**MEMORY MODULE**
**EEPROM 128Kx40-SOP**

**EEPROM MODULE**

**3D EE5M40CS5175**

5Mbit EEPROM organized as 128Kx40, based on 128Kx8

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**Features**

- Organized as one bank of 128Kx40bit.
- Supply: 5V +/- 10%.
- Five decoupling capacitors (100nF) inside the Module.
- Access time 150ns (max).
- Power dissipation:
  - Active 100mW/MHz (typ).
  - Standby 0.5mW (max).
- On-chip latches: address, data, #CE, #OE, #WE.
- Automatic byte write: 10ms (max).
- Automatic page write (128 bytes): 10ms (max).
- Data polling and RDY / #Busy.
- Reliable CMOS with MNOS cell technology
- 10⁴ erase/write cycles (in page mode).
- 10 years data retention.
- Software data protection.
- Write protection by #RES pin.
- Available Temperature Range:
  - 0°C to +70°C
  - -40°C to +85°C
  - -55°C to +125°C
- Available with screening option for high reliability application (Space, etc...).

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**General description**

The 3D EE5M40CS5175 is a 131,072 words of 40-bits.
Electrically Erasable and Programmable CMOS ROM.
It is organized as one bank of 5Mbit (128Kx40).
Each bank has 40-bit interface and is selected with specific #CE.
All other signals are common to the five 1Mbit EEPRom.
Each Bank operates at high speed, low power consumption
and high reliability by employing advanced MNOS memory
technology and CMOS process and circuitry technology.
The device is manufactured using 3D PLUS well known MCM-V
patented technology.
It is particularly well suited for use in high reliability, high
performance and high density system applications.
The 3D EE5M40CS5175 is packaged in a 64 pins SOP.
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EEPROM 128Kx40-SOP

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Mechanical Drawing

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>VCC, VCCQ</td>
<td>4.5</td>
<td>5.0</td>
<td>5.5</td>
<td>V</td>
</tr>
<tr>
<td>Input logic high voltage</td>
<td>VIL</td>
<td>2.2</td>
<td>-</td>
<td>VCC+0.3</td>
<td>V</td>
</tr>
<tr>
<td>Input logic low voltage</td>
<td>VIL</td>
<td>-0.3</td>
<td>0</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>-</td>
<td>V</td>
</tr>
<tr>
<td>Output logic low voltage</td>
<td>VOL</td>
<td>-</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>V_i</td>
<td>-0.5 ~ +7.0</td>
<td>V</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>T_{STG}</td>
<td>-55 ~ +125</td>
<td>°C</td>
</tr>
<tr>
<td>Junction Temperature</td>
<td>T_J</td>
<td>150</td>
<td>°C</td>
</tr>
<tr>
<td>Thermoelectric Resistance, Junction-to-Case</td>
<td>R_T</td>
<td>5</td>
<td>°C/W</td>
</tr>
<tr>
<td>Package Power dissipation permitted</td>
<td>P_T</td>
<td>2</td>
<td>W</td>
</tr>
</tbody>
</table>

DC Operating conditions and characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Power Supply current</td>
<td>ICC3</td>
<td>75</td>
<td>mA</td>
</tr>
<tr>
<td>Standby Current (#CE0=Vil)</td>
<td>ICC2</td>
<td>5</td>
<td>mA</td>
</tr>
<tr>
<td>Standby Current (#CE0=VCC)</td>
<td>ICC1</td>
<td>100</td>
<td>μA</td>
</tr>
</tbody>
</table>

DC Characteristics (Max.)

3D EE5M40CS5175

Temperature Range

| C = | -55°C to + 125°C |
| I = | -40°C to + 85°C  |
| M = | 0°C to + 70°C    |

Quality Level

| N = | Commercial Grade |
| B = | Industrial Grade |
| S = | Space Grade      |
| C = | Custom           |

Part Number Marking

| 3D XX 000X 00 00 0000 | 0000 |

Date Code (YYWW)

Pin 1 Indicator

Serial Number Optional

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