Introduction

Micron uses various marks and labels on our products and packaging. The first section of this customer service note describes the product marks and labels we place on our devices. The second section describes the labels used on and in our packaging.
# Table of Contents

Introduction .................................................................................................................................................. 1
Table of Contents ......................................................................................................................................... 2
List of Figures ............................................................................................................................................... 3
List of Tables .................................................................................................................................................. 4
Product Marks and Labels .............................................................................................................................. 5
  Component Mark Information .......................................................................................................................... 5
  Abbreviated Component Mark Information .................................................................................................... 6
  Module Label Data and Examples .................................................................................................................. 8
  Process Codes .............................................................................................................................................. 12
SSD Label Information ..................................................................................................................................... 15
SD and microSD Label Information ................................................................................................................ 21
Micron Packaging Labels ............................................................................................................................... 25
  Master Container Labels ................................................................................................................................ 25
  Bar Code Information .................................................................................................................................... 25
Individual Packaging Labels ............................................................................................................................ 26
Revision History ............................................................................................................................................. 29
List of Figures

Figure 1: TSOP Component Mark ................................................................. 6
Figure 2: SOP2/W-PDFN/BGA/LGA Abbreviated Component Mark ....................... 7
Figure 3: Legacy BGA Component with Elpida Part Mark .................................... 7
Figure 4: DDR5 LRDIMM, RDIMM, UDIMM and SODIMM DRAM Module Label Content ........ 8
Figure 5: DDR4/DDR3 LRDIMM, RDIMM, UDIMM and SODIMM DRAM Module Label Content ... 9
Figure 6: DDR4/DDR3 NVDIMM Additional Label Content .................................. 10
Figure 7: DDR4/DDR3 ECC UDIMM/SODIMM Label Example ........................... 10
Figure 8: SSD MID Label .............................................................................. 15
Figure 9: Micron Standard SATA/NVMe 2.5/U.x SSD Label Structures ...................... 18
Figure 10: Micron Standard SATA/NVMe M.2 SSD Label Structures ...................... 19
Figure 11: Micron Standard NVMe E1.x SSD Label Structures .............................. 20
Figure 12: MID/CERT Label Structure .......................................................... 20
Figure 13: Embedded USB Label Structure ...................................................... 20
Figure 14: Micron SD Label Structure ................................................................ 21
Figure 15: Micron microSD Label Structure ...................................................... 22
Figure 16: Micron SD Backside Markings .......................................................... 23
Figure 17: Micron microSD Backside Markings ................................................... 24
Figure 18: Standard Master Container Shipping Label .......................................... 25
Figure 19: Standard Master Container Bar Code Label ....................................... 26
Figure 20: Standard Bar Code Label ............................................................... 27
Figure 21: Micron’s Inner Packing Container Label .............................................. 27
Figure 22: Micron’s Inner Packing Container Label for Modules and SSDs .............. 27
Figure 23: Micron’s Moisture Sensitivity (MST) Label ........................................ 28
Figure 24: Labeling on Moisture-Barrier and Static-Shielding Bags .......................... 28
### List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>DDR3 Process Code Options</td>
<td>12</td>
</tr>
<tr>
<td>Table 2</td>
<td>DDR4 RDIMM, NVDIMM(^1) Process Code Options</td>
<td>12</td>
</tr>
<tr>
<td>Table 3</td>
<td>DDR4 LRDIMM Process Code Options</td>
<td>13</td>
</tr>
<tr>
<td>Table 4</td>
<td>DDR4 NVDIMM Process Code Third Character Options</td>
<td>13</td>
</tr>
<tr>
<td>Table 5</td>
<td>DDR5 Process Code Options</td>
<td>14</td>
</tr>
<tr>
<td>Table 6</td>
<td>Module Manufacturing Locations</td>
<td>14</td>
</tr>
<tr>
<td>Table 7</td>
<td>SSD Label Mark Definitions</td>
<td>15</td>
</tr>
</tbody>
</table>
Product Marks and Labels

Most of Micron’s component products use one of two product mark variations to accommodate smaller components and different package sizes (for example, FBGA and CSP). Both product marks are right- and left-justified and have a character height of 0.040–0.050 inches depending on package size. Both marks also include a unique, laser-inscribed identification number on the top side of the part for traceability purposes.

Legacy component products with Elpida part marks use the same part marks used prior to Micron’s acquisition of Elpida. Further information may be found in our product guides and on Micron’s Web site: www.micron.com/numbering.

Component Mark Information

Most component marks contain the following details (see Figure 1 on page 6):

- Date code (year and workweek)
- Special mark characters
- Country of diffusion (see below for country codes)
- Country of encapsulation (see below for country codes)
- Micron® mark or logo
- Product family
- Process technology
- Device number
- Device versions
- Package type
- Speed
- Special test option (if relevant)
- Die revision
- Scribe

For more information on product-specific designators, see the part numbering guides on Micron’s Web site: www.micron.com/numbering.

Codes for the countries of diffusion and encapsulation:

<table>
<thead>
<tr>
<th>Code</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>USA</td>
</tr>
<tr>
<td>2</td>
<td>Singapore</td>
</tr>
<tr>
<td>3</td>
<td>Italy</td>
</tr>
<tr>
<td>4</td>
<td>Japan</td>
</tr>
<tr>
<td>5</td>
<td>China</td>
</tr>
<tr>
<td>6</td>
<td>Japan</td>
</tr>
<tr>
<td>7</td>
<td>Taiwan</td>
</tr>
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<td>8</td>
<td>Korea</td>
</tr>
<tr>
<td>9</td>
<td>Mixed</td>
</tr>
<tr>
<td>B</td>
<td>Israel</td>
</tr>
<tr>
<td>C</td>
<td>Ireland</td>
</tr>
<tr>
<td>D</td>
<td>Malaysia</td>
</tr>
<tr>
<td>F</td>
<td>Philippines</td>
</tr>
</tbody>
</table>
Abbreviated Component Mark Information

Due to space limitations, FBGA-package component marks contain abbreviated details for two distinct types of information (see Figure 2 on page 7). The top row of the component mark contains the flooring details that are unrelated to product type:

- Date code (see below)
- Die revision
- Country of diffusion (see below for country codes)
- Country of encapsulation (see below for country codes)

Date codes are alphanumeric characters that indicate the year and workweek the parts were marked, in even-numbered workweeks. The first character is the last number in the year, and the second (alpha) character is the workweek.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>E</td>
<td>F</td>
<td>G</td>
<td>H</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>I</td>
<td>J</td>
<td>K</td>
<td>L</td>
</tr>
<tr>
<td>18</td>
<td>20</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>M</td>
<td>N</td>
<td>O</td>
<td>P</td>
</tr>
<tr>
<td>26</td>
<td>28</td>
<td>30</td>
<td>32</td>
</tr>
<tr>
<td>Q</td>
<td>R</td>
<td>S</td>
<td>T</td>
</tr>
<tr>
<td>34</td>
<td>36</td>
<td>38</td>
<td>40</td>
</tr>
<tr>
<td>U</td>
<td>V</td>
<td>W</td>
<td>X</td>
</tr>
<tr>
<td>42</td>
<td>44</td>
<td>46</td>
<td>48</td>
</tr>
<tr>
<td>Y</td>
<td>Z</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Codes for the countries of diffusion and encapsulation:

<table>
<thead>
<tr>
<th>1 = USA</th>
<th>2 = Singapore</th>
<th>3 = Italy</th>
<th>4 = Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 = China</td>
<td>7 = Taiwan</td>
<td>8 = Korea</td>
<td>9 = Mixed</td>
</tr>
<tr>
<td>B = Israel</td>
<td>C = Ireland</td>
<td>D = Malaysia</td>
<td>F = Philippines</td>
</tr>
</tbody>
</table>

The middle and bottom rows of the component mark contain product-specific details such as:

- Micron logo/ball 1 designator
- Coded part number
- Product family
- Special mark characters
More information on product-specific designators is provided in Micron’s various part numbering guides, which are available on Micron’s Web site at www.micron.com/numbering. Information on the corresponding part numbers for part mark codes is available from the FBGA Part Marking Decoder at www.micron.com/decoder.

Figure 2: SOP2/W-PDFN/BGA/LGA Abbreviated Component Mark

Notes:
1. If the "MT" and "dot" are both present, ball 1 or lead 1 are identified by the "dot."
2. For BGA packages, the scribe and ball 1 or lead 1 indicator may swap positions if the package is wider than its length. The scribe and ball 1 or lead 1 indicator will always be marked along the short side of the component.

Figure 3: Legacy BGA Component with Elpida Part Mark
Module Label Data and Examples

Labels used for module production have standard requirements for each line printed on the label, but can vary by type (see Figure 4 through Figures 7). Micron’s module label content and format conform to JEDEC label specifications.

Figure 4: DDR5 LRDIMM, RDIMM, UDIMM and SODIMM DRAM Module Label Content

Key note definitions:
1. Code 128 subset B bar code (per ISO/IEC 15417:2007) of Micron part number/date-code (YW W) with a space separator between the data. Example:
   – MTC120F41616CSZALB48BA1 126
2. 2D barcode (see JEDEC DDR5 DIMM Label Specification)
   – (L)technical details(S)serial number(P)part number(c)process code
3. Micron DRAM module marketing part number
   3a. For more information about module part numbering, see Module Part Numbering Systems on micron.com
4. DRAM technology
5. JEDEC technical details (see JEDEC DDR5 DIMM Label Specification):
   5a. Module capacity, ranks, and number of data lines per DRAM device (256GB 2S16Rx16 shown)
   5b. DRAM technology (PC5 shown)
   5c. Module speed bin (5200C shown)
   5d. Module type, reference raw card and revision (RAB0 shown)
   5e. JEDEC SPD revision (1010 shown)
   5f. Temperature grade (XT shown)
6. JEDEC serial number (see JEDEC DDR5 DIMM Label Specification)
   6a. Micron’s JEDEC manufacturer code, 802C (constant on all modules)
   6b. Manufacturing location (two characters, variable—see Table 6)
   6c. Date code (four characters: YYWW)
   6d. Module serial number (eight characters, unique to each module)
7. Module build lot ID
8. Micron logo
9. The UK Regulatory Requirement mark (may or may not be present on a particular module label)
10. The European Regulatory Requirement mark (may or may not be present on a particular module label)
11. Module assembly country of origin; Micron uses:
   – “Made in Taiwan” for Taiwan origin product
   – “Assembled in USA” for US origin product
   – “Product of xxx” for products of other origins
12. Module DIMM type
13. A process code is printed after the last character of module part numbers (ABCDEF shown; see Table 5). This additional information provided is not part of the module part number.

**Figure 5:** DDR4/DDR3 LRDIMM, RDIMM, UDIMM and SODIMM DRAM Module Label Content

Key note definitions:
1. Code 128 subset B bar code (per ISO/IEC 15417:2007) of Micron part number/date code (YWW) with a space separator between the data. Example: MTA18ASF1G72PDZ-2G6B1QG 126
2. Micron DRAM module marketing part number
   2a. For more information about module part numbering, see Module Part Numbering Systems on micron.com (see also number 8 below)
3. Micron logo
4. Module build lot ID
5. Module assembly country of origin; Micron uses:
   – “Made in Taiwan” for Taiwan origin product
   – “Assembled in USA” for US origin product
   – “Product of xxxx” for products of other origins
6. Module date code, four characters (YYWW)
7. DDR4 JEDEC label text (see JEDEC document Module 4.20.28)
   7a. Module capacity, ranks, and number of data lines per DRAM device (8GB 2RX8 shown)
   7b. DRAM technology (PC4 shown)
   7c. Module speed bin (2666V shown)
   7d. Module type, reference raw card and revision (REB shown)
   7e. JEDEC SPD revision (11 shown)
8. A process code is printed after the last character of RDIMM, LRDIMM, NVDIMM, and ECC UDIMM/SODIMM module part numbers (QG shown; see Tables 1–3). This additional information is not part of the module part number.
   8a. The process code for ECC UDIMM and SODIMM labels differ slightly as shown in Figure 7. Labels on UDIMMs and SODIMMs without ECC do not have a process code appended to the part number.
9. The UK Regulatory Requirement mark (may or may not be present on a particular module label)
10. 2D barcode – Encoded data string (per ISO/IEC 15426-2:2005)
   10a. Data identifier, S (constant on all modules)
   10b. Micron’s JEDEC manufacturer code, 802C (constant on all modules)
   10c. Manufacturing location, two characters, variable (see Table 6)
   10d. Datecode, four characters (YYWW)
10e. Module serial number, eight characters, unique to each module
11. The European Regulatory Requirement mark (may or may not be present on a particular module label)

Figure 6: DDR4/DDR3 NVDIMM Additional Label Content

Micron’s NVDIMM label has content not included on the standard label. This additional content is described below.

Key note definitions:
1. The process code on the NVDIMM label includes a third character (E shown) that identifies the multiplexer (MUX) vendor and device ID (See Table 4)
2. JEDEC hybrid memory module type; function designators:
   N = Persistent
   F = Block
   P = Combined
3. 2D barcode and human-readable text – Encoded data string (per ISO/IEC 15426-2:2005)
   3a. Data identifier, S (constant on all modules), applies only to barcode area
   3b. Micron’s JEDEC manufacturer code, 802C (constant on all modules)
   3c. Manufacturing location, two characters, variable (see Table 6)
   3d. Datecode, four characters (YYWW)
   3e. Module serial number, eight characters, unique to each module
4. Firmware revision

Figure 7: DDR4/DDR3 ECC UDIMM/SODIMM Label Example

Key note definitions:
1. Code 128 subset B bar code (per ISO/IEC 15417:2007) of Micron part number/date code (YYWW) with a space separator between the data
2. Micron DRAM module marketing part number
   2a. For more information about module part numbering, see Module Part Numbering Systems on micron.com (see also number 8 below)
3. Micron logo
4. Module date code, four characters (YYWW)
5. Module assembly country of origin; Micron uses:
CSN-11: Product Marks/Product and Packaging Labels
Product Marks and Labels

- "Made in Taiwan" for Taiwan origin product
- "Assembled in USA" for US origin product
- "Product of xxxx" for products of other origins

6. Module build lot ID
7. DDR3 JEDEC label text (See JEDEC Doc. Module 4.20.20)
   7a. Module capacity (8GB shown)
   7b. Module ranks and number of data lines per DRAM device (2RX8 shown)
   7c. DRAM technology and supply voltage (V_{DD}; PC3L shown)
   7d. Module speed bin (12800 shown)
   7e. Module type (E shown)
   7f. CAS Latency, in clocks (11 shown)
   7g. JEDEC SPD revision (13 shown)
   7h. Reference raw card and revision (E3 shown)

8. A two-character process code is printed after the last character of the module part numbers (QG shown; see Tables 1-3). This additional information provided is not part of the module part number
   8a. The first character of the process code, Z, is a place holder that means there is no register on the module
   8b. The second character, G in this case, identifies the temperature sensor manufacturer and device version

9. The UK Regulatory Requirement mark (may or may not be present on a particular module label)
10. 2D barcode – Encoded data string (per ISO/IEC 15426-2:2005)
    10a. Data identifier, S (constant on all modules)
    10b. Micron’s JEDEC manufacturer code, 802C (constant on all modules)
    10c. Manufacturing location, two characters, variable (see Table 6)
    10d. Datecode, four characters (YYWW)
    10e. Module serial number, eight characters, unique to each module

11. The European Regulatory Requirement mark (may or may not be present on a particular module label)

Non-ECC UDIMM and SODIMM module labels do not have a process code ID printed on the label.
Process Codes

The following tables provide the process code options for DDR3 register, DDR4 register clock driver (RCD) and MUX, DDR5 RCD, PMIC, HUB, and temperature sensor/EEPROM devices.

### Table 1: DDR3 Process Code Options

<table>
<thead>
<tr>
<th>Register Vendor</th>
<th>Register Vendor ID (First Character)</th>
<th>Register Vendor Part Number</th>
<th>Temp Sensor/EEPROM Vendor ID (Second Character)</th>
<th>Temp Sensor/EEPROM Vendor Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDT</td>
<td>D</td>
<td>SSTE32B82HLBAKG8</td>
<td>E</td>
<td>STTS2002B2DN3F</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>SSTE32B82KA1AKG8</td>
<td>F</td>
<td>MCP98243T-BE/MNYAA</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SSTE32B82KB1AKG8</td>
<td>G</td>
<td>SE97BTP-547</td>
</tr>
<tr>
<td>Inphi</td>
<td>A</td>
<td>INSSSTE32B82LV-GS02</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>INSSSTE32B82UV-GS02</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>K</td>
<td>INSSSTE32B82XV-GS02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montage</td>
<td>N</td>
<td>M88SSTE32B82H0-T</td>
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<td></td>
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<tr>
<td>TI</td>
<td>B</td>
<td>SN74SSQEA32B82ZALR</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>G</td>
<td>SN74SSQEB32B82ZALR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>SN74SSQEC32B82ZALR</td>
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<td></td>
</tr>
<tr>
<td>None</td>
<td>Z</td>
<td>–</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 2: DDR4 RDIMM, NVDIMM¹ Process Code Options

<table>
<thead>
<tr>
<th>RCD Vendor</th>
<th>RCD Vendor ID (First Character)</th>
<th>RCD Vendor Part Number</th>
<th>Temp Sensor/EEPROM Vendor ID (Second Character)</th>
<th>Temp Sensor/EEPROM Vendor Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDT</td>
<td>I</td>
<td>4RCD0124KC0ATG</td>
<td>IDT</td>
<td>TSE2004GB2B0NCG8</td>
</tr>
<tr>
<td></td>
<td>S</td>
<td>4RCD0229KB1ATG8</td>
<td>ST Micro</td>
<td>STTS2004B2DN3F</td>
</tr>
<tr>
<td></td>
<td>V</td>
<td>4RCD0232KC1ATG8</td>
<td>Microchip</td>
<td>MCP98244T-BE/MNY</td>
</tr>
<tr>
<td>Inphi</td>
<td>K</td>
<td>IDDR4RCD-GS02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rambus</td>
<td>A (NVDIMM)</td>
<td>IDDR4NVRC2D-GS02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montage</td>
<td>H</td>
<td>M88DDR4RCD01B1-T</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>M88DDR4RCD01C0-T</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q</td>
<td>M88DDR4RCD02A0-T</td>
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<td></td>
<td>T</td>
<td>M88DR4RCD02PH1</td>
<td></td>
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<td>TI</td>
<td>J</td>
<td>CAB4AZNRR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>Z</td>
<td>–</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. DDR4 NVDIMMs’ process code includes a third character that identifies the multiplexer (MUX) vendor and device version (see Table 4).
### Table 3: DDR4 LRDIMM Process Code Options

<table>
<thead>
<tr>
<th>RCD/Data Buffer Vendor</th>
<th>RCD/Data Buffer Vendor ID (First Character)</th>
<th>RCD Vendor Part Number</th>
<th>Temp Sensor/EEPROM Vendor</th>
<th>Temp Sensor/EEPROM Vendor ID (Second Character)</th>
<th>Temp Sensor/EEPROM Vendor Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDT</td>
<td>I</td>
<td>4RCD0124KC0ATG 4DB0124KB1AVG53</td>
<td>IDT</td>
<td>G</td>
<td>TSE2004GB2B0NCG8</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>4RCD0124KC0ATG 4DB0226KA3AVG</td>
<td>ST Micro</td>
<td>I</td>
<td>STTS2004B2DN3F</td>
</tr>
<tr>
<td></td>
<td>S</td>
<td>4RCD0229KB1ATG8 4DB0226KB0AVG8</td>
<td>Microchip</td>
<td>K</td>
<td>MCP98244T-BE/MNY</td>
</tr>
<tr>
<td></td>
<td>V</td>
<td>4RCD0232KC1ATG8 4DB0232KC2AVG8</td>
<td>Renasas</td>
<td>L</td>
<td>TSE2004GB2C0NCG8</td>
</tr>
<tr>
<td>Montage</td>
<td>H</td>
<td>M88DDR4RCD01B1-T M88DDR4DB01A1-T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>M88DDR4RCD01C0-T M88DDR4DB01B0-T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q</td>
<td>M88DDR4RCD02A0-T M88DDR4DB02A1-T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>M88DR4RCD02PH1 M88DR4DB02PH2-T</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>None</td>
<td>Z</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 4: DDR4 NVDIMM Process Code Third Character Options

<table>
<thead>
<tr>
<th>MUX Vendor</th>
<th>Process Code Character</th>
<th>Vendor Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>TI</td>
<td>D</td>
<td>TS3DDR4000ZBAR</td>
</tr>
<tr>
<td>NXP</td>
<td>E</td>
<td>CBTV24DD12</td>
</tr>
</tbody>
</table>
Table 5: DDR5 Process Code Options

<table>
<thead>
<tr>
<th>Position (SODIMM/UDIMM)</th>
<th>Position (RDIMM)</th>
<th>Code</th>
<th>Part Type</th>
<th>Vendor</th>
<th>Vendor Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>N/A</td>
<td>B</td>
<td>Client PMIC</td>
<td>Renesas</td>
<td>P8911-Y02001FNG</td>
</tr>
<tr>
<td>1st</td>
<td>N/A</td>
<td>C</td>
<td>Client PMIC</td>
<td>MPS</td>
<td>MP5431GLT-0010-Z</td>
</tr>
<tr>
<td>1st</td>
<td>N/A</td>
<td>J</td>
<td>Client PMIC</td>
<td>Richtek</td>
<td>RTQ5132GQWF-310</td>
</tr>
<tr>
<td>1st</td>
<td>N/A</td>
<td>K</td>
<td>Client PMIC</td>
<td>MPS</td>
<td>MP5431GLT-0012-Z</td>
</tr>
<tr>
<td>N/A</td>
<td>1st</td>
<td>F</td>
<td>Server PMIC</td>
<td>Renesas</td>
<td>P8900-X02001FNG</td>
</tr>
<tr>
<td>N/A</td>
<td>1st</td>
<td>G</td>
<td>Server PMIC</td>
<td>MPS</td>
<td>MPQ8895GU-0010-Z</td>
</tr>
<tr>
<td>N/A</td>
<td>1st</td>
<td>H</td>
<td>Server PMIC</td>
<td>MPS</td>
<td>MPQ8894GU-0010-Z</td>
</tr>
<tr>
<td>N/A</td>
<td>1st</td>
<td>I</td>
<td>Server PMIC</td>
<td>TI</td>
<td>TPS53830RWZR</td>
</tr>
<tr>
<td>N/A</td>
<td>1st</td>
<td>J</td>
<td>Server PMIC</td>
<td>TI</td>
<td>TPS53832RWZR</td>
</tr>
<tr>
<td>N/A</td>
<td>1st</td>
<td>M</td>
<td>Server PMIC</td>
<td>MPS</td>
<td>MPQ8895GU-0011-Z</td>
</tr>
<tr>
<td>N/A</td>
<td>1st</td>
<td>N</td>
<td>Server PMIC</td>
<td>MPS</td>
<td>MPQ8894GU-0011-Z</td>
</tr>
<tr>
<td>N/A</td>
<td>1st</td>
<td>P</td>
<td>Server PMIC</td>
<td>Richtek</td>
<td>RTQ5119AGQVF-71</td>
</tr>
<tr>
<td>N/A</td>
<td>2nd</td>
<td>G</td>
<td>RCD</td>
<td>Renesas</td>
<td>5RCD0148HC3AVG</td>
</tr>
<tr>
<td>N/A</td>
<td>2nd</td>
<td>H</td>
<td>RCD</td>
<td>Rambus</td>
<td>DDR5RCD1-G1EX</td>
</tr>
<tr>
<td>N/A</td>
<td>2nd</td>
<td>I</td>
<td>RCD</td>
<td>Montage</td>
<td>M88DR5RCD01B2</td>
</tr>
<tr>
<td>N/A</td>
<td>2nd</td>
<td>M</td>
<td>RCD</td>
<td>Montage</td>
<td>M88DR5RCD02A1-T</td>
</tr>
<tr>
<td>2nd</td>
<td>3rd</td>
<td>C</td>
<td>HUB</td>
<td>Renesas</td>
<td>SPD5118-Y18000NCG</td>
</tr>
<tr>
<td>2nd</td>
<td>3rd</td>
<td>F</td>
<td>HUB</td>
<td>Montage</td>
<td>M88SPD5118A5-T</td>
</tr>
<tr>
<td>N/A</td>
<td>4th</td>
<td>F</td>
<td>TempSensor</td>
<td>Montage</td>
<td>M88TS5110AA-T</td>
</tr>
<tr>
<td>N/A</td>
<td>4th</td>
<td>C</td>
<td>TempSensor</td>
<td>Renesas</td>
<td>TS5111-Z2AHRI</td>
</tr>
</tbody>
</table>

Table 6: Module Manufacturing Locations

<table>
<thead>
<tr>
<th>Location</th>
<th>ID Number</th>
<th>Hexadecimal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIG (USA)</td>
<td>1</td>
<td>0x01</td>
</tr>
<tr>
<td>MTB (Taiwan)</td>
<td>2</td>
<td>0x02</td>
</tr>
<tr>
<td>MNG (Malaysia)</td>
<td>5</td>
<td>0x05</td>
</tr>
<tr>
<td>MMP (Malaysia)</td>
<td>6</td>
<td>0x06</td>
</tr>
<tr>
<td>SING (Singapore)</td>
<td>8</td>
<td>0x08</td>
</tr>
<tr>
<td>MXA (China)</td>
<td>15</td>
<td>0x0F</td>
</tr>
<tr>
<td>TSMT (Taiwan)</td>
<td>37</td>
<td>0x25</td>
</tr>
<tr>
<td>Hotayi (Malaysia)</td>
<td>26</td>
<td>0x1A</td>
</tr>
</tbody>
</table>
SSD Label Information

Figures 8 through 13 show representative label structures for our SSD products. The table below provides the details of each particular item found on the various labels. Not all items are present on all labels.

Micron has added a manufacturing identification (MID) label to all SSD products. This 2D barcode label is for Micron internal use only.

Figure 8: SSD MID Label

Table 7: SSD Label Mark Definitions

<table>
<thead>
<tr>
<th>Mark or Text Example</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micron logo</td>
<td>Micron logo</td>
</tr>
<tr>
<td>XXXX U.X</td>
<td>Market segment, form factor, product and FIPS security (if applicable) Example: 1100 2.5 SSD FIPS 140-2 L2</td>
</tr>
<tr>
<td>XV X.XA</td>
<td>The device’s voltage level with its related amperes at normal operation (defined by Micron QRA)</td>
</tr>
<tr>
<td>F/W: XXXXXXXX</td>
<td>Drive firmware revision number</td>
</tr>
<tr>
<td>Data matrix (2D) barcode containing the PSID (if applicable for a security feature enabled drive) or the drive serial number, drive part number and PSID</td>
<td></td>
</tr>
<tr>
<td>FCC</td>
<td>Reserved for the official USA Federal Communications Commission (FCC) mark</td>
</tr>
<tr>
<td>Reserved for the official China Restriction of Hazardous Substances mark This device must meet the standards of China RoHS to enable the 20 year indication of the RoHS mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official Japan VCCI mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official mark based on the drive interface (SATA, NVMe, and so on)</td>
<td></td>
</tr>
</tbody>
</table>
### SSD Label Mark Definitions

<table>
<thead>
<tr>
<th>Mark or Text Example</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved for the official Ukraine mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official Taiwan Bureau of Standards Metrology and Inspection (BSMI) mark. In addition, the certification number assigned to this Micron product shall be listed below the mark in a legible font.</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official European Regulatory Requirement mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official Industry of Canada certification number</td>
<td></td>
</tr>
<tr>
<td>Reserved for official UK Regulatory Requirement mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official RCM (Australian) mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official European Waste Electrical and Electronics Equipment (WEEE) mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official TÜV mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official Underwriters Laboratories (UL) mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official Morocco mark</td>
<td></td>
</tr>
<tr>
<td>Reserved for the official Korean Certification (KC) mark In addition, the certification number assigned to this Micron product shall be listed near the mark in a legible font Example: MSIP-REM-MU2-MTFDDAKXXXXX or R-R-MU2-MTFDXXXXXXXXX</td>
<td></td>
</tr>
<tr>
<td>Warning Hot Surface symbol</td>
<td></td>
</tr>
<tr>
<td>PSID: XXXXXXXX-XXXX-XXXX-XXXX-XXXX-XXXXX</td>
<td>PSID alphanumeric code</td>
</tr>
</tbody>
</table>
Table 7: SSD Label Mark Definitions

<table>
<thead>
<tr>
<th>Mark or Text Example</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product of XXXXXXXX</td>
<td>Country where the device is assembled, written in English; Micron uses: “Made in Taiwan” for Taiwan origin product “Assembled in USA” for US origin product “Product of XXXX” for products of other origins</td>
</tr>
<tr>
<td>LN: XXXXXXXXXX</td>
<td>Lot number for tracking the drive’s manufacturing data This is listed as xxyyyyyzzz: xx = 2 digits to denote manufacturing site yyyy = 5 digits to denote the kit number (randomly generated) zzz = 3 digits denoting a sublot size (to provide greater resolution of manufacturing information)</td>
</tr>
<tr>
<td>HALOGEN-FREE</td>
<td>Halogen-free mark indicating that the drive meets the IPC low-halogen requirements</td>
</tr>
<tr>
<td>XXXXGB XXX XGb/s XXXX</td>
<td>Drive’s capacity, product type, maximum interface rate, and security feature set (SED, Opal 2, FIPS, and so on, if applicable); Example: 512GB SATA 6 Gb/s SED</td>
</tr>
<tr>
<td>SN: YYWWXXXXXXXXXX</td>
<td>Drive serial number Format: 12 characters: YYWWXXXXXXXX YY is the current year WW is the current Micron workweek XXXXXXXX is an eight digit hex (base 16 0–9, A–F) serial number</td>
</tr>
<tr>
<td>PN: MTFDXXXXXXXXX-</td>
<td>Drive serial number bar code data for item above (follows the Code 128 standard) (The example shown is a representation, not an actual barcode)</td>
</tr>
<tr>
<td>XXXXXXXX</td>
<td>Drive part number bar code data for item above (follows the Code 128 standard) (The example shown is a representation, not an actual barcode)</td>
</tr>
<tr>
<td>MTFDXXXXXXXXX</td>
<td>Micron model number</td>
</tr>
<tr>
<td>MDL:MTFDXXXXXXXXX</td>
<td>EUI-64 number</td>
</tr>
<tr>
<td>EUI-64:00A0750XXXXXXX</td>
<td>Yellow bar Applicable to select products, a yellow bar may or may not be present on the label edge and may indicate Gen4 product.</td>
</tr>
</tbody>
</table>
Not shown is the worldwide name assigned to Micron (as defined by IEEE), which may or may not be present on the label. WWN: 500A0751XXXXXXXX
Figure 10: Micron Standard SATA/NVMe M.2 SSD Label Structures

Not shown is the worldwide name assigned to Micron (as defined by IEEE), which may or may not be present on the label. WWN: 500A0751XXXXXX
Figure 11: Micron Standard NVMe E1.x SSD Label Structures

Example 1

Not shown is the worldwide name assigned to Micron (as defined by IEEE), which may or may not be present on the label. WWN: 500A0751XXXXXXX

Figure 12: MID/CERT Label Structure

The MID/CERT label may be used as needed where an SSD label does not include regulatory marks. The printed label has a black background with the text and marks in white.

Figure 13: Embedded USB Label Structure

Labels for engineering samples replace these logos with text: ENGINEERING SAMPLE.
SD and microSD Label Information

Figure 14 shows a representative front label structure for our SD and microSD products. Figure 16 shows the backside markings. The figures have designated “key notes” that outline the details of each particular item.

Figure 14: Micron SD Label Structure

Key note definitions:
1. Micron logo
2. Speed class rating
3. UHS speed class rating
4. UHS Rating
5. Type
6. Form factor
7. Capacity
Figure 15: Micron microSD Label Structure

Key note definitions:
1. Micron logo
2. Form factor
3. UHS speed class rating
4. UHS Rating
5. Type
6. Speed class rating
7. Capacity
Figure 16: Micron SD Backside Markings

Key note definitions:
1. Reserved for the official USA Federal Communications Commission (FCC) mark
2. Reserved for the official European Regulatory Requirement mark
3. Reserved for the official Japan VCCI mark
4. Micron part number
5. Lot number and date code
6. Country of origin
Figure 17: Micron microSD Backside Markings

Key note definitions:
1. Reserved for the official USA Federal Communications Commission (FCC) mark
2. Reserved for the official European Regulatory Requirement mark
3. Reserved for the official Japan VCCI mark
4. Manufacturing lot number
5. Internal assembly part number
6. Date code
7. Country of origin
Micron Packaging Labels

Micron uses various packaging labels to enable quick identification of packaged contents, provide a simple order verification method, and indicate inner-package moisture levels. All labels are manufactured from matte-coated facestock or synthetic paper and contain acrylic- or water-based adhesive. See CSN-16 for complete information on all Micron packaging materials, including recyclable materials.

Master Container Labels

For all shipments, Micron uses standard bar code labels that conform to EIA Standard 556. The bar code labels enable customers to scan Micron containers for quick order verification. Figure 19 on page 26 shows an example of the standard bar code label used on master containers. Each box also carries its own bar code label (see the Individual Packaging Labels section).

Bar Code Information

The following information appears on the master container labels only:
- (3S/4S) - PKG ID: Invoice or packing slip number
- (1P) - SPLR PROD ID: Reserved for individual customer requirements
- (Q) - QUANTITY: Number of parts in master container
- (K) - TRANS ID: Customer purchase order number
- (P) - CUST PART NO: If a customer part number is not designated, the Micron part number will be printed
- (4L) - Origin: The country in which the product was made

Figure 18:  Standard Master Container Shipping Label

Micron Technology, Inc.
For Company Name
8000 S. Federal Way
BOISE ID 83707-0006
USA

COMPANY NAME
ADDRESS
CITY STATE/PROVINCE ZIP CODE
COUNTRY

WB # 638030055867 / 0087659818
Child W/B: 00821466

*************
Piece 1 of 1
*************

PO #s XXXXXXXX XXXXXXXX

PKG ID: 87659819A1
CSN-11: Product Marks/Product and Packaging Labels

Individual Packaging Labels

Figure 19: Standard Master Container Bar Code Label

<table>
<thead>
<tr>
<th>(3S) PKG ID: 417904839</th>
<th>Ship To Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Address</td>
</tr>
<tr>
<td></td>
<td>City, ST ZIP Code</td>
</tr>
<tr>
<td></td>
<td>Country</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(Q) QUANTITY: 2500</th>
<th>(4L) Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TW</td>
</tr>
<tr>
<td></td>
<td>25.9 x 15.9 x 27.9 In</td>
</tr>
<tr>
<td></td>
<td>66.3 x 38.6 x 71.4 Cm</td>
</tr>
<tr>
<td></td>
<td>Micron Technology, Inc.</td>
</tr>
<tr>
<td></td>
<td>1160 Exchange, Doc 1D</td>
</tr>
<tr>
<td></td>
<td>Boise ID 83715</td>
</tr>
<tr>
<td></td>
<td>USA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(1P) SPLR PROD ID: MT41K256M16TW</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>(K) TRANS ID: 4505469156</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>(P) CUST PART NO: 256-4839</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PACKAGE WEIGHT 2.7 LBS / 1.2 KGS</th>
<th>SHIP DATE 03/20/2017</th>
</tr>
</thead>
</table>

Notes: 1. For the "CUST PART NO:" field, if no CPN is provided by the customer, the Micron part number will be displayed.

Additional Label Information

The following information appears in the upper right and bottom portion of the master container labels and may differ slightly depending on whether the label has a (3S) or (4S) PKG ID:

- Ship-to name: Customer’s name and ship-to address
- Ship-from name: Micron’s name and address
- PACKAGE COUNT (3S): Master container package count, or TOTAL COUNT (4S): Master container package count
  - (3S) label includes master container size in inches and centimeters
- PACKAGE WEIGHT (3S): Package weight in pounds and kilograms, or TOTAL WEIGHT (4S): Master container weight in pounds and kilograms
- SHIP DATE: Date the product leaves the factory

Individual Packaging Labels

For quick order verification, Micron attaches a standard bar code label and inner packing container label on the inner packing container. Additionally, the moisture-barrier or static-shielding bag has a moisture sensitivity (MST) label and a standard bar code label attached to the front. If ordering in tape and reel, the tape-and-reel carrier will have a standard bar code label attached. Figure 20 on page 27 shows an example of the standard bar code label, Figure 21 on page 27 shows an example of Micron’s inner packing container label, and Figure 23 on page 28 shows an example of Micron’s MST label. Refer to Figure 24 on page 28 for approximate placement of these labels on Micron’s moisture-barrier and static-shielding bags.
Figure 20:  Standard Bar Code Label

![Standard Bar Code Label]

Figure 21, Micron’s Inner Packing Container Label, indicates the RoHS status of compliance with either RoHS or RoHS and HF (for those products that are also free of halogens). This space will be blank on labels for containers that hold parts with lead. Also, an asterisk (*) at the end of the date code indicates that the container holds a mix of product from more than one date; the date shown is that of the oldest product in the container. The “VID...” text is printed on the label as applicable for specific products.

Figure 21:  Micron’s Inner Packing Container Label

![Micron’s Inner Packing Container Label]

Figure 22:  Micron’s Inner Packing Container Label for Modules and SSDs

![Micron’s Inner Packing Container Label for Modules and SSDs]

Notes:
1. The European Regulatory Requirement mark may or may not be present on a particular inner packing label.
2. Some module product labels may include additional characters after the Micron marketing part number. For more information, see the Module Label Data section.
Figure 23: Micron’s Moisture Sensitivity (MST) Label

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>Peak Package Body Temp</th>
<th>Moisture Level</th>
<th>Floor Life: One Year</th>
<th>Condition</th>
<th>Package Seal Date</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>235</td>
<td></td>
<td>2</td>
<td></td>
<td>= 30 deg. C/60% RH</td>
<td>Apr 08 2004</td>
<td>JDOE</td>
</tr>
<tr>
<td>260</td>
<td></td>
<td>2</td>
<td></td>
<td>= 30 deg. C/60% RH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

 Package Seal Date: Apr 08 2004
 Operator: JDOE

Figure 24: Labeling on Moisture-Barrier and Static-Shielding Bags¹

Heat-sealed moisture-barrier bag

ESD and moisture precautions

Internal label²

MST label with moisture level, floor life, and package seal date³

Standard bar code label⁴

Notes:
1. This figure indicates the approximate locations only of the various labels.
2. Internal labels are applicable to tube and tray shipments only and may or may not be present on every bag.
3. See Figure 23.
4. See Figure 20.
Revision History

Rev. AU ................................................................. 12/22
• Updated Table 5

Rev. AT ............................................................... 6/22
• Updated Figure 20

Rev. AS ............................................................... 3/22
• Updated Table 5

Rev. AR ............................................................... 1/22
• Updated Table 5

Rev. AQ ............................................................... 11/21
• Updated Table 5
• Updated Figures 4 through 7
• Updated SSD section Figures and text

Rev. AP ............................................................... 7/21
• Updated Tables 2, 3 and 6
• Updated Figures 4, 5 and 7
• Removed DDR5 NVDIMM section

Rev. AO ............................................................... 1/21
• Updated Figure 4

Rev. AN ............................................................... 1/21
• Added Figure 4, Figure 5
• Updated Figure 6, Figure 7, Figure 8, Figure 21
• Added Table 5
• Removed figures: 2.5-inch Label Structure - M5XX(DC/IT)/M600 and mSATA Label Structure - M6XX and mSATA Label Structure - M6XX

Rev. AM ............................................................... 9/19
• Updated Table 5

Rev. AL ............................................................... 4/19
• Updated country of origin key note text for Figures 4, 6, 8, 9, 10 and 11
• Added “Reserved for the official Industry of Canada certification number” to Figure 8 key notes
• Updated Figure 18 1P and P fields and added note 1
• Updated Figure 21 and added note 2

Rev. AK ............................................................... 11/18
• Updated Figure 5 and notes
• Updated Table 5
• Updated Figures 8, 10, 18 and 20

Rev. AJ ............................................................... 8/18
• Added note 2 to Figure 2
• Added the official Morocco mark to Figures 8 and 10
• Updated Figure 20
CSN-11: Product Marks/Product and Packaging Labels

Revision History

Rev. AI ................................................................. 3/18
  • Updated Tables 2 and 3

Rev. AH ............................................................ 12/17
  • Added SD and microSD Label Information

Rev. AG ............................................................ 10/17
  • Updated Figures 8–11

Rev. AF ............................................................. 7/17
  • Updated Figure 16

Rev. AE ............................................................. 5/17
  • Updated Data matrix (2D) barcode description for Figure 10
    • Deleted Figures 11 and 12 (EoL product)

Rev. AD ............................................................. 3/17
  • Updated Figure 16 and the following explanatory paragraphs

Rev. AC ............................................................ 11/16
  • Added Table of Contents and List of Figures
    • Updated Figures 1 and 2
    • Updated and expanded Module Label Data and Examples (Added Process Codes)
    • Updated all SSD labels and key note definitions
    • Updated Figures 15 through 19

Rev. AB ............................................................. 5/16
  • Added DDR3, DDR4 Process Code Reference section

Rev. AA ............................................................. 3/16
  • Corrected typo in Note 3 of Figure 4
    • Updated Figures 12, 16 and added new Figure 17. 1/16

Rev. Z ............................................................... 10/15
  • Updated module label explanation and notes.
    • Added M6xx SSD labels.
    • Deleted links to specific SSD label figures under SSD Label Information.
    • Added Table of Contents and List of Figures.
    • Updated Figure 2 title.

Rev. Y ............................................................... 7/15
  • Added SSD MID label.

Rev. X ............................................................... 5/15
  • Updated Figure 4.
    • Updated Figure 23.

Rev. W ............................................................... 5/15
  • Added Note 2 to Figure 4.

Rev. V ............................................................... 10/14
  • Updated information on page one.
    • Added information for legacy components with Elpida part marks.
    • Added DC and IT mark to M5xx SSD label title.
CSN-11: Product Marks/Product and Packaging Labels
Revision History

- Added 2.5in P420m label information.  
  Rev. U ................................................................. 7/14
  - Added M.2 M510/M550 label.  
- Added “.../date code (YWW)” to Line 1 of the Module Label Information section.  
  Rev. T ................................................................. 1/14
- Added European Regulatory Requirement logo and note to Figures 3 and 20.  
  - Corrected numbering on pages 4 and 5.  
  Rev. S ................................................................. 12/13
- Corrected label titles for Figure 10, Figure 16, and Figure 17.  
  Rev. R ................................................................. 8/13
- Added new SSD labels.  
  Rev. R ................................................................. 7/13
- Added new SSD labels.  
  Rev. Q ................................................................. 5/13
- Updated Inner Packing Container and Standard Master Container Shipping labels.  
  - Corrected note references for Figure 15.  
  Rev. P ................................................................. 2/13
- Added Microdisplay panel label.  
  Rev. O ................................................................. 6/12
- Added the Embedded USB label.  
  Rev. N ................................................................. 3/12
- Added the SSD mSATA label.  
  Rev. M ................................................................. 2/12
- Corrected references in Figure 12.  
  Rev. L ................................................................. 2/12
- Updated security feature set to Figure 6 and its notes.  
  Rev. K ................................................................. 10/11
- Added aliases to the links for the part numbering guides and FBGA date codes, and 
  the FBGA Part Marking Decoder.  
  - Added specific date code information.  
  - Updated country codes.  
  - Added SSD C400 label information.  
  Rev. J ................................................................. 6/11
- Added date code information to the text for Figure 9  
  Rev. H ................................................................. 2/10
- Corrected typo  
  Rev. G ................................................................. 1/10
- Added SSD product labels.  
  - Added packaging label information from CSN-16  
  Rev. F ................................................................. 12/09
CSN-11: Product Marks/Product and Packaging Labels

Revision History

Rev. E ............................................................... 10/09
- Updated template
- Updated Figure 3, “Module Label”

Rev. D ............................................................... 6/08
- Added Korea to note 1 country codes
- Updated and renamed Figure 2
- Deleted Figure 3, “DDR2/GDDR3 FBGA Abbreviated Component Mark”

Rev. C ............................................................... 5/07
- Added Taiwan to note 1 country codes

Rev. 12/9/05
- Added logo information to Figure 1 on page 6 and Figure 2 on page 7

Rev. 2/14/05
- Added China to note 1 country code