

DESCRIPTION:

This document describes Aplus 256M x 72-bit 2GB DDR3 SDRAM (Synchronous DRAM) Dual In-Line Memory Module. The components on this module include nine 256M x 8-bit DDR3 SDRAMs in FBGA packages and a 2048-bit serial EEPROM. Those components were mounted on a 240-pin printed circuit board. This 240-pin DIMM is used to be mounted into 240-pin edge connector sockets and data I/O transactions could be apply on both edges of DQS. The electrical and mechanical specifications are as follows:

Features

- VDD=1.5V +/- 0.075V
- VDDQ=1.5V +/- 0.075V
- VDDSPD=3.0V to 3.6V
- 8 internal banks
- Data transfer rates: PC3-12800, PC3-10600, PC3-8500
- Bi-directional Differential Data Strobe
- 8 bit pre-fetch
- Burst Length (BL) switch on-the-fly: BL 8 or BC (Burst Chop) 4
- Supports ECC error correction and detection
- On Die Termination (ODT) supported
- Temperature sensor with integrated SPD (Serial Presence Detect) EEPROM
- This product is in Compliance with the RoHS dire

Options

Operating temperature¹

– Commercial (0°C ≤TA ≤+70°C)

Frequency/CAS latency

– 1.25ns @ CL = 11 (DDR3-1600)

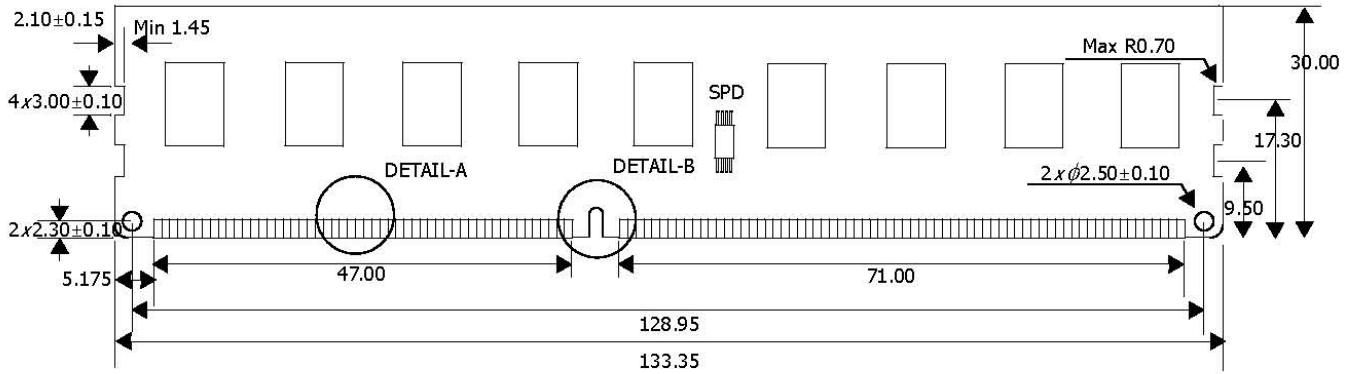
– 1.5ns @ CL = 9 (DDR3-1333)

– 1.87ns @ CL = 7 (DDR3-1066)

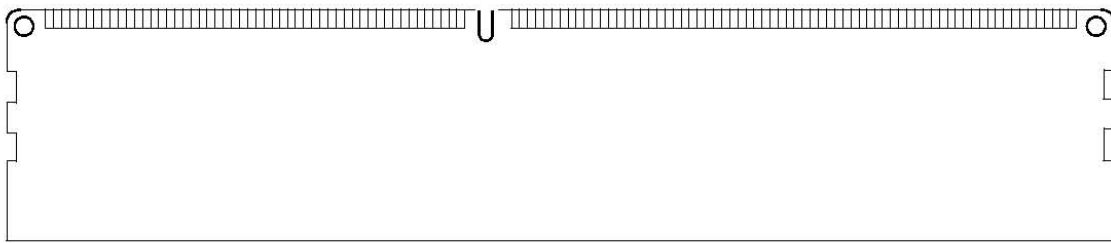
Industry Nomenclature	Data Rate (MT/s)					tRCD (ns)	tRP (ns)	tRC (ns)	Module Bandwidth	Memory Clock/ Data Rate	Clock Cycles (CL-tRCD-tRP)
	CL=11	CL=10	CL=9	CL=8	CL=7						
PC3-12800	1600	1333	1333	1066	1066	13.125	13.125	48.125	12.8GB/s	1.25ns/1600 MT/s	11-11-11
PC3-10600	–	1333	1333	1066	1066	13.125	13.125	49.125	10.6GB/s	1.5ns/1333 MT/s	9-9-9
PC3-8500	–	–	–	1066	1066	13.125	13.125	50.625	8.5GB/s	1.87ns/1066 MT/s	7-7-7

240-Pin DDR3 ECC DIMM

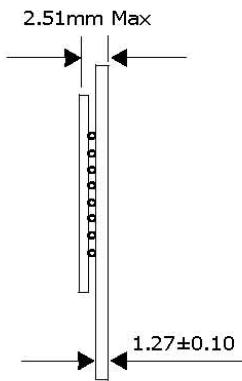
Front



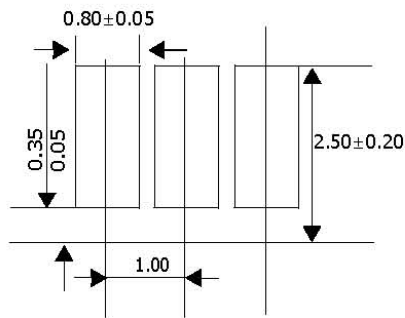
Back



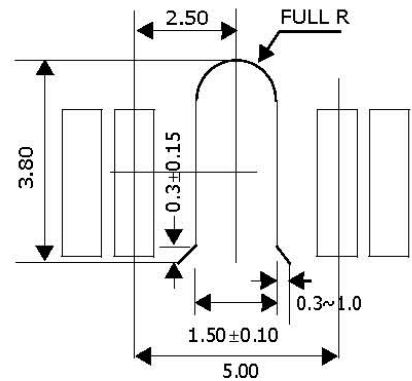
Side



Detail - A



Detail - B



Note:

1. ±0.13 tolerance on all dimensions unless otherwise stated.

Units: millimeters