

## DESCRIPTION:

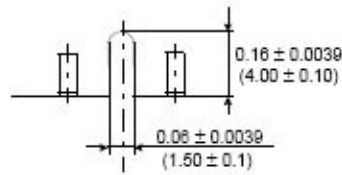
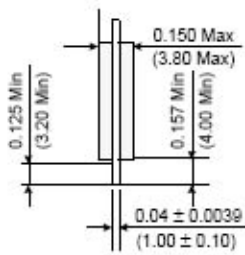
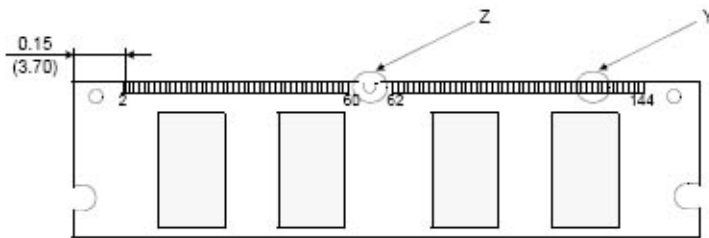
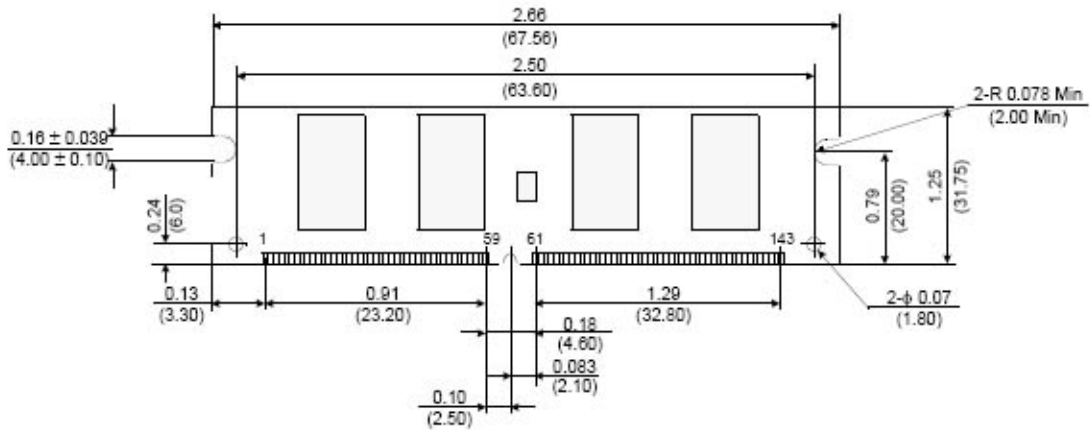
This document describes Aplus 16M x 64-bit 128MB PC133 CL3 SDRAM (Synchronous DRAM) memory module. The components on this module include eight 8M x 16-bit (4 Bank) PC133 SDRAM in TSOP packages. This 144-pin SO-DIMM uses gold contact fingers and requires +3.3V. The electrical and mechanical specifications are as follows:

## FEATURES:

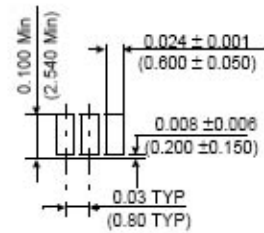
- Single 3.3V  $\pm$  0.3V power supply
- Burst mode operation
- Auto & self refresh capability
- LVTTTL compatible inputs and outputs
- MRS cycle with address key programs
- Latency (Access from column address)
- Burst length (1,2,4,8 & Full page)
- Data scramble (sequential & interleave)
- All inputs are sampled at the positive going edge of the system clock
- Timing Reference: CL-tRCD-tRP (3-3-3)
- Serial presence detect with EEPROM

## PERFORMANCE:

CLK cycle time ( tCC )	7.5ns (min.) /1000ns (max.)
CLK to output ( tSAC )	5.4ns
Row active time ( tRAS )	45ns (min.) /100ns (max.)
Row cycle time ( tRC )	65ns (min.)
Power Dissipation	8W
Operating Temperature	0°C to 70 °C
Storage Temperature	-55°C to +150 °C



Detail Z



Detail Y