cadence®

Allegro® EDM
Object Import User Guide

Product Version 23.1
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Contents

Importing Data for Additional Object Types into EDM Component Database

If you enable some features of Allegro EDM that are not available out of the box, you will then need to import the data for these objects into Allegro EDM.

For details about enabling additional object types in the Allegro EDM component database, refer to the *Customization Options* chapter of *Cadence Pulse Configuration Guide*.

Importing Manufacturer Part Data into Allegro EDM Component Database

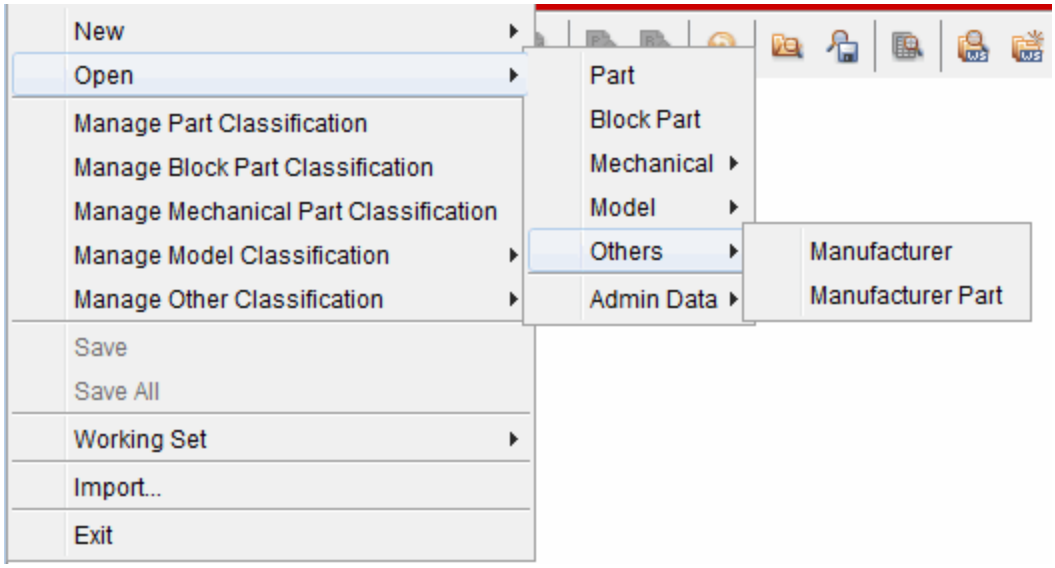
After you enable alternate manufacturer lists (AML) by updating the database schema, you can associate electrical parts with alternate manufacturer parts using Data Exchange or Database Editor. Manufacturer parts are from different manufacturers and each manufacturer part has its own datasheet. So, you can also associate the manufacturer name and datasheets with a manufacturer part.

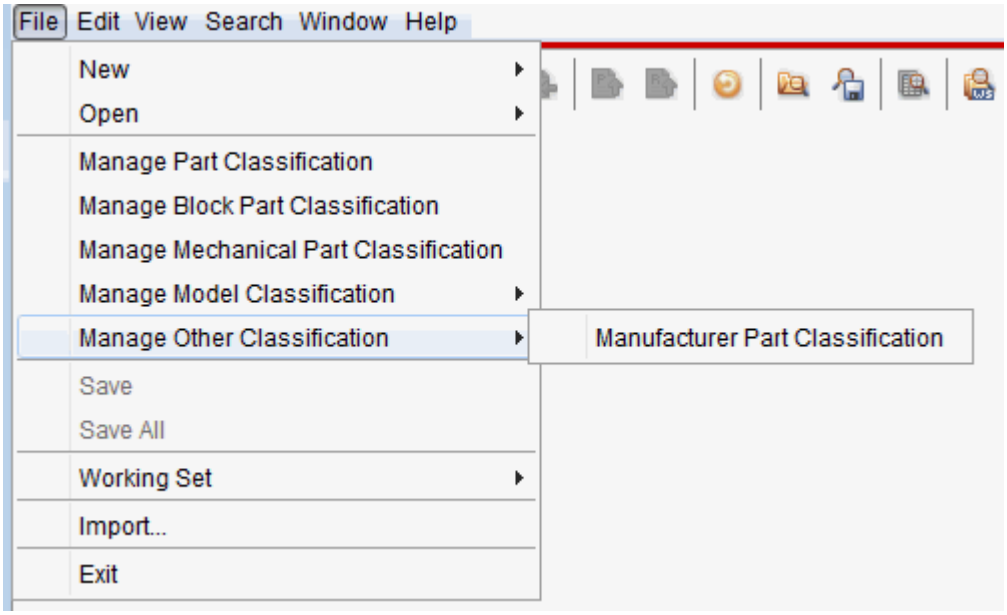
In addition to managing attributes and relations for manufacturer parts, you can also associate classifications with them. These classifications can be managed in Database Editor just as any other model classification.

To import manufacturer part data using Data Exchange, do the following:

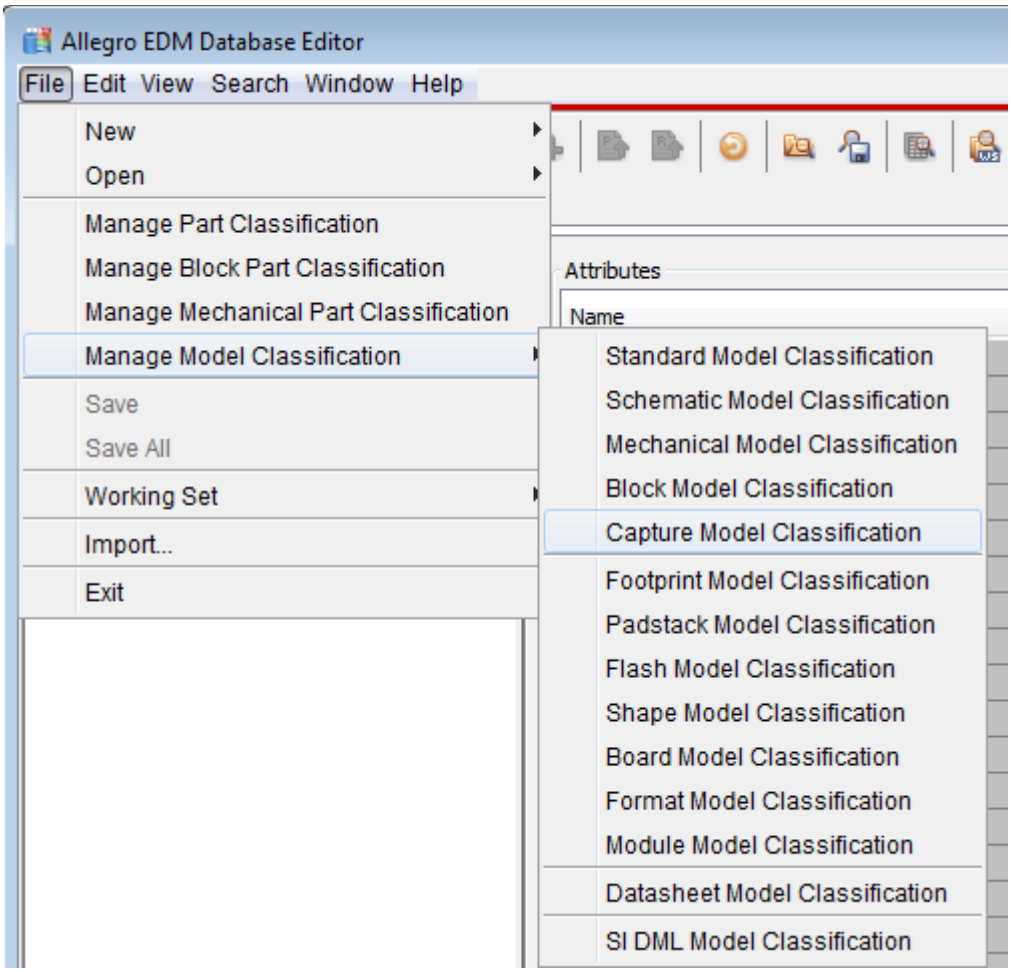
1. Open the Allegro EDM Prompt.
2. Run the following command: `adwschema -enable`
3. Specify your option by entering the ID of the required schema extension.

If you enabled the 'Manufacturer Part', 'Manufacturer', and 'Manufacturer Part Classification' object types, they are created in the Allegro EDM component database, and can be viewed and edited in Allegro EDM Database Editor.





Similarly, support for the development and import of Capture models is enabled and can be viewed in Allegro EDM Database Editor and Allegro EDM Database Administrator.



4. Run the following command:

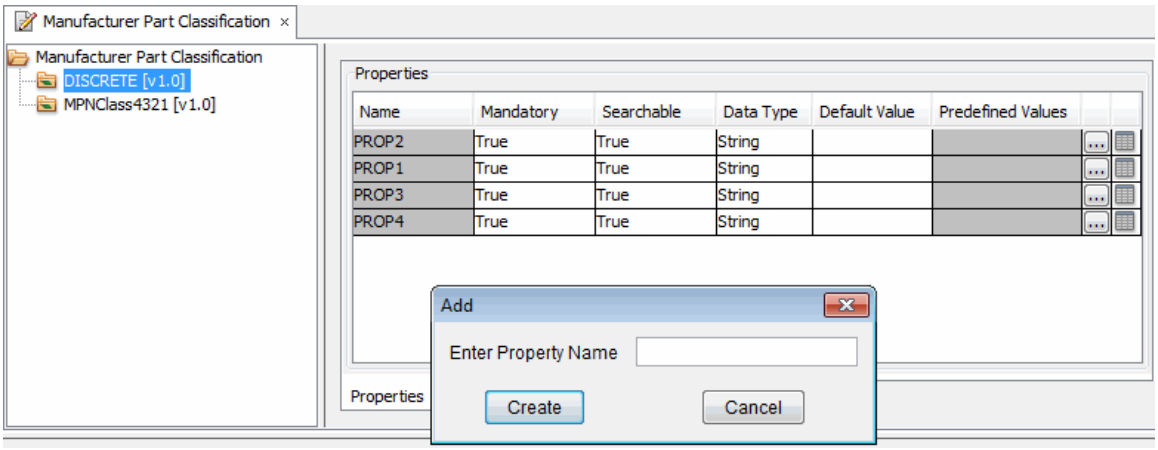
   ```
   adwschema -addAttribute -Manufacturer <attribute_name>
   ```

   For example:

   ```
   adwschema -addAttribute -Manufacturer Contact
   adwschema -addAttribute -Manufacturer Mobile
   adwschema -addAttribute -Manufacturer Address
   ```

   The Contact, Mobile, and Address attributes are added to the Manufacturer object type in the database.

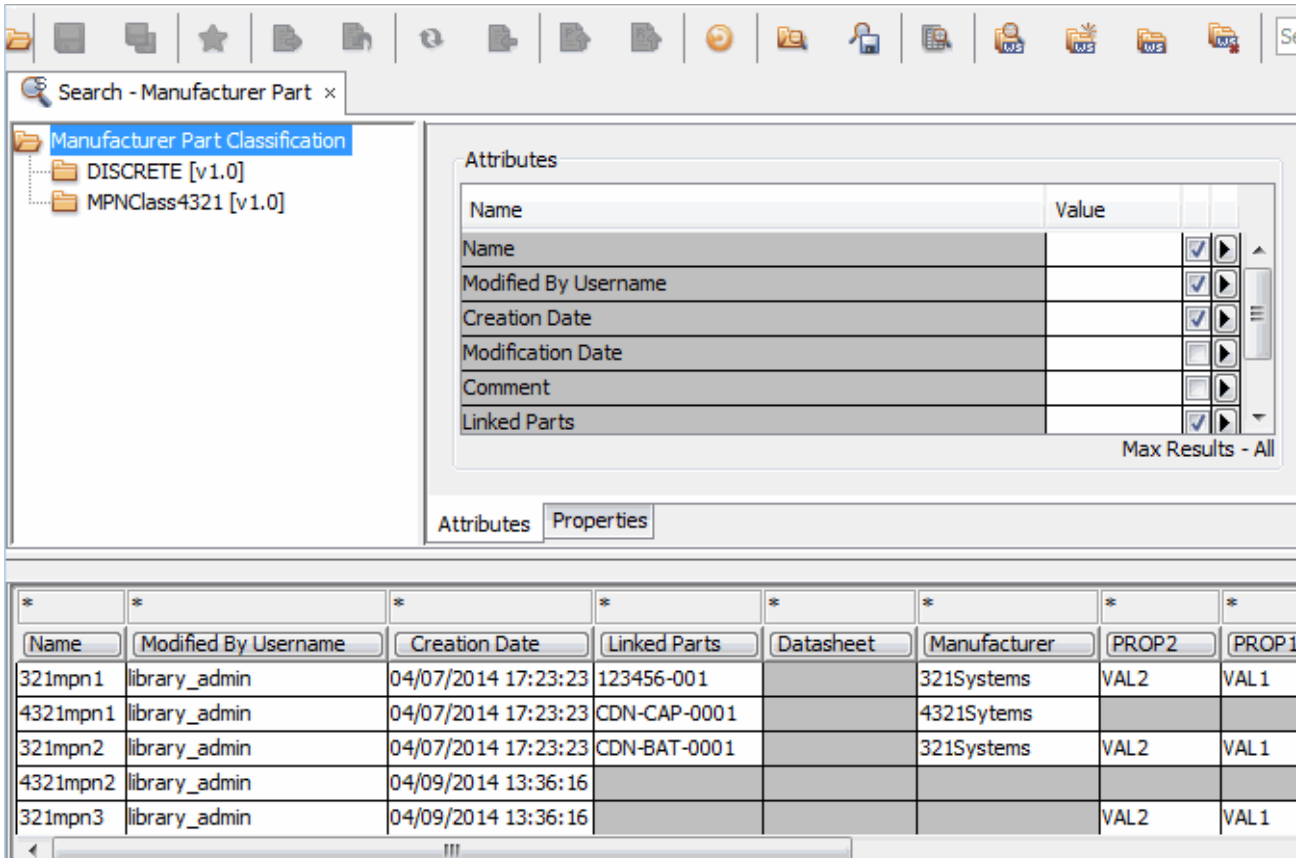
5. Create a Manufacturer Part Classification classification type, and add properties to this classification.

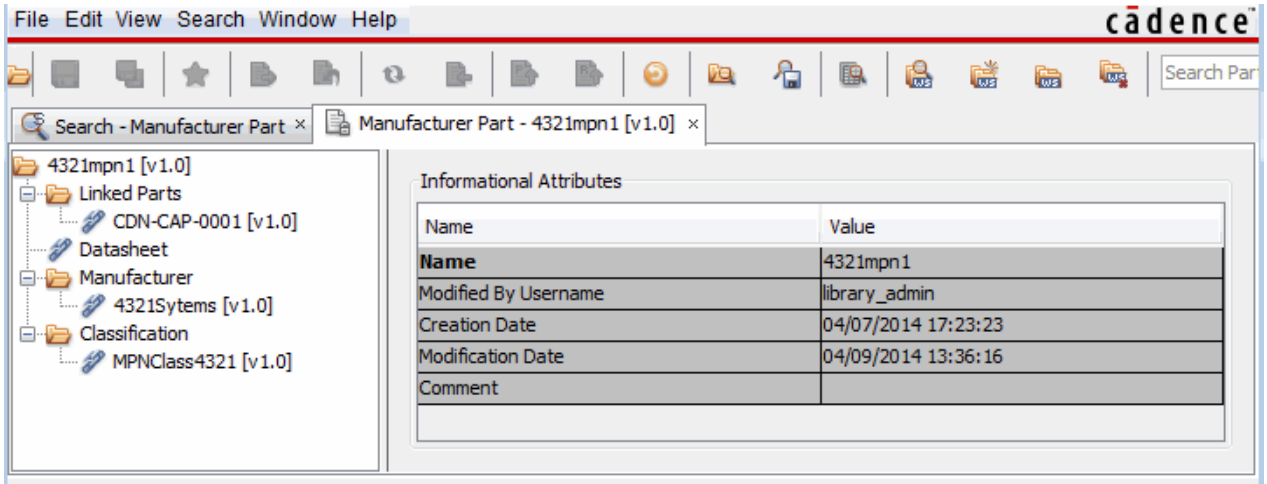


6. Prepare the data to be imported into the database.
7. Create `import.xml` to import the following:
   - ❑ Objects for manufacturers
   - ❑ Objects for manufacturer parts and their associated information

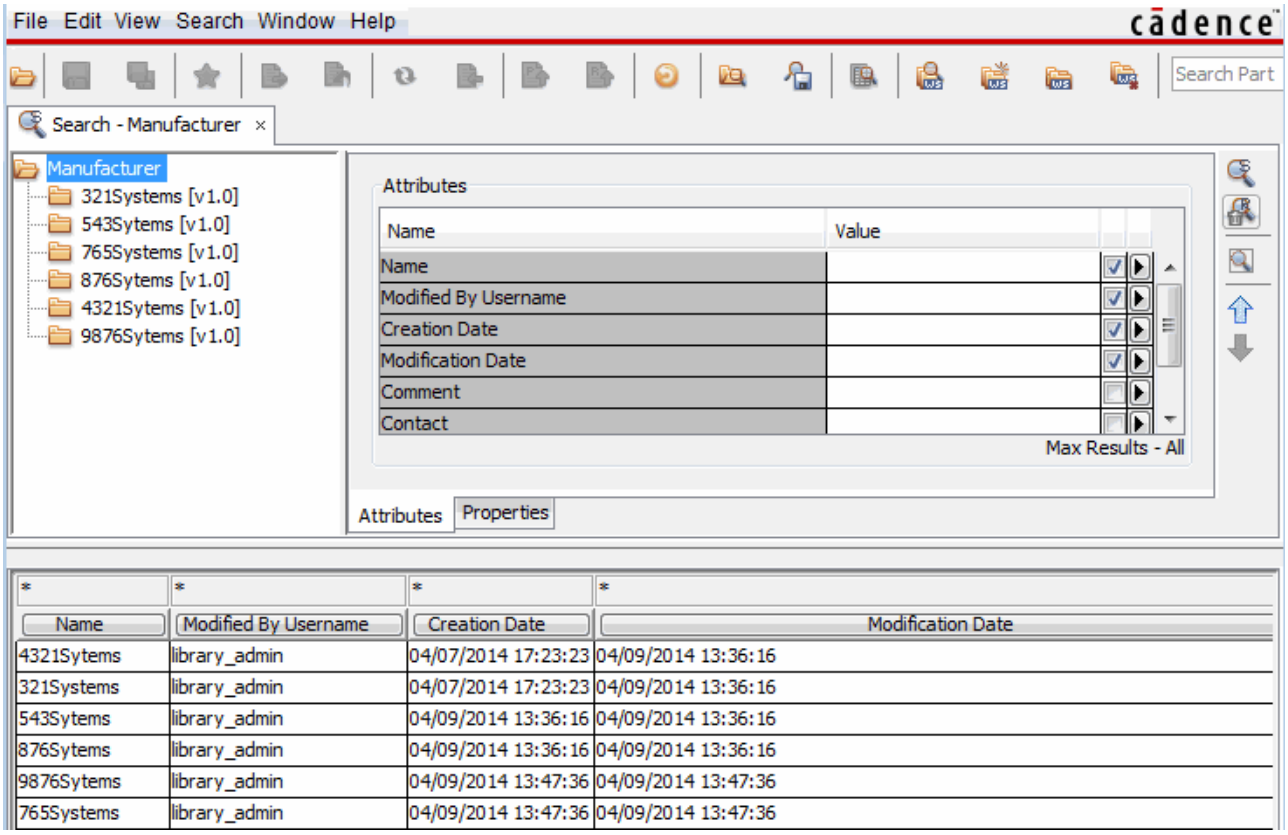
   For details on how to create the XML files, see the *<installation_hierarchy>*`\tools\pcbdw\database\dataexchange\archindep\samples\sampleavlapicode.java` file.
8. Run the Data Exchange command: `dataexchange -import adw`

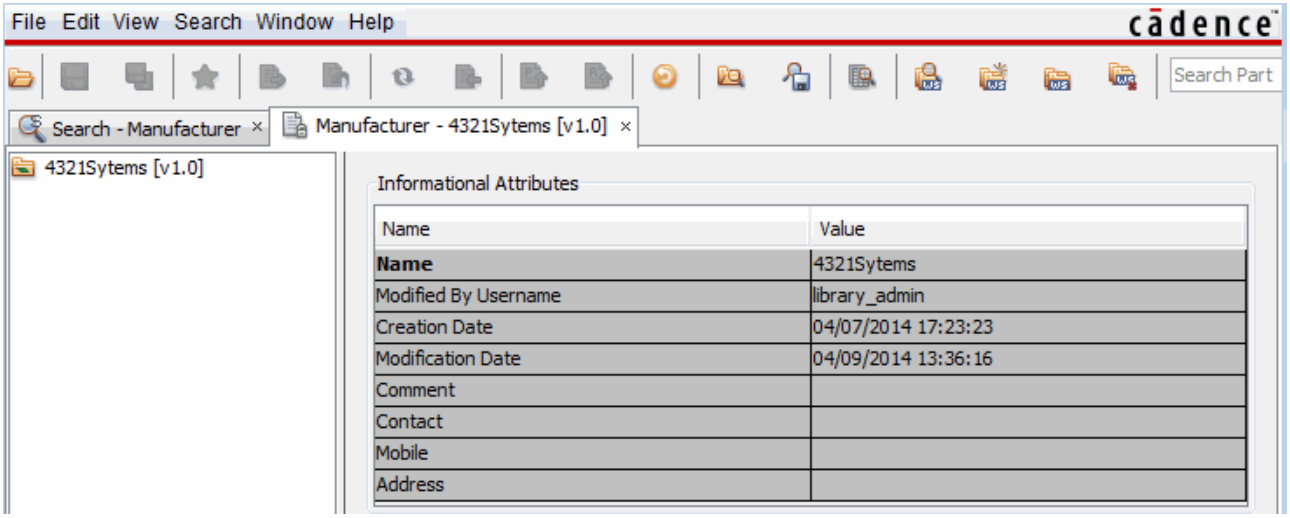
You can view and edit the objects that have been added in Database Editor for the following:





Manufacturers





9. Run the library distribution command: `lib_dist`

   After you run library distribution, the relations created between AMLs and electrical parts in the library flow can be seen in Part Information Manager. You can also generate the reports for AMLs associated with the electrical parts.

Importing Reliability Data into Allegro EDM Component Database

After enabling reliability in the component database, you can import reliability attributes as objects using Data Exchange. You can also associate classifications with these objects. These classifications are managed in Database Editor just as any other model classification.

To import reliability data, do the following:

1. Run the following command at the Allegro EDM Prompt:

   ```
   adwschema -enable extension0006 -reliability
   <reliability_object_type_name>
   ```

   For example:

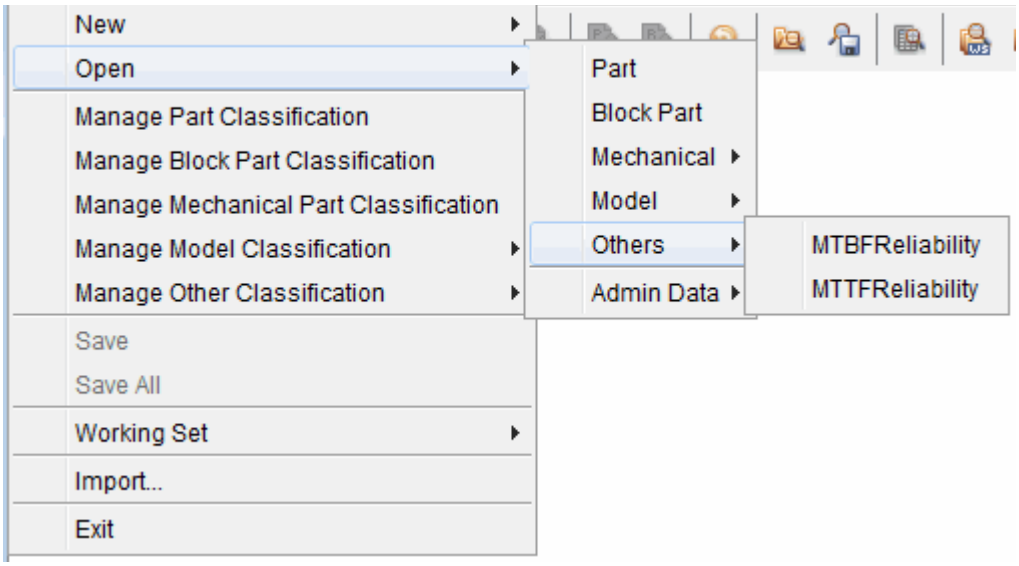
   ```
   adwschema -enable extension0006 -reliability MTBFReliability
   ```

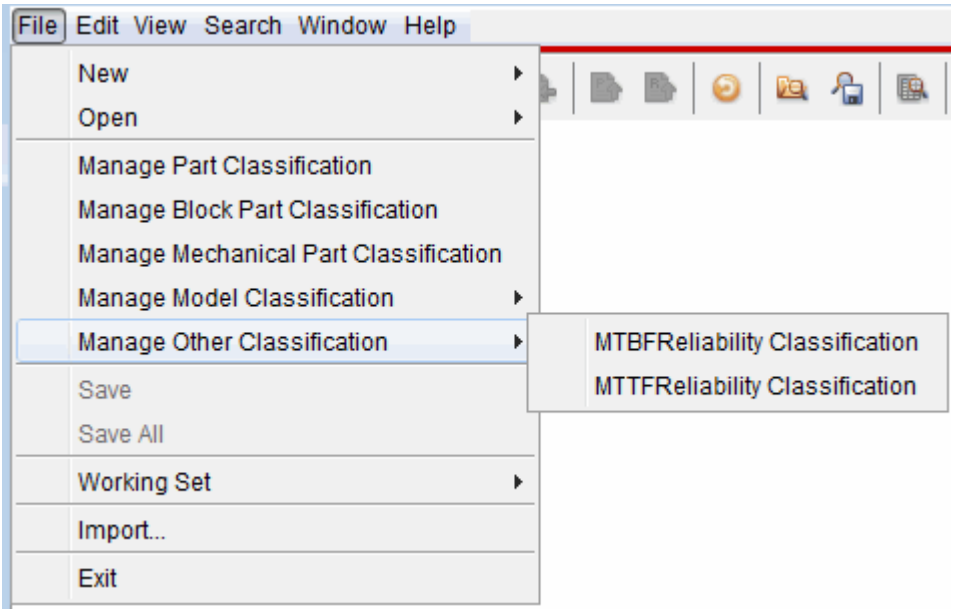
   ```
   adwschema -enable extension0006 -reliability MTTFReliability
   ```

   The following reliability object types are created in the Allegro EDM component database. You can view these object types in Database Editor:

   - MTBFReliability
   - MTTFReliability
   - MTBFReliability Classification

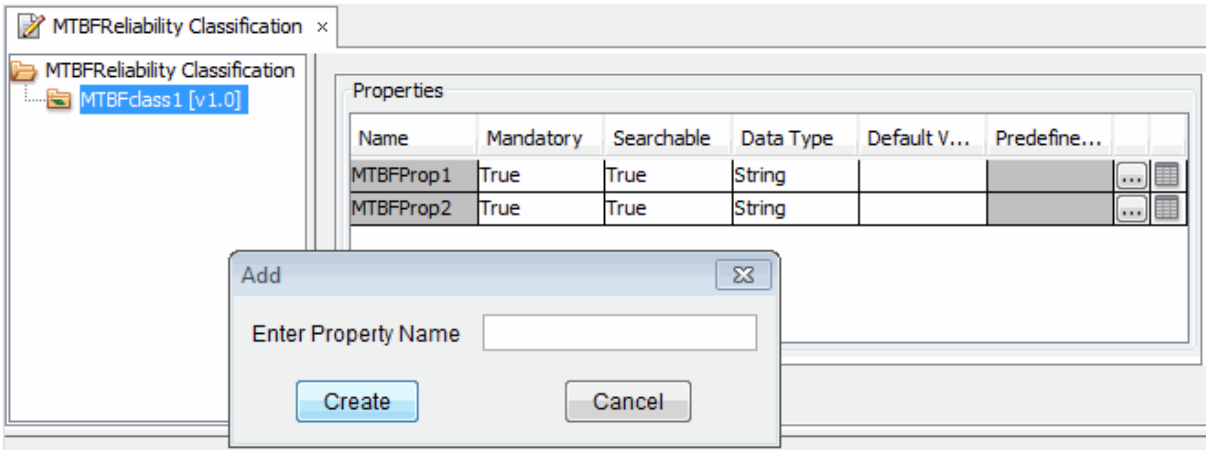
- MTTFReliability Classification





2. Create *<reliability_object_type_name>* `Classification` and add properties to this classification.

For example, add properties to `MTBFReliability Classification`.

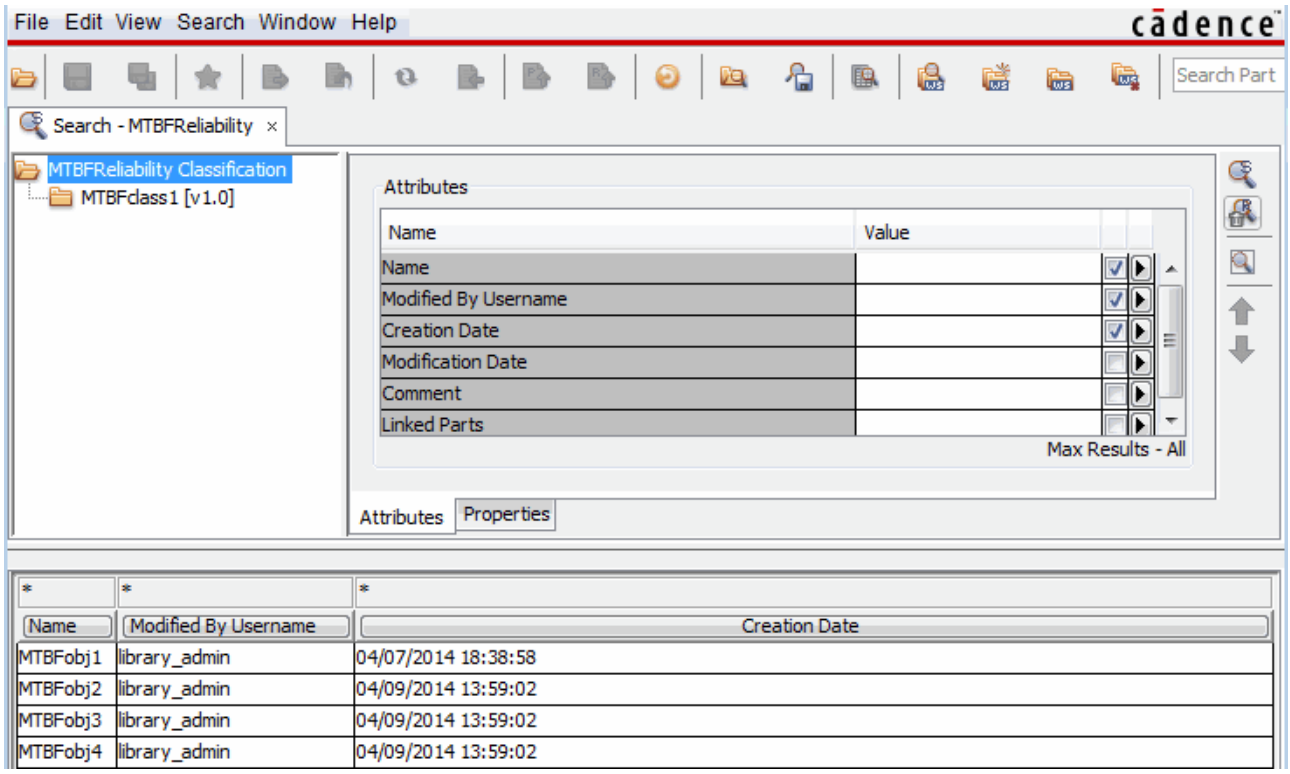


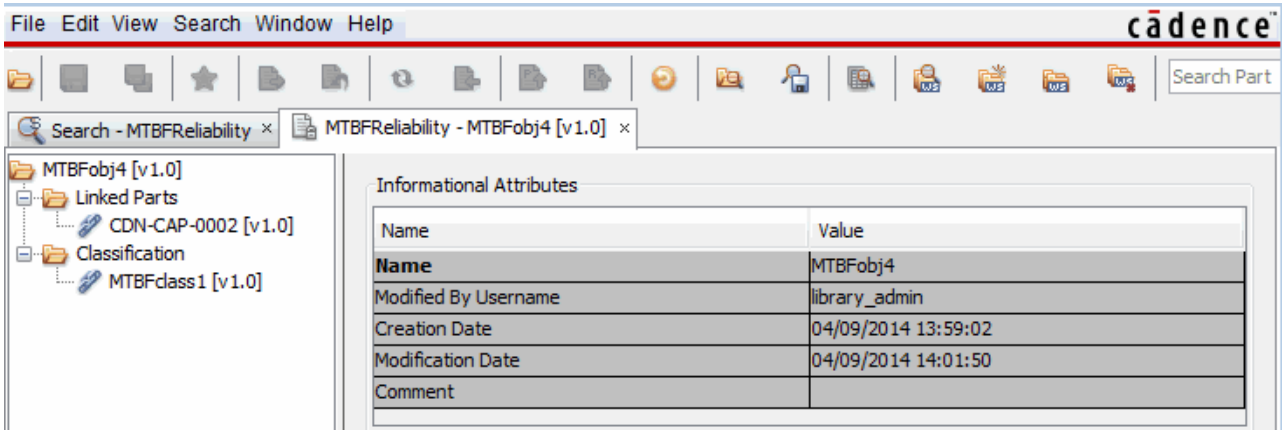
3. Create `import.xml` to import objects for reliability object types.

   For sample XML files, see `<Installation_Hierarchy>\tools\pcbdw\database\dataexchange\archindep\samples`. For details on how to create the XML files, contact Cadence Support and Services.

4. Run the Data Exchange command: `dataexchange -import adw`

The reliability objects are imported into the component database. You can open Database Editor and now view these objects.





5. Run the library distribution command: `lib_dist`

   You can generate reports to see the reliability attributes associated with the electrical parts.

Recommendations for Importing Data

Consider the following while importing data using Data Exchange:

- To create import.xml for importing data related to manufacturer's parts, reliability, or datasheets, contact Cadence Support and Services. Data Exchange being a powerful utility, incorrect or invalid incoming data can lead to database corruption.
- Import the data in smaller parts, for example, 20,000 manufacturer parts at a time. To change memory settings for importing a large amount of data, see the Setting Up Memory for Allegro EDM section in *Cadence Pulse Configuration Guide*.
- Run the Data Exchange command on the same machine as the Allegro EDM server to avoid any issues related to network latency.
- Use datasheet URLs in properties rather than importing a large number of manufacturer part datasheets into Allegro EDM.
  - Importing a large number of datasheets increases the number of objects and relations, which may slow down the performance of the Allegro EDM Server.
  - Import the manufacturer part datasheets into the Allegro EDM component database before you enable AML for your database.
  - Use library import to import manufacturer part datasheets rather than the Data Exchange utility for a faster upload to the Allegro EDM Server.
  - You may also notice out-of-sync data in Part Information Manager while you are importing a large amount of data related to datasheets, manufacturer parts, or reliability.
- Depending on the number of objects to be imported, you might need to set the Allegro EDM server memory.
- If you have existing classification properties for parts related to manufacturer parts or reliability, it is recommended that you move them as objects. See the following sections for details: Importing Manufacturer Part Data and Importing Reliability Data. If you want to manage both, the classification properties, and the objects, you need to ensure that during every data exchange session, information on properties is in sync.

Limitations of AML and Reliability Support in Allegro EDM

Alternate Manufacturer List and Reliability support has the following limitation:

- Attributes related to alternate manufacturer lists and Reliability are not added to the PTFs.

Searching for Parts by Manufacturer Part Numbers

All commercially available physical parts have unique Manufacturer Part Numbers (MPNs). All manufacturers provide their parts with a datasheet that contains details about the part such as its operating environment, environmental compliance, package details (shape, dimensions, weight, style, and body material), moisture sensitivity, reliability, and so on. Different manufacturers offer parts for the same functionality. As a result, many MPNs from different manufacturers can be used in an electronic product. Component engineers/ designers choose the one that best fits their requirements.

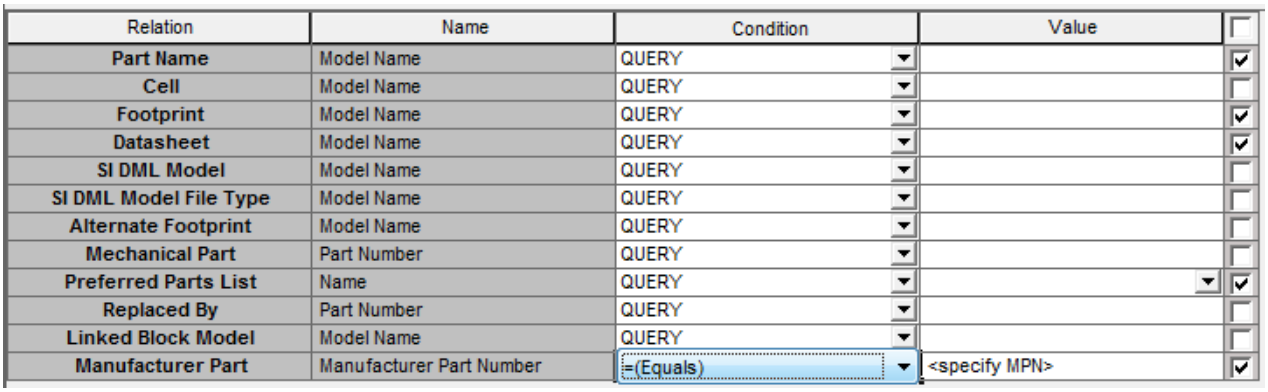
As a designer, you know which MPN you want to use in your designs. You need to find which ECAD part in your corporate libraries corresponds to the MPN you want to use. You also need to find if other MPNs from other manufacturers can be used. You can now search for an MPN directly in Part Information Manager. You do not need to search for the MPN in the component database for the corresponding ECAD part number and then search for that ECAD part number in Part Information Manager. When you search for an MPN, Part Information Manager displays the following:

- The corresponding ECAD part in the Allegro EDM library
- All the MPNs available for that ECAD part
- Names of manufacturers
- Datasheets for MPNs

To find the ECAD part that corresponds to an MNP, you can do the following:

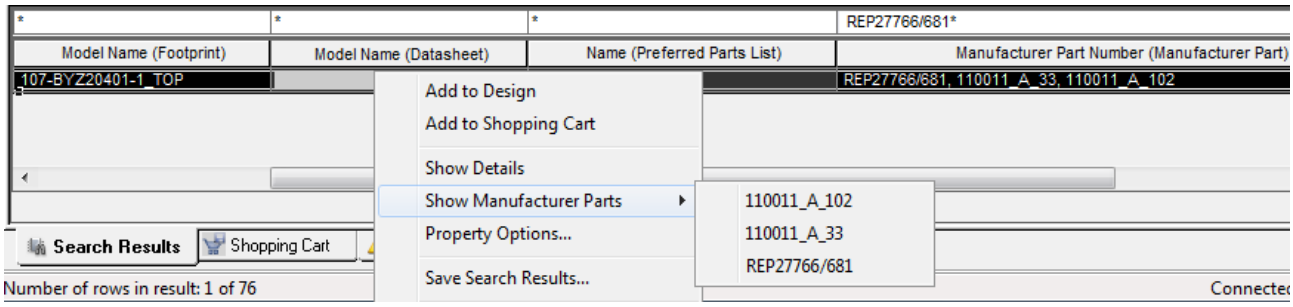
- Use free text search: Type the MPN in the free text search box and click the Search icon.
- Run a relational search: To find the ECAD part that corresponds to an MPN, do the following in the Relations tab:

  a. Specify the Manufacturer Part property.



Relation	Name	Condition	Value	
Part Name	Model Name	QUERY		☑
Cell	Model Name	QUERY		☐
Footprint	Model Name	QUERY		☑
Datasheet	Model Name	QUERY		☑
SI DML Model	Model Name	QUERY		☐
SI DML Model File Type	Model Name	QUERY		☐
Alternate Footprint	Model Name	QUERY		☐
Mechanical Part	Part Number	QUERY		☐
Preferred Parts List	Name	QUERY		☑
Replaced By	Part Number	QUERY		☐
Linked Block Model	Model Name	QUERY		☐
Manufacturer Part	Manufacturer Part Number	=(Equals)	<specify MPN>	☑

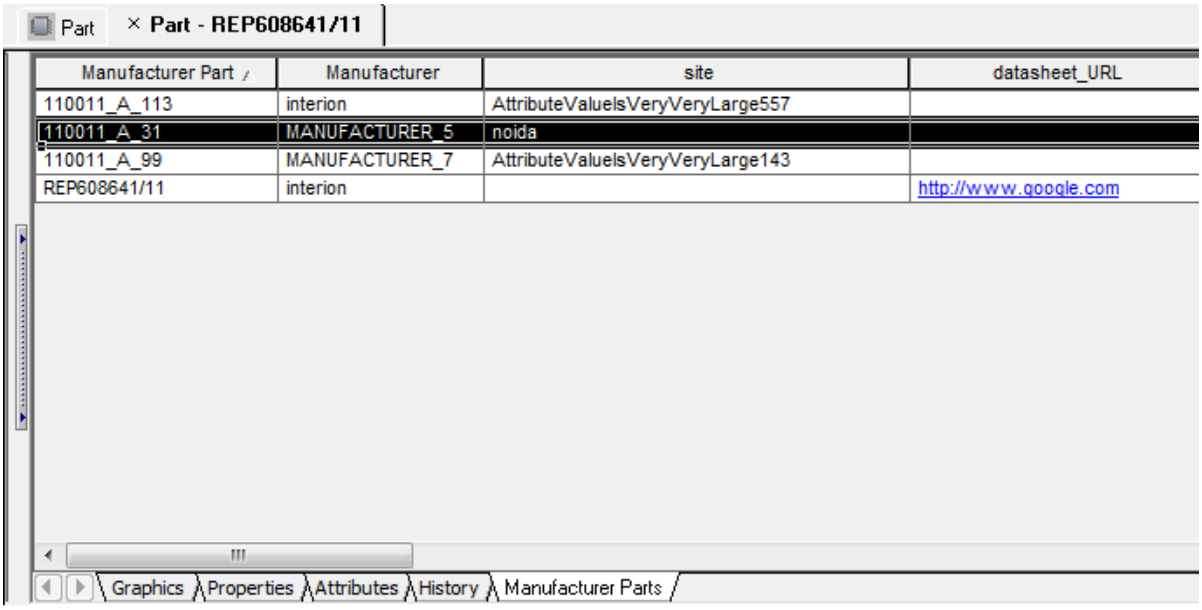
The results pane shows the parts that correspond to the MPN. You can also see other MPNs that are associated with the ECAD part.



b. Right-click and choose *Show Manufacturer Parts*.

c. Select any of the MPNs.

The <Part> tab opens with the details of all the available MPNs for the ECAD part.

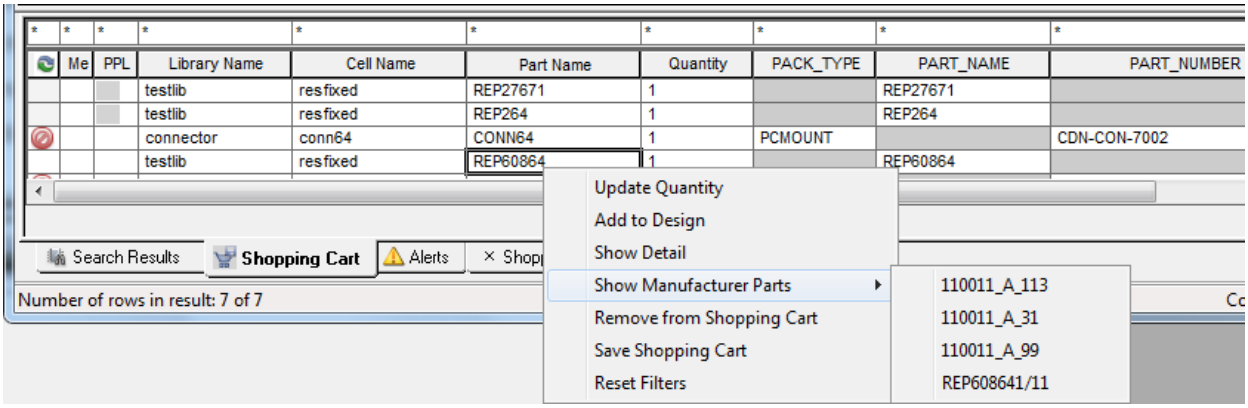


The opened tab has the rows sorted by Manufacturer Parts. By default, the MPN selected will be highlighted in the Manufacturers tab. The following is displayed:

- All the available MPNs in the database for the ECAD part
- Their manufacturers
- Links to their datasheets

- Other properties found in the database

Parts in the Shopping Cart and Shopping Lists also show MPN menu options.



a. Select the part you require.

b. Click *Add*.

The part is added to the design or shopping cart.