

***RoHS Compliant***

**8GB DDR5 SDRAM SO-DIMM**

Halogen free

***Product Specifications***

April 13, 2023

Version 1.1



***Apacer Technology Inc.***

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## General Description

Apacer **D22.35491H.001** is a 8GB DDR5 SDRAM (Synchronous DRAM) SO-DIMM. This memory module consists of 4 pieces 1G x 16 bits DDR5 synchronous DRAMs in FBGA packages and 8K Bits EEPROM. The module is a 262-pins dual in-line memory module and is intended for mounting into a connector socket. The following provides general specifications of this module.

## Ordering Information

| Part Number    | Density | Speed     | Organization | DRAM Composition | Rank |
|----------------|---------|-----------|--------------|------------------|------|
| D22.35491H.001 | 8GB     | 5600 Mbps | 1Gx64        | 1Gx16 *4         | 1    |

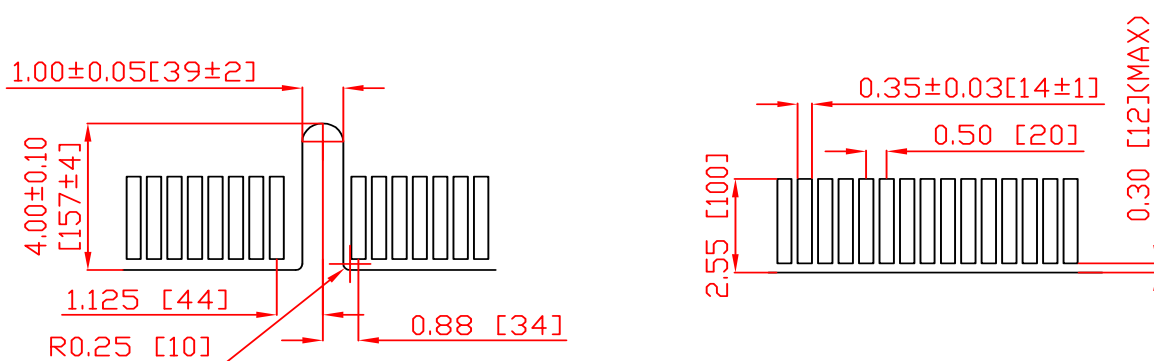
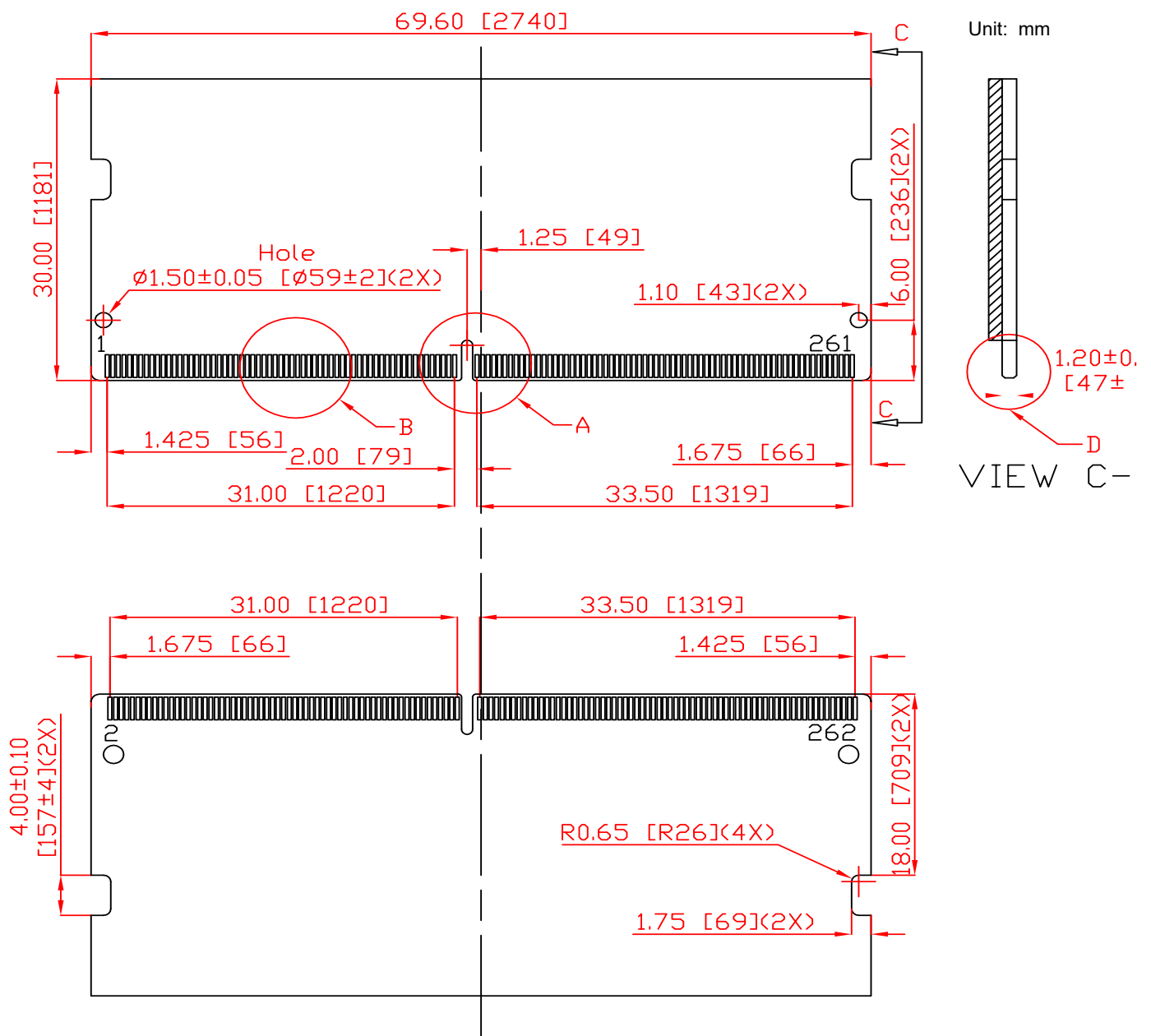
## Key Parameters

| Speed       | DDR5-4800 | DDR5-5600 | Unit |
|-------------|-----------|-----------|------|
|             | -CL40     | -CL46     |      |
| tCK (min)   | 0.416     | 0.357     | ns   |
| CAS latency | 40        | 46        | nCK  |
| tRCD (min)  | 16        | 16        | ns   |
| tRP (min)   | 16        | 16        | ns   |
| tRAS (min)  | 32        | 32        | ns   |
| tRC (min)   | 48        | 48        | ns   |
| CL-tRCD-tRP | 40-39-39  | 46-45-45  | nCK  |

## Features:

- ◆ JEDEC standard compliant
- ◆ On-DIMM thermal sensor : Yes
- ◆ PCB: height 30 mm, lead pitch 0.5 mm (pin),
- ◆ VDD = VDDQ= 1.1V (1.067V to 1.166V)
- ◆ VPP = 1.8V (1.746V to 1.908V) 、 VDDSPD = 1.8V
- ◆ 32 internal banks (x4, x8): 8 groups of 4 banks each
- ◆ 16 internal banks (x16): 4 groups of 4 banks each
- ◆ CAS Latency (CL): 22,26,28,30,32,36,40,42,46,48,50
- ◆ CAS Write Latency (CWL): RL-2
- ◆ Operating temperature Tcase—(0°C ~85°C )
- ◆ Average Refresh period 3.9us at lower than Tcase 85°C, 1.95us at 85°C < Tcase < 95 °C.
- ◆ All bank and same bank refresh
- ◆ Bi-Directional Differential Data Strobe
- ◆ 16-bit prefetch architecture
- ◆ On-die ECC
- ◆ ECC transparency and error scrub
- ◆ sPPR and hPPR capability
- ◆ Halogen free 、 Lead-free (RoHS compliant)

# Mechanical Drawing



Detail A

Detail B

(All dimensions are in millimeters with  $\pm 0.15$ mm tolerance unless specified otherwise.)

## Revision History

| Revision | Date      | Description                       | Remark |
|----------|-----------|-----------------------------------|--------|
| 1.0      | 4/12/2022 | Initial release                   |        |
| 1.1      | 11/4/2022 | Updated DIMM Voltage Requirements |        |

## Global Presence

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