MEMORY MODULE
EEPROM 256Kx32-SOP

EEPROM MODULE

3D EE8M32CS8163
8Mbit EEPROM organized as 256Kx32, based on 128Kx8

Features

- Organized as two banks of 128Kx32bit.
- Single supply : 5.0 V +/- 10%
- Eight decoupling capacitors (100nF) inside the Module.
- Access time 150ns (max).
- Power dissipation :
  - Active 80mW/MHz (typ).
  - Standby 1mW (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
- 10^6 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...).

General description

The 3D EE8M32CS8163 is a 262,144 words of 32-bits.
Electrically Erasable and Programmable CMOS ROM.
It is organized as two banks of 4Mbit (128Kx32).
Each bank has 32-bit interface and is selected with specific #CE.
All other signals are common to the eight 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 EE8M32CS8163 is packaged in a 64 pins SOP.
MEMORY MODULE
EEPROM 256Kx32-SOP

EEPROM
MODULE

3D EE8M32CS8163
8Mbit EEPROM organized as 256Kx32, based on 128Kx8

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>-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>

<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 T</td>
<td>0.5 ~ 7.0</td>
<td>V</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>TSTG</td>
<td>-55 ~ +125</td>
<td>°C</td>
</tr>
<tr>
<td>Junction Temperature</td>
<td>TJ</td>
<td>150</td>
<td>°C</td>
</tr>
<tr>
<td>Thermale Resistance, Junction-to-Case</td>
<td>rJC</td>
<td>5</td>
<td>°C/W</td>
</tr>
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</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 current (One bank active)</td>
<td>ICCOP</td>
<td>60</td>
<td>mA</td>
</tr>
<tr>
<td>TTL Standby Current</td>
<td>ISB</td>
<td>18</td>
<td>mA</td>
</tr>
<tr>
<td>CMOS Standby Current</td>
<td>ISB1</td>
<td>160</td>
<td>μA</td>
</tr>
</tbody>
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Test Tools

3D EE8M32CS8163
ENPLAS OTQ 128-0.5
Modifier by 3D PLUS

Absolute maximum ratings

DC Characteristics @ 1MHz

3D EE8M32CS8163

Temperature Range
C = (0°C to + 70°C)
I = (-40°C to + 85°C)
M = (-50°C to + 125°C)
S = Specific
N = Commercial Grade
B = Industrial Grade
S = Space Grade
C = Custom

MAIN SALES OFFICE

<table>
<thead>
<tr>
<th>Country</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Web</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRANCE</td>
<td>3D PLUS 408, rue Hélène Boucher Z.I. 78932 BUC Cedex</td>
<td>Tél : 33 (0)1 30 83 26 50</td>
<td>Fax : 33 (0)1 39 56 25 89</td>
<td>Web : <a href="http://www.3d-plus.com">www.3d-plus.com</a></td>
<td>e-mail : <a href="mailto:sales@3d-plus.com">sales@3d-plus.com</a></td>
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<td>3D PLUS USA, Inc 6633 Eldorado Parkway Suite 420 McKinney, TX 75070</td>
<td>Tél : (214) 733-8505</td>
<td>Fax : (214) 733-8506</td>
<td></td>
<td>e-mail : <a href="mailto:sales@3d-plus.com">sales@3d-plus.com</a></td>
</tr>
</tbody>
</table>

MODULE MARKING

3D Plus Logo
Data Code (YYWW)
Serial Number Optional

PRELIMINARY / MME3250808SCYD
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