Overview

The Standard Microcircuit Cross Reference (SMCR) references microcircuits covered by Standard Microcircuit Drawings, MIL-M-38510 Specifications and Vendor Item Drawings and provides information about approved sources, equivalent military part numbers, preferred part numbers, etc.

Search results include parts matching search criteria and the option to view additional information including package descriptions, end-of-life dates, Radiation Hardness Assurance levels, and corresponding military specifications or drawings.

There are two kinds of SMCR searches:

- **Part Number/Key Word Search**
  Search by standard part number, vendor part number, generic part number, vendor name, vendor CAGE code, National Stock Number, or a keyword/phrase in the description.

- **EIC / Description Search**
  Search by EIC and Description to view a range of parts available; narrow search to specific parts.

Part Number/Key Word Search

To complete a search using a Part Number and/or Key Word:

1. Use the first drop-down list to select a Part Number type:
   - **Standard Part Number** - The military part number, as defined by a MIL-M-38510 specification or SMD (e.g., M38510/00104BCA) See Standard Part Number Definitions for more information.
   - **Vendor Part Number**
   The vendor’s catalog part number (e.g., JD5400BCA)
   - **Generic Part Number**
   The vendor's part number without prefix or suffix characters (e.g., 5400)
   - **Description**
   A keyword or phrase contained in the description of the part (e.g., NAND GATE)
2. Use the second drop-down list to select a search type:

- **Contains**
  Returns records where search text is found anywhere within the selected field. This is the broadest (and slowest) way to search.

- **Starts with**
  Returns records where the data value in the selected field starts with the search text, regardless of which characters follow. This is a fast, flexible, way to search because the level of detail is specified by adding or removing characters at the end of the search text.

- **Exactly matches**
  Returns records where the entire data value in the selected field exactly matches the search text. This is the narrowest (and fastest) way to search.

3. If desired, narrow the search by entering additional text in the empty field.

   - The *Starts With* operator automatically inserts a trailing wild card and the *Contains* operator automatically inserts leading and trailing wild cards.
   
   - Use the buttons on the right side of search bar labeled **5962-**, **M38510/** and **V62/** to insert the corresponding string into the search text (a JavaScript enabled browser is required)

4. If desired, check one of the following:

- **Show only QML Parts**
  Check this box to return only QML parts (QPL parts and Class M (MIL-STD-883 compliant) parts are not included in search results).

- **Show only RHA Parts**
  Check this box to return only radiation hardened parts. If this box is checked and a Standard PN starting with "5962-" or "M38510/" or "M38510/" is specified, the dash or slash is replaced with a wild card character so that all RHA variations are returned. The highest RHA level for each vendor is displayed; lower levels may be supplied at the vendor’s discretion.

5. Click **Go**.
   The system displays output similar to the following:

<table>
<thead>
<tr>
<th>Standard PN</th>
<th>Source</th>
<th>Vendor PN</th>
<th>EOL Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5962-9550301QPA</td>
<td>NATIONAL (1)</td>
<td>LM6142AMJ/883</td>
<td></td>
<td>OP AMP, HIGH-SPEED, LOW POWER, INPUT-OUTPUT</td>
</tr>
</tbody>
</table>

6. Click a Standard PN number for additional information about the part or click the Source name for information about the source.

For more information about interpreting search results, see this document’s Interpreting Part Number/Key Word Search Results.
Interpreting Part Number/Key Word Search Results

The system displays PN details in the following format:

<table>
<thead>
<tr>
<th>Standard PN</th>
<th>5962-7802004MEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>LINE RECEIVER, QUAD DIFFERENTIAL</td>
</tr>
<tr>
<td>NSN</td>
<td>5962-01-340-8440</td>
</tr>
<tr>
<td>Source</td>
<td>11</td>
</tr>
<tr>
<td>Cage</td>
<td>01295</td>
</tr>
<tr>
<td>Vendor PN</td>
<td>AM26LS33AMJ5B</td>
</tr>
<tr>
<td>Generic PN</td>
<td>26LS33A</td>
</tr>
<tr>
<td>Package</td>
<td>Dual-in-line, wide</td>
</tr>
<tr>
<td>Pin Count</td>
<td>16</td>
</tr>
<tr>
<td>ESD Status</td>
<td>Class 1: 0 to 1,999 V (1000 V actual)</td>
</tr>
<tr>
<td>RHA Level</td>
<td></td>
</tr>
<tr>
<td>Quality Level</td>
<td>QML monolithic - regular</td>
</tr>
<tr>
<td>EOL Date</td>
<td></td>
</tr>
<tr>
<td>EIC</td>
<td>57S-6LS33A</td>
</tr>
<tr>
<td>Drawing</td>
<td>7802035D (109 kb) Revision: V Date: 3/3/2010</td>
</tr>
</tbody>
</table>

1. Click the Source name for additional information about the source.
2. Click the Drawing number to download the military part or drawing in PDF format.
3. Click Show Similar Parts to display functionally equivalent parts (based on the generic PN). The system displays all variations of package and lead finish, and may include SMD parts, M38510 parts and VID parts.
4. Click Show Points of Contact to display POCs responsible for the part/document.
5. Click Show Preferred Parts to display standard parts that are preferred to this part for new design. The system displays all variations of package and lead finish, and may include SMD parts, M38510 parts and VID parts.

A note about NSN search results

For NSN searches, the system displays specialized result sets. The system first looks for an exact match to the NSN. If an exact match is found, the system queries again to find all lead finish variations with the corresponding PN. Records found with matching lead finish are displayed with links to part details and records without matching lead finish are displayed with blank Source and Vendor PN fields.

The system displays the following output for an NSN search for 5962-01-264-0084, PN M38510/3003BCA and a description of Hex Inverter:
### Standard Part Number Definitions

Standard PN’s are constructed according to one of the following schemes:

**SMD PN’s: pre-1985**

<table>
<thead>
<tr>
<th>Drawing Number</th>
<th>Device Type</th>
<th>Package</th>
<th>Lead Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>77034</td>
<td>01</td>
<td>T</td>
<td>A</td>
</tr>
</tbody>
</table>

**SMD PN’s: 1985 - 1986**

<table>
<thead>
<tr>
<th>Drawing Number</th>
<th>Device Type</th>
<th>Package</th>
<th>Lead Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>5962-85155</td>
<td>01</td>
<td>R</td>
<td>A</td>
</tr>
</tbody>
</table>

**SMD PN’s: 1987 to present**

<table>
<thead>
<tr>
<th>FSC Prefix</th>
<th>RHA Level</th>
<th>Drawing Designation</th>
<th>Device Type</th>
<th>Quality Level</th>
<th>Package</th>
<th>Lead Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>5962</td>
<td>-</td>
<td>90965</td>
<td>01</td>
<td>M</td>
<td>T</td>
<td>A</td>
</tr>
</tbody>
</table>

**MIL-M-38510 part numbers**

<table>
<thead>
<tr>
<th>MIL-M- 38510 Designation</th>
<th>RHA Level</th>
<th>Slash Sheet</th>
<th>Device Type</th>
<th>Quality Level</th>
<th>Package</th>
<th>Lead Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>M38510</td>
<td>/</td>
<td>001</td>
<td>01</td>
<td>B</td>
<td>C</td>
<td>A</td>
</tr>
</tbody>
</table>

**VID part numbers**

<table>
<thead>
<tr>
<th>VID Designation</th>
<th>FSC-Drawing Yr. Separator</th>
<th>Drawing Yr.</th>
<th>Sequential Drawing #</th>
<th>Device Type</th>
<th>Package</th>
<th>Lead Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>V62</td>
<td>/</td>
<td>03</td>
<td>601</td>
<td>01</td>
<td>X</td>
<td>A</td>
</tr>
</tbody>
</table>

**Notes:**

- The following part numbers are exceptions to the preceding schemes:
  - 5962-38128
  - 5962-38707
  - 5962-38267
  - 5962-78020
  - 5962-38294
  - 5962-78023
  - 5962-38480
  - 5962-85064
  - 5962-38705
- *QML DATABOOK PT* in the standard PN column indicates parts manufactured under QML processes but not covered by SMDs.

For more information about Standard PN numbering schemes, see Integrated Circuits (Microcircuits) Manufacturing, General Specification For FSC 5962 (MIL-PRF-38535).
Example Part Number/Key Word Searches

The following examples provide information about adjusting input criteria for meaningful results.

Example: To find a device in a specific package, without regard to lead finish:

```
[Standard PN] Starts with [5962-8752501MC] Go
```

Example: To find all variations of one device type, without regard to quality level, package, or lead finish:

```
[Standard PN] Starts with [5962-8752501] Go
```

Example: To find all variations all device types listed on a drawing:

```
[Standard PN] Starts with [5962-87525] Go
```

Example: To find all variations of all device types listed on a drawing:

```
[Standard PN] Starts with [5962-8752501%CA] Go
```

The system displays the following PNs:
- 5962-8752501CA
- 5962-8752501BCA
- 5962-8752501MCA
- 5962-8752501SCA

Example: To find all SMD parts with RHA level R:

```
[Standard PN] Starts with [M38510%05553BEA] Go
```

The system displays the following PNs:
- M38510/05553BEA
- M38510H05553BEA
- M38510R05553BEA

Example: To find a TTL Quad 2-input NAND Gate, generic PN 5400 using various search methods:

```

or

[Standard PN] Starts with [M38510/00104] Go

or

[Vendor PN] Contains [5400] Go
```
EIC / Description Search

To complete a search using EIC/Description:

1. Use the drop-down list to select an EIC/Description.

   See the List of Standard Microcircuit Drawings (MIL-HDBK-103) for a list of microcircuits covered by Standard Microcircuit Drawings, approved sources, a cross-reference from vendor part numbers to Standard Microcircuit Drawing part numbers, and vice versa.

2. Click Go.
   The system displays output similar to the following:

   ![Part List]

<table>
<thead>
<tr>
<th>EIC</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>231-4906A</td>
<td>SHIFT REGISTER, DUAL 4-STAGE/5-STAGE</td>
</tr>
<tr>
<td>231-4906B</td>
<td>SHIFT REGISTER, DUAL 4 STAGE/5 STAGE</td>
</tr>
</tbody>
</table>

3. Click an EIC to narrow the search to a specific description or generic part type.
   The system displays a list of parts corresponding to the selected EIC with output similar to the following:

   ![Part List]

<table>
<thead>
<tr>
<th>Standard PN</th>
<th>Source</th>
<th>Vendor PN</th>
<th>EOL Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M38510/05701BAA</td>
<td>(NONE)</td>
<td>4006A (GEN)</td>
<td></td>
<td>SHIFT REGISTER, DUAL 4-STAGE/5-STAGE</td>
</tr>
<tr>
<td>M38510/05701BCA</td>
<td>(NONE)</td>
<td>4006A (GEN)</td>
<td></td>
<td>SHIFT REGISTER, DUAL 4-STAGE/5-STAGE</td>
</tr>
<tr>
<td>M38510/05701BDA</td>
<td>(NONE)</td>
<td>4006A (GEN)</td>
<td></td>
<td>SHIFT REGISTER, DUAL 4-STAGE/5-STAGE</td>
</tr>
<tr>
<td>M38510/05701BNA</td>
<td>(NONE)</td>
<td>4006A (GEN)</td>
<td></td>
<td>SHIFT REGISTER, DUAL 4-STAGE/5-STAGE</td>
</tr>
<tr>
<td>M38510/05701BTA</td>
<td>(NONE)</td>
<td>4006A (GEN)</td>
<td></td>
<td>SHIFT REGISTER, DUAL 4-STAGE/5-STAGE</td>
</tr>
<tr>
<td>M38510/05701BVA</td>
<td>(NONE)</td>
<td>4006A (GEN)</td>
<td></td>
<td>SHIFT REGISTER, DUAL 4-STAGE/5-STAGE</td>
</tr>
</tbody>
</table>