APLUS TECHNOLOGY

# DDR400 UNBUFFERED SO-DIMM 1GB 64Mx8

## DESCRIPTION:

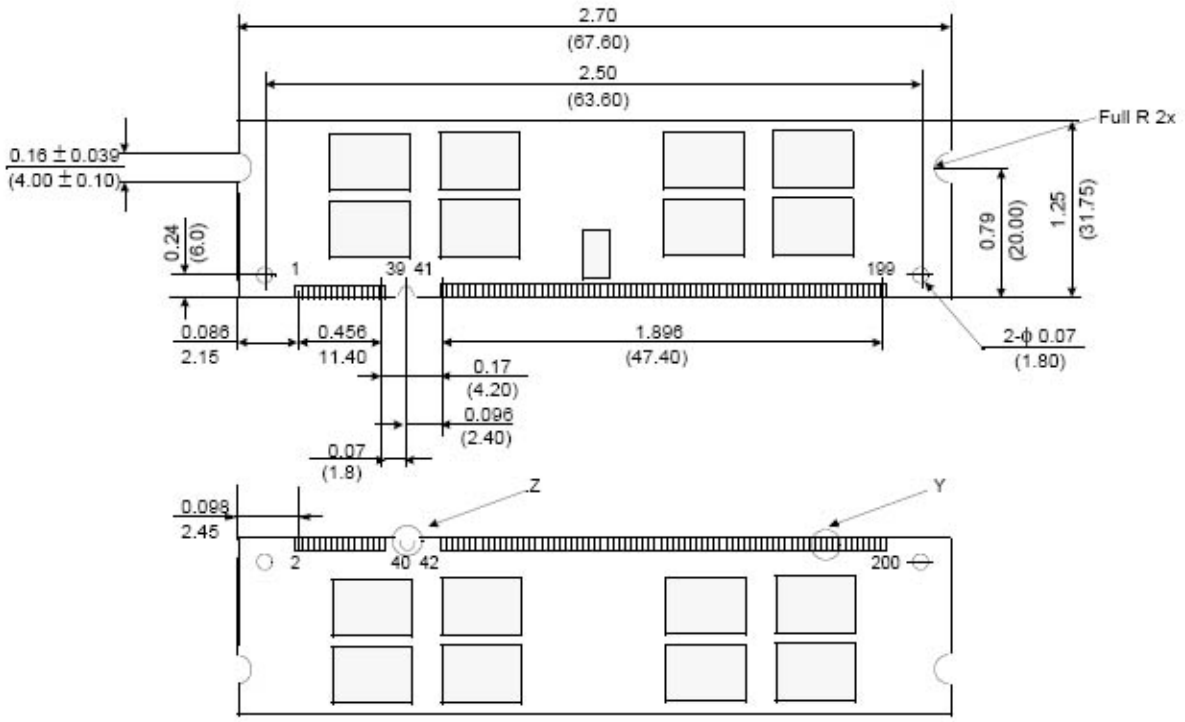
This document describes Aplus 128M x 64-bit 1GB DDR400 CL3 SDRAM (Synchronous DRAM) memory module The components on this module include sixteen 64M x 8-bit (4Banks) DDR400 SDRAM in FBGA packages. This 200-pin SO-DIMM uses gold contact fingers and requires +2.6V. The electrical and mechanical specifications are as follows:

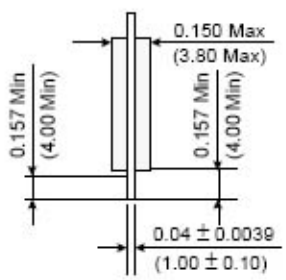
## FEATURES:

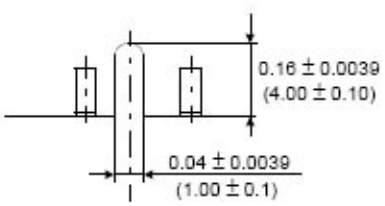
Power supply: Vdd: 2.6V ± 0.1V ,Vddq: 2.6V ± 0.1V
All inputs and outputs SSTL_2 compatible
Max clock Freq: 200Mhz
Double-data-rate architecture; two data transfers per clock cycle
Bidirectional data strobe (DQS)
Differential clock inputs (CK and CK)
DLL aligns DQ and DQS transition with CK transition
Programmable Read latency 3 (clock)
Programmable Burst length (2,4,8)
Programmable Burst type (sequential & interleave)
Timing Reference: CL-tRCD-tRP (3-3-3)
Edge aligned data output, center aligned data input
Auto & Self refresh, 7.8us refresh interval (8K/64ms refresh)
Serial presence detect with EEPROM

## PERFORMANCE:

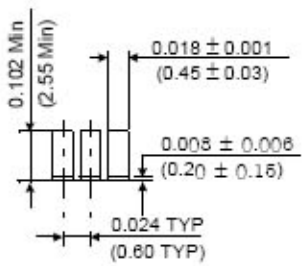
| | |
|---|---|
| Clock Cycle Time ( tCK ) | 5ns (min.) /10ns (max.) |
| Row Cycle Time ( tRC ) | 55ns (min.) |
| Refresh Row Cycle Time ( tRFC ) | 70ns (min.) |
| Row Active Time ( tRAS ) | 40ns (min.) /70,000ns (max.) |
| Power Dissipation | 16W |
| Operating Temperature | 0℃ to 70℃ |
| Storage Temperature | -55℃ to +150℃ |




Detail Z




Detail Y