Features
- Stack of eight 512Mbit SDRAM.
- Organized as 512Mx8-bit.
- Single +3.3V power supply.
- Fully synchronous; all signals registered on positive edge of system clock.
- Internal pipelined operation; column address can be changed every clock cycle.
- Programmable burst length: 1, 2, 4, 8 or full page.
- Auto precharge includes concurrent auto precharge, and auto refresh modes.
- Self refresh modes.
- LVTTL-compatible inputs and outputs
- Available Temperature Range:
  0°C to 70°C
  -40°C to +85°C
- Available with screening option for high reliability application (Space, etc…)

General Description

The 3DSD4G08VS8613 is a high-speed highly integrated Synchronous Dynamic Random Access Memory containing 4,294,967,296 bits.
It is organized with eight banks of 512 Mbit.
Each bank has an 8-bit interface and is selected with specific #CS and CKE.
It is particularly well suited for use in high reliability, high performance and high density system applications, such as solid state mass recorder, server or workstation.
The 3DSD4G08VS8613 is packaged in a 58 pin SOP.
Synchronous Dynamic Ram MODULE

Memory Module

SDRAM Memory Module

4Gbit SDRAM organized as 512Mx8, based on 64Mx8

Mechanical Drawing

DC operating conditions and characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage</td>
<td>VDD</td>
<td>3.0</td>
<td>3.6</td>
<td>V</td>
</tr>
<tr>
<td>Input Logic High Voltage</td>
<td>VIN</td>
<td>2.0</td>
<td>VDD+0.3</td>
<td>V</td>
</tr>
<tr>
<td>Input Logic Low Voltage</td>
<td>VIL</td>
<td>-0.3</td>
<td>0.8</td>
<td>V</td>
</tr>
<tr>
<td>Output Logic High Voltage</td>
<td>VOH</td>
<td>2.4</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Output Logic Low Voltage</td>
<td>VOL</td>
<td>-</td>
<td>0.4</td>
<td>V</td>
</tr>
</tbody>
</table>

Absolute maximum ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage on any pin relative to VSS</td>
<td>VIN, VOUT</td>
<td>-1.0 to VDD+0.5</td>
<td>V</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>TSTG</td>
<td>-65 to +125</td>
<td>°C</td>
</tr>
<tr>
<td>Power dissipation</td>
<td>PD</td>
<td>2</td>
<td>W</td>
</tr>
<tr>
<td>Short circuit current</td>
<td>ICSP</td>
<td>50</td>
<td>mA</td>
</tr>
</tbody>
</table>

DC Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Current (one bank active)</td>
<td>IOPS</td>
<td>168</td>
<td>mA</td>
</tr>
<tr>
<td>Precharge Standby Current in power-down mode</td>
<td>ICHOP</td>
<td>32</td>
<td>mA</td>
</tr>
</tbody>
</table>

3DSD4G08VS8613

Temperature Range

C = (0°C ~ +70°C)
I = (-40°C ~ +85°C)
M = (-55°C to +125°C)
S = Specific

Quality Level

N = Commercial Grade
B = Industrial Grade
S = Space Grade

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SDRAM Memory Module

3D Plus SA reserves the right to cancel product or specifications without notice

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