16N11S8/4WP

4GB 1Rx8 512M x 64-Bit PC3-12800
CL11 240-Pin DIMM

DESCRIPTION

This document describes ValueRAM's 512M x 64-bit (4GB) DDR3-1600 CL11 SDRAM (Synchronous DRAM) 1Rx8, memory module, based on eight 512M x 8-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR3-1600 timing of 11-11-11 at 1.5V. This 240-pin DIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

FEATURES

- JEDEC standard 1.5V Power Supply

- VDDQ = 1.5V

- 800MHz fCK for 1600Mb/sec/pin

- 8 independent internal bank

- Programmable CAS Latency: 11, 10, 9, 8, 7, 6

- Programmable Additive Latency: 0, CL - 2, or CL - 1 clock

- 8-bit pre-fetch

- Burst Length: 8 (Interleave without any limit, sequential with starting address "000" only), 4 with tCCD = 4 which does not allow seamless read or write [either on the fly using A12 or MRS]

- Bi-directional Differential Data Strobe

- Internal(self) calibration : Internal self calibration through ZQ pin (RZQ : 240 ohm ± 1%)

- On Die Termination using ODT pin

- Average Refresh Period 7.8us at lower than TCASE 85°C, 3.9us at 85°C < TCASE ≤ 95°C

- Asynchronous Reset
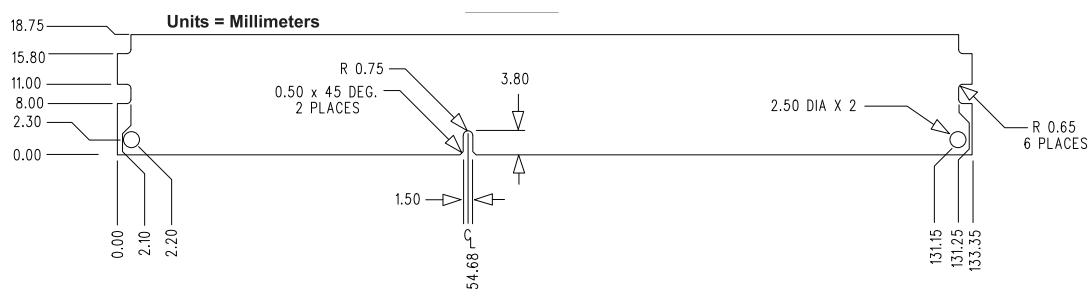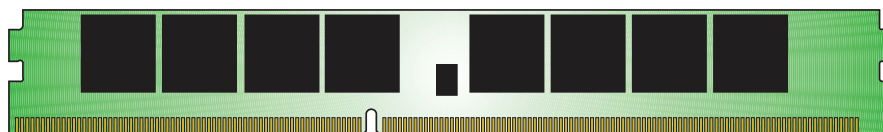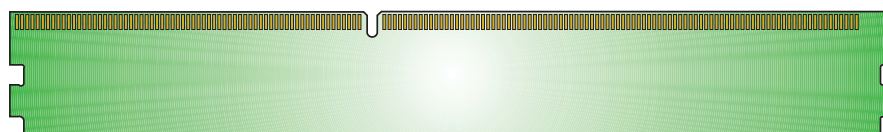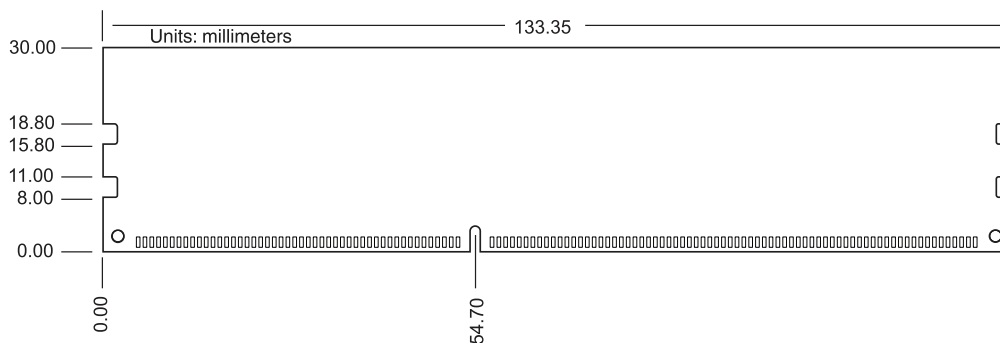
- PCB : Height 0.740" (18.75mm) or 1.180" (30.00mm)
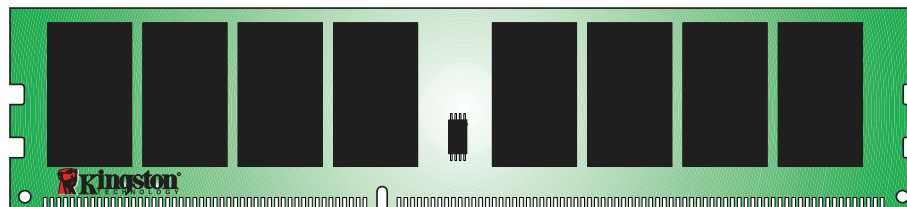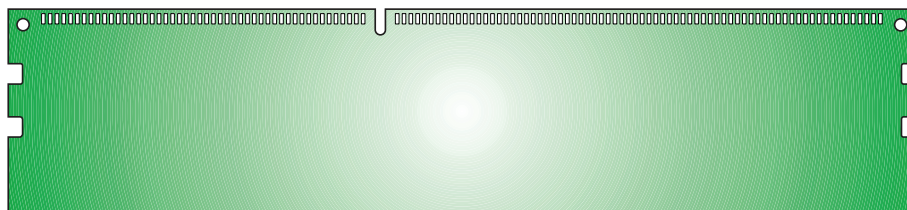
SPECIFICATIONS

CL(IDD)	11 cycles
Row Cycle Time (tRCmin)	48.125ns (min.)
Refresh to Active/Refresh Command Time (tRFCmin)	260ns (min.)
Row Active Time (tRASmin)	35ns (min.)
UL Rating	94 V - 0
Operating Temperature	0° C to 85° C
Storage Temperature	-55° C to +100° C

Important Information: The module defined in this data sheet is one of several configurations available under this part number. While all configurations are compatible, the DRAM combination and/or the module height may vary from what is described here.

MODULE DIMENSIONS:

Units: millimeters

133.35

30.00
18.80
15.80
11.00
8.00
0.00

0.00   54.70

Units = Millimeters

18.75
15.80
11.00
8.00
2.30
0.00

R 0.75

0.50 x 45 DEG.
2 PLACES

3.80

2.50 DIA X 2

R 0.65
6 PLACES

1.50

0.00 2.10 2.20

54.68

131.15 131.25 133.35

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