

# Library for Keysight ADS (for 2011 and later)

## User Manual



# 0. Contents

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1. About this manual
2. Operation environment
3. How to install
4. How to use
5. Contact

# 1. About this manual

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- This manual is for users of the design kit (the "library") that provides the parameters of Murata Manufacturing Co., Ltd. ("Murata"). It describes the operations from library installation to using the library in the schematic window.
  - Although operating the Library in accordance with this manual can basically perform the required operations, some operations may differ partially depending on the environment used.

## 2. Operation environment

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- This manual is described based on the following environment. See the manuals for the PC, etc. used in the actual environment.
  - OS: Windows 7
    - It is necessary to have the administrative right to install the library.
  - ADS: ADS2011.05 – 2016.01
    - Unavailable with ADS2009U1 or previous versions

# 3. How to install (1)

The procedures for both installing in a newly created workspace and an existing workspace are described below. In both cases, the basic flow is:

- 1) Unzip the downloaded ZIP format library.
- 2) Place the folder created after unzipping in your desired folder.
- 3) Specify the "lib.defs" file in the library.

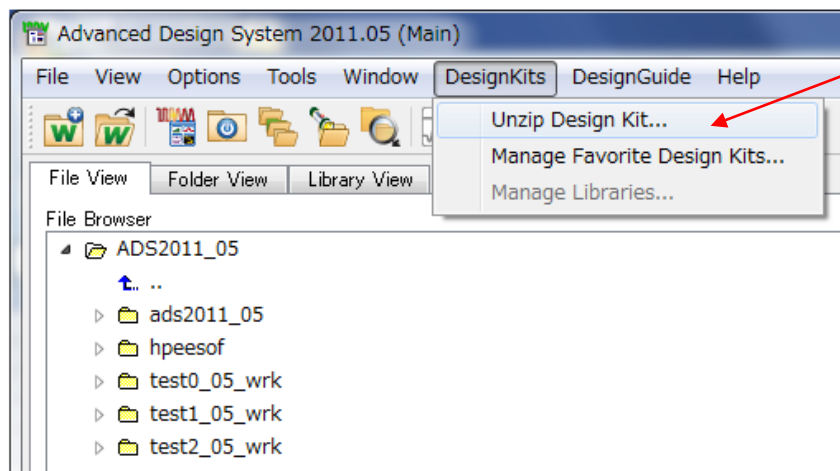
When starting installation from "Unzip Design Kit..." described below, 3) can be omitted.

## [Procedures for Installing in a Newly Created Workspace]

1. The procedure for installing before creating the workspace and after creating the workspace are described below.

1-1. Procedure for installing before creating the workspace

1-1-(1). Select "DesignKits" -> "Unzip Design Kit..." in the main window.

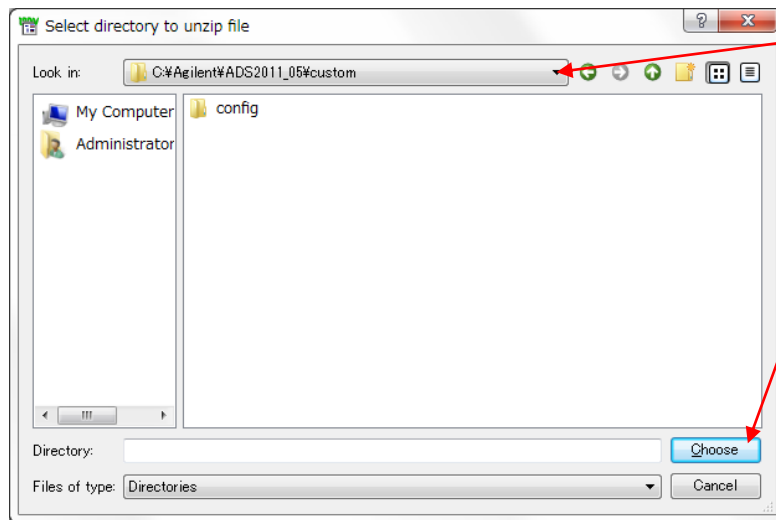


1-1-(1). Select "Unzip Design Kit..."

### 3. How to install (2)

1-1-(2). Select the folder containing the downloaded library, and then select the library.

1-1-(3). Select your desired folder for the unzipped library (example: C:\Agilent\ADS2011\_05\custom) and click “Choose”.



1-1-(3). Select your desired folder and click “Choose”.

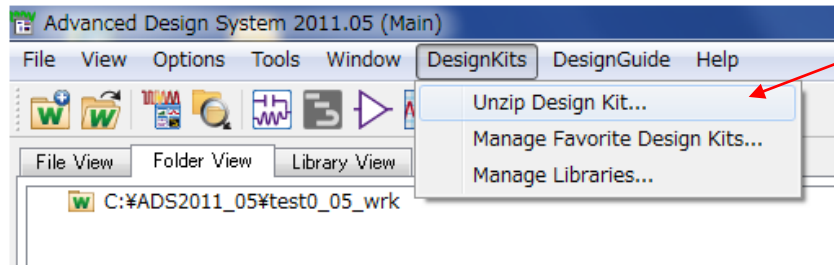
1-1-(4). Check that the “Murata\_static” folder has been created in the unzipped folder.

This completes the installation.

### 3. How to install (3)

1-2. Procedure for installing after creating the workspace

1-2-(1). Select “DesignKits” -> “Unzip Design Kit...” in the main window.

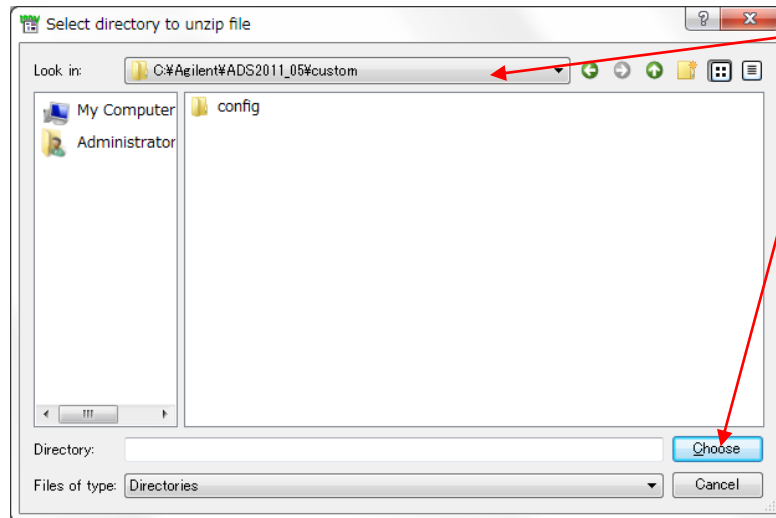


1-2-(1). Select “Unzip Design Kit...”.

1-2-(2). Select the folder containing the downloaded library, and then select the library.

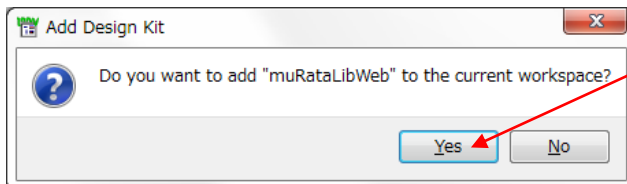
### 3. How to install (4)

1-2-(3). Select your desired folder for the unzipped library (example: C:\¥Agilent¥ADS2011\_05¥custom) and click “Choose”.



1-2-(3). Select your desired folder and click “Choose”.

1-2-(4). The “Add Design Kit” window appears. Click “Yes” in the window.



1-2-(4). Click “Yes”.

1-2-(5). Check that the “Murata\_static” folder has been created in the unzipped folder.

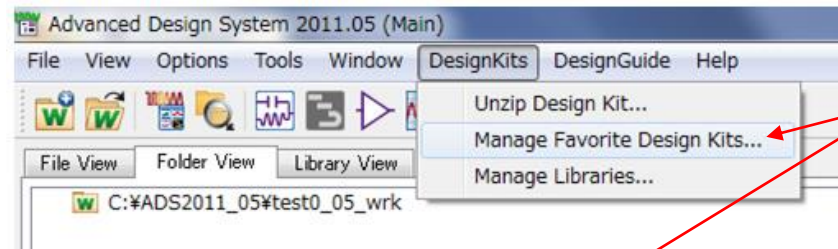
This completes the installation.

### 3. How to install (5)

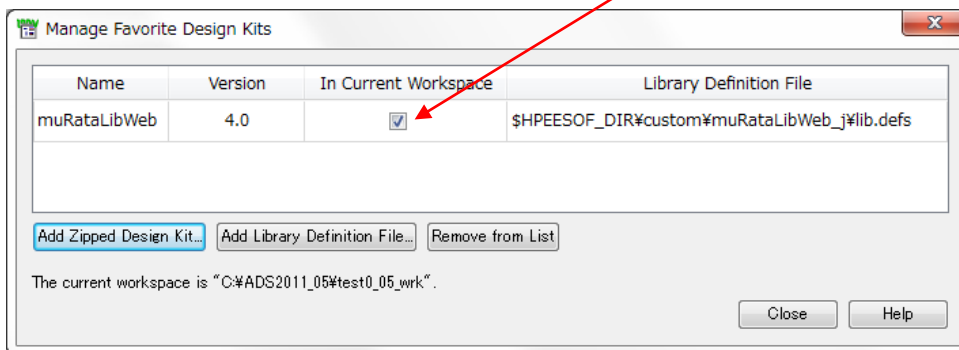
#### <Supplementary information: Confirmation of installation completion>

(1) If you install before creating the workspace at 1-1., create a new workspace.  
(Perform the same procedure if the existing workspace is opened.)

(2) Select “DesignKits” -> “Manage Favorite Design Kits...” in the main window. The “Manage Favorite Design Kits” window appears and the “In Current Workspace” item in the “muRataLibWeb” line is checked.

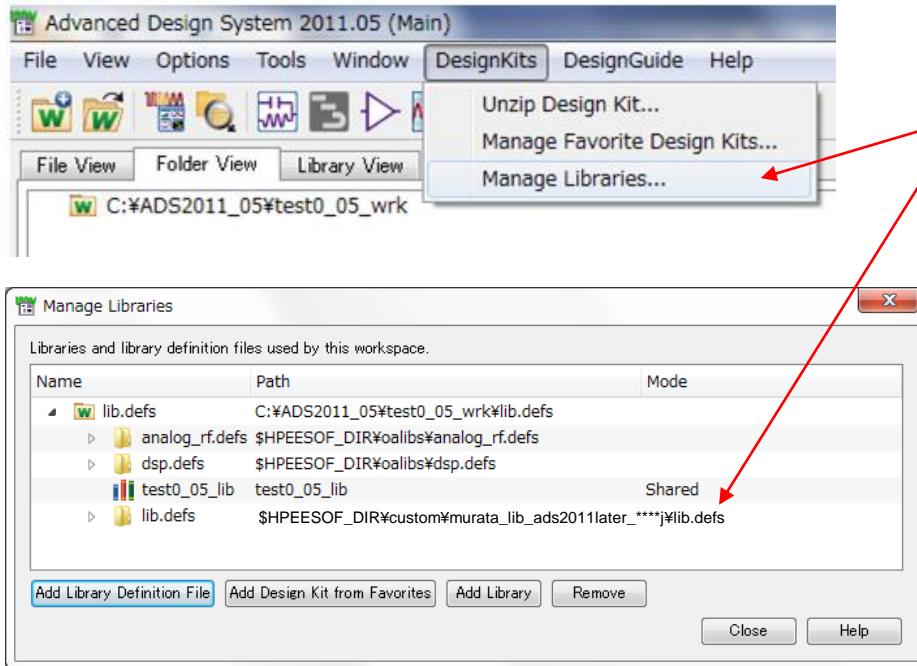


(2) When the “Manage Favorite Design Kits” window is displayed, this checkbox is selected.



### 3. How to install (6)

(3) Select “DesignKits” -> “Manage Libraries...” in the main window. The “Manage Libraries” window appears and the library path is added.



(3) When the “Manage Libraries” window is displayed, the library path has been added.

### 3. How to install (7)

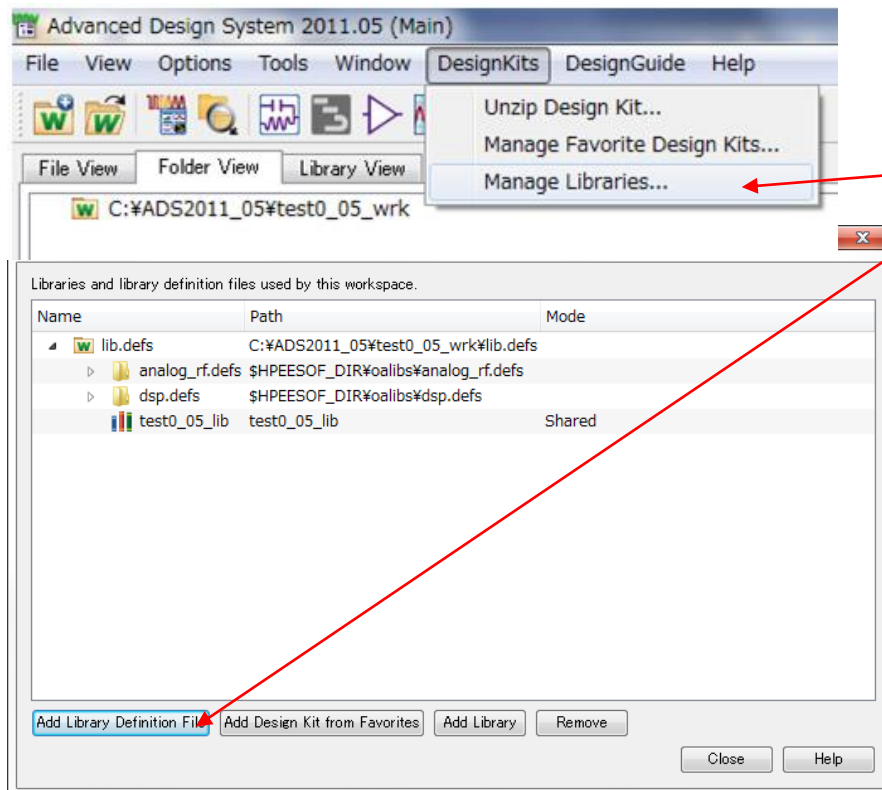
#### [Procedures for Installing in an Existing Workspace]

2. First, open an existing workspace. Two installation procedures are described below.

##### 2-1. Pattern 1

2-1-(1). Unzip the downloaded library (murata\_lib\_ads2011later\_\*.e.zip) and place the created folder "Murata\_static" into your desired folder (example: C:\Agilent\ADS2011\_05\custom).

2-1-(2). Select "DesignKits" -> "Manage Libraries..." in the main window. The "Manage Libraries" window appears. Click "Add Library Definition File".

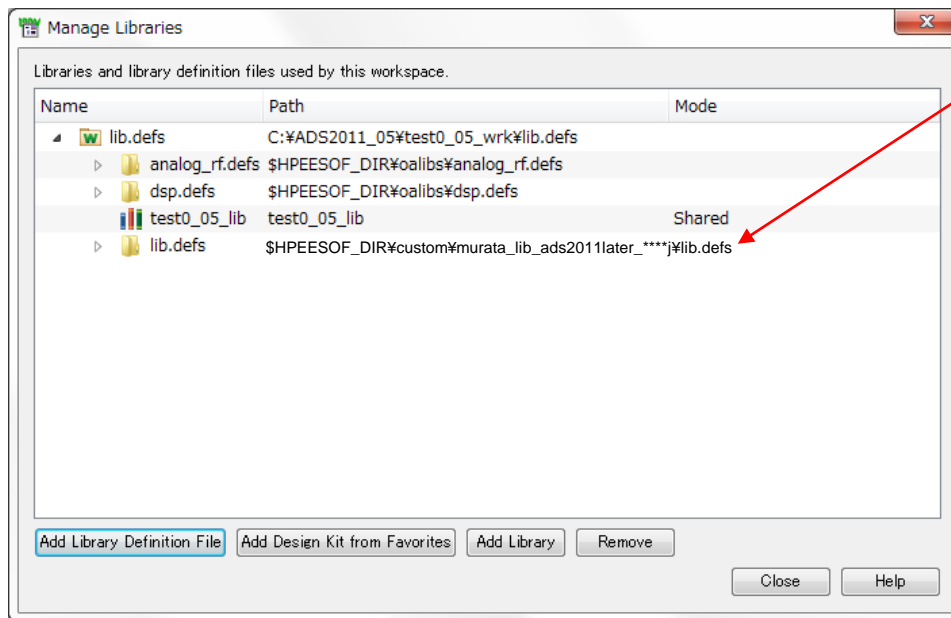


2-1-(2). Select "Manage Libraries" and click "Add Library Definition File".

### 3. How to install (8)

2-1-(3). Select the “lib.defs” file in the “Murata\_static” folder and click “Open”.

2-1-(4). The library path is added to the “Manage Libraries” window.



2-1-(4). The library path is added to the “Manage Libraries” window.

This completes the installation.

### 3. How to install (9)

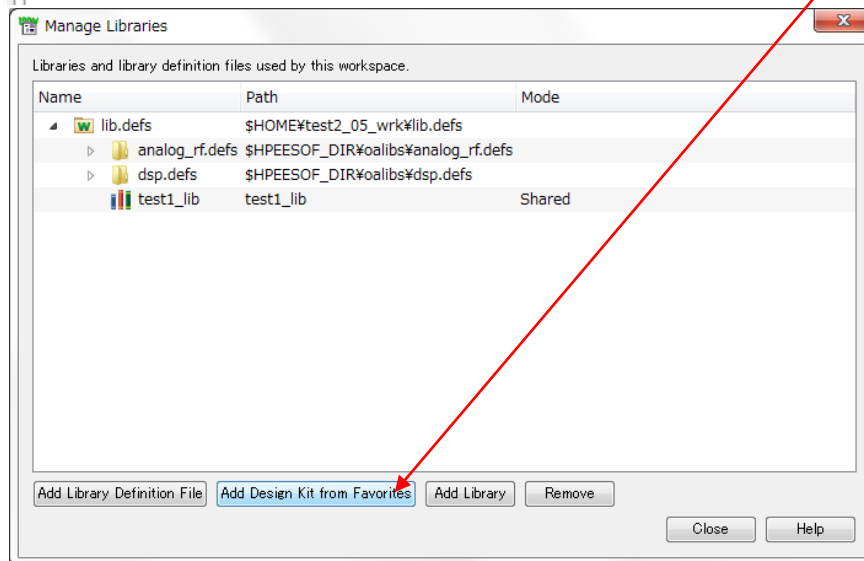
#### 2-2. Pattern 2

2-2-(1). Unzip the downloaded library (murata\_lib\_ads2011later\_\*.zip) and place the created folder “Murata\_static” into your desired folder (example: C:\¥Agilent¥ADS2011\_05¥custom).

2-2-(2). Select “DesignKits” -> “Manage Libraries...” in the main window. The “Manage Libraries” window appears. Click “Add Library Definition File”.

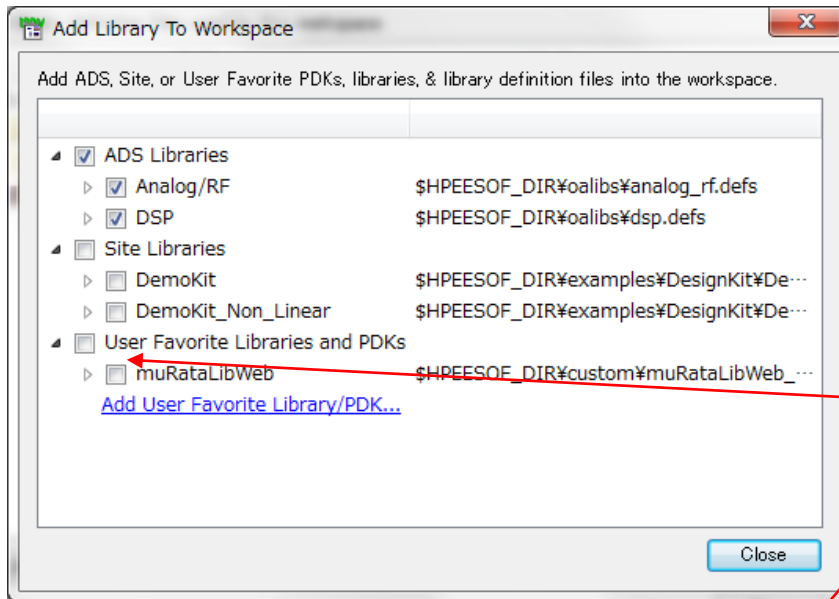


2-2-(2). Select “Manage Libraries” and click “Add Design Kit from Favorites”.

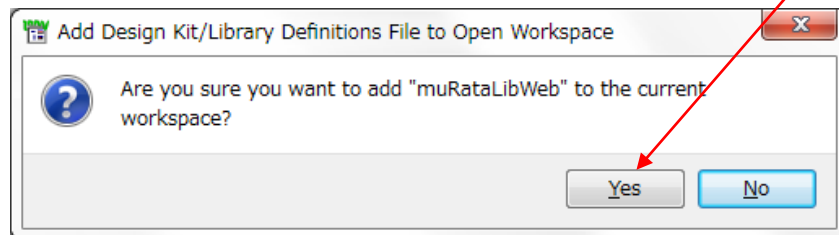


### 3. How to install (10)

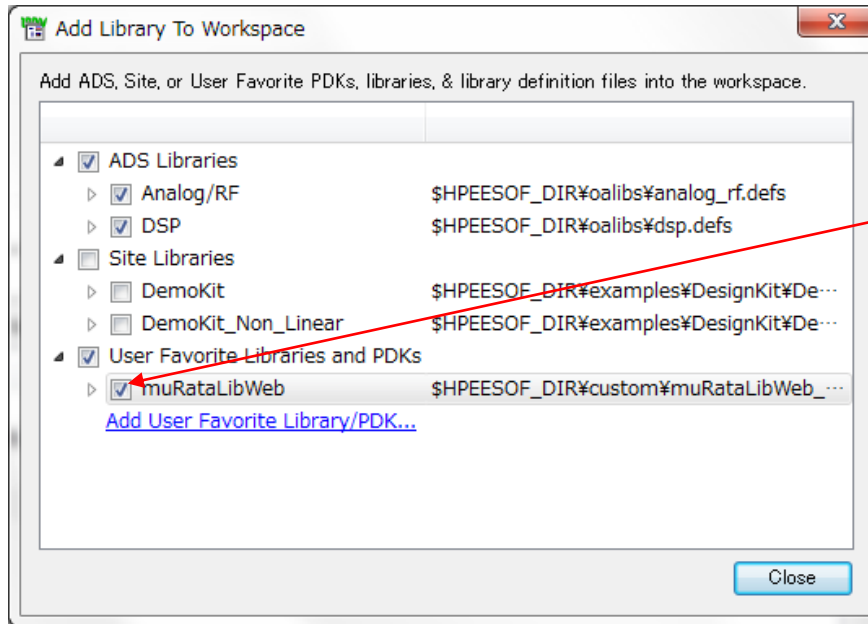
2-2-(3). If there is a library you want to install in the displayed window, select the checkbox (if not, go to 2-2-(4)). Click “Yes” on the confirmation window.



2-2-(3). Select the checkbox for the library you want to install. Click “Yes” on the confirmation window.



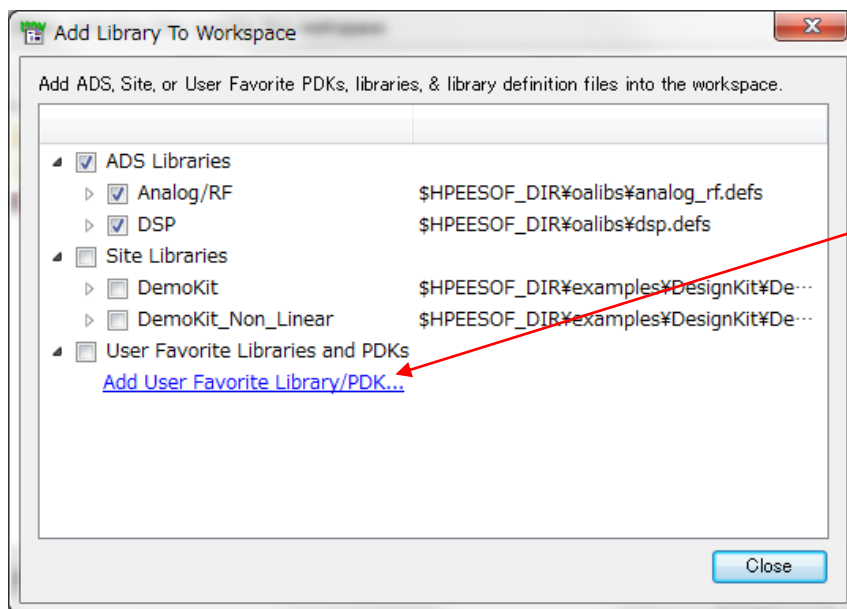
### 3. How to install (11)



This completes the installation.

### 3. How to install (12)

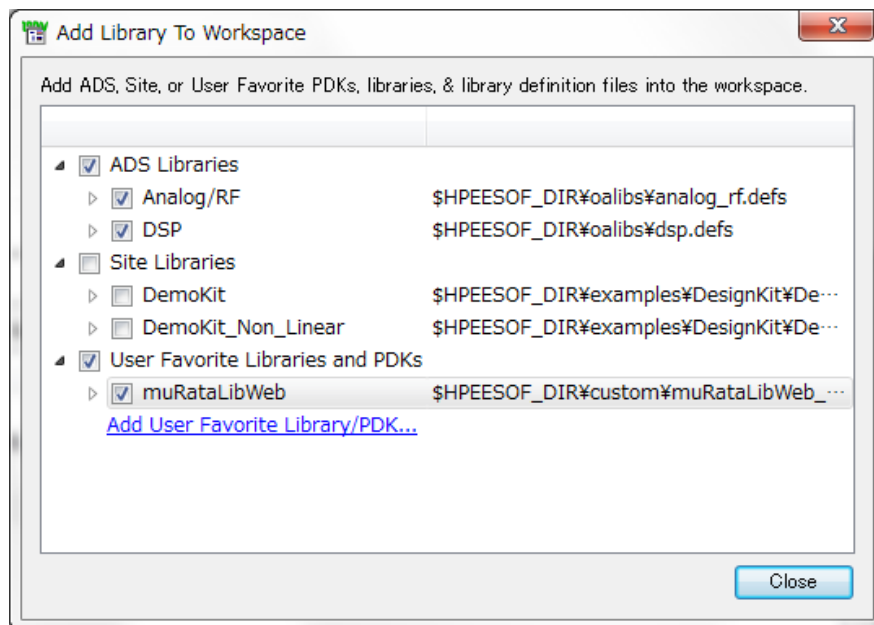
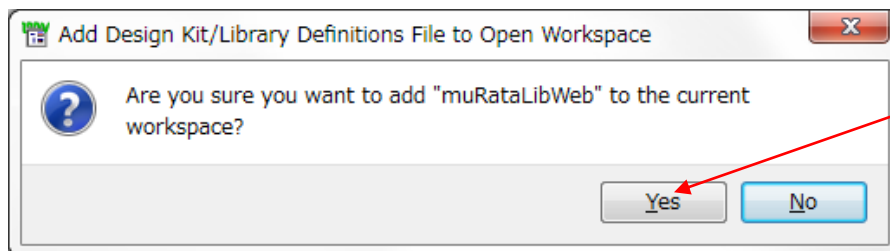
2-2-(4). If you cannot find the library you want to install on the window of 2-2-(3) above, click “Add User Favorite Library/PDK...” on the same window.



2-2-(4). Click “Add User Favorite Library/PDK...”.

### 3. How to install (13)

2-2-(5). Select the “lib.defs” file in the “Murata\_static” folder. And click “Yes” on the confirmation window.



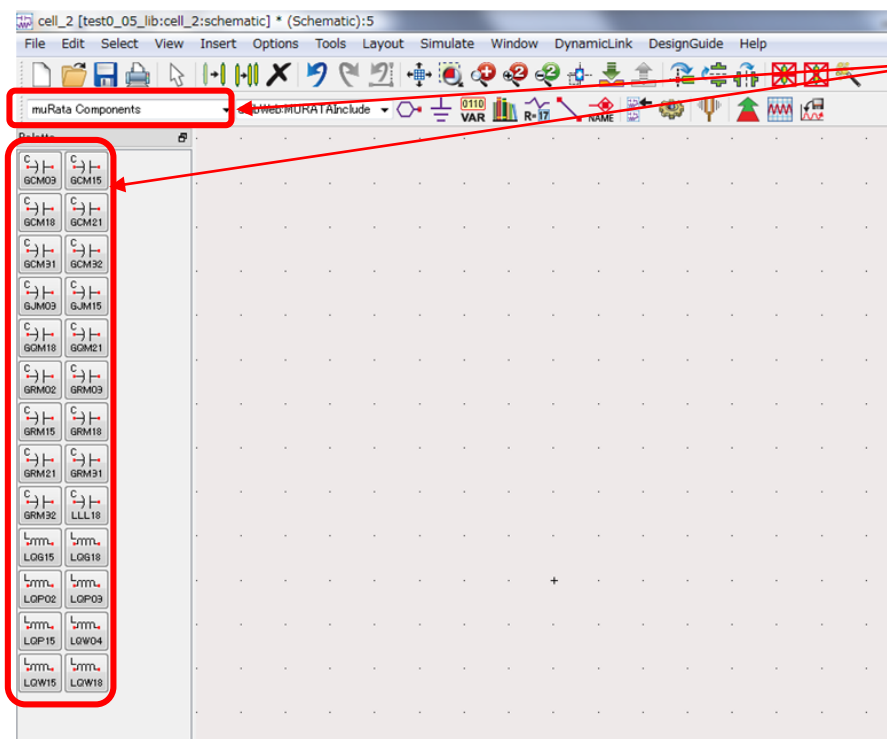
This completes the installation.

## 4. How to use (1)

This section describes how to place the components required for using the Murata library, including “NETLIST INCLUDE”, on the schematic window, and how to select products within the components.

### 1. How to place the Components

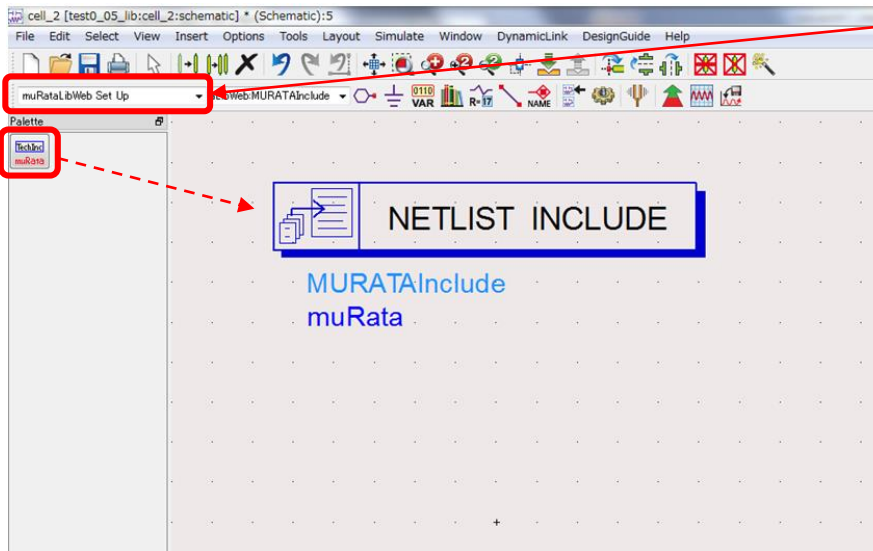
1-(1). In the schematic window shown immediately after startup, the Murata product palette is displayed in the palette list on the left side.



1-(1). The Murata product palette list is displayed as default.

## 4. How to use (2)

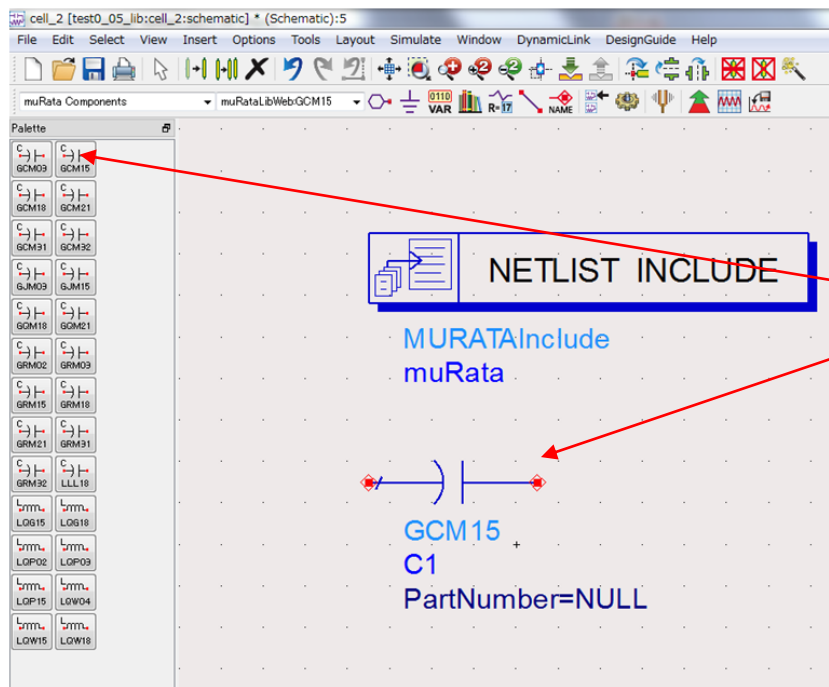
- 1-(2). Change the palette list from “muRata Components” to “muRataLibWeb Set Up”. After selecting the displayed palette, move the cursor onto the schematic window and click again to place the “NETLIST INCLUDE” component.



- 1-(2). Change the palette list and place the “NETLIST INCLUDE” component.

## 4. How to use (3)

- 1-(3). Return the palette list from “muRataLibWeb Set Up” to “muRata Components”. Using the same procedure as 1-(2), click your desired palette, and then move the cursor onto the schematic window and click again to place the component (the operation mode continues even after placed, but it can be released by pressing the ESC key).

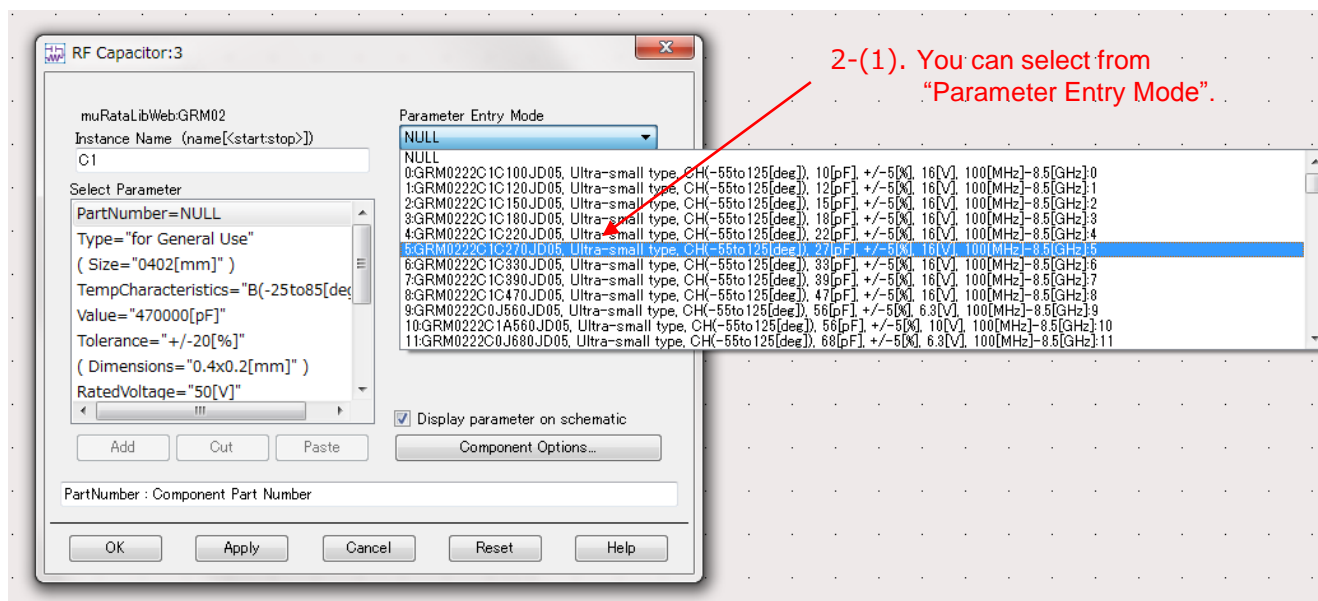


1-(3). You can place components using the same procedure as 1-(2) above.

## 4. How to use (4)

### 2. How to select products

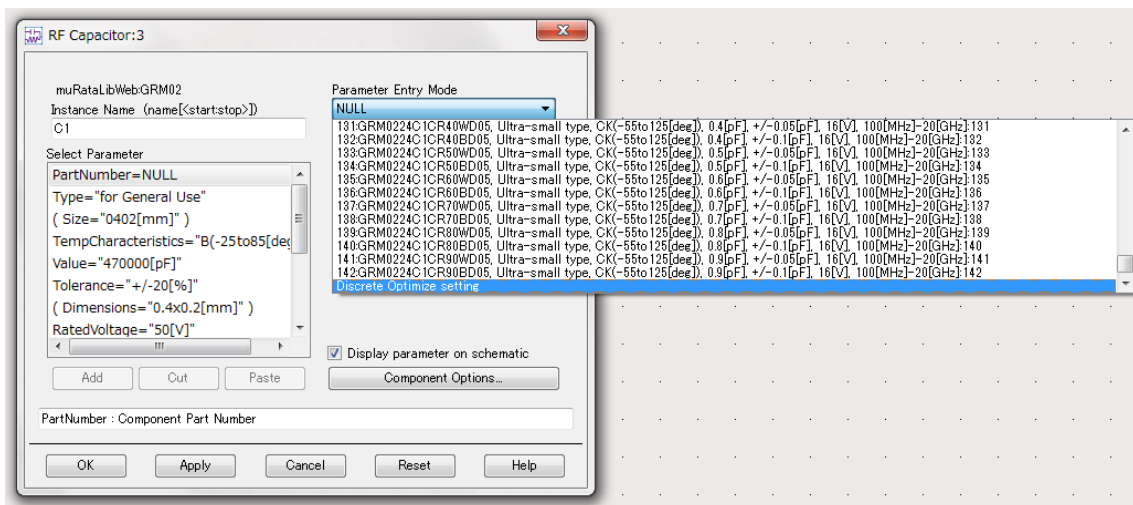
- 2-(1). Double-click a component to display the setting window. You can select products from the part number list of "Parameter Entry Mode" on the upper right corner.



## 4. How to use (5)

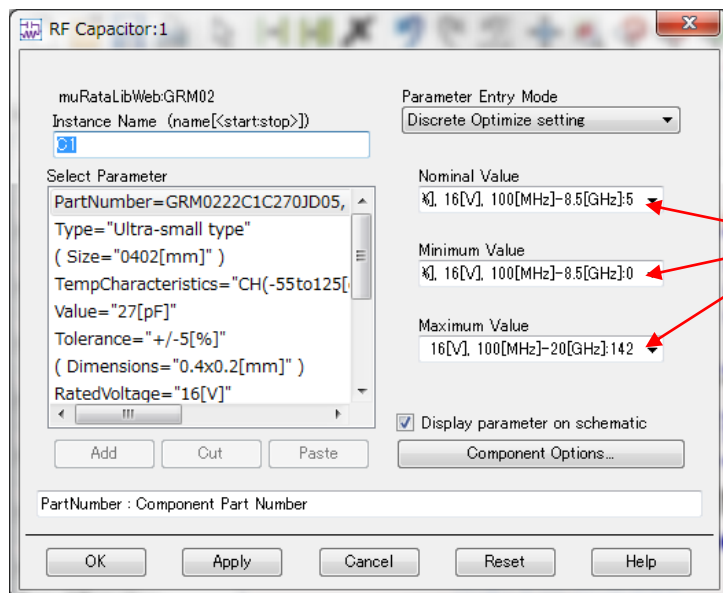
### 3. How to use Discrete Optimize function

- 3-(1). Double-click a component to display the settings window. Select “Discrete Optimize setting” at the bottom of the part number list of “Parameter Entry Mode” on the upper right corner.



## 4. How to use (6)

3-(2). The “Nominal Value”, “Minimum Value” and “Maximum Value” items are displayed. By specifying each of these items, you can use the Discrete Optimize function.



3-(2). Specify each item.

## 5. Contact

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- For inquiries concerning this library, please go to the following inquiry form on our website.
  - <https://www.murata.com/contactform>

# Library for Keysight ADS Tolerance Model

User Manual appendix  
01 Oct 2018



# 0.Contents

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1. About this manual
2. Operation environment
3. How to use

# 1.About this manual

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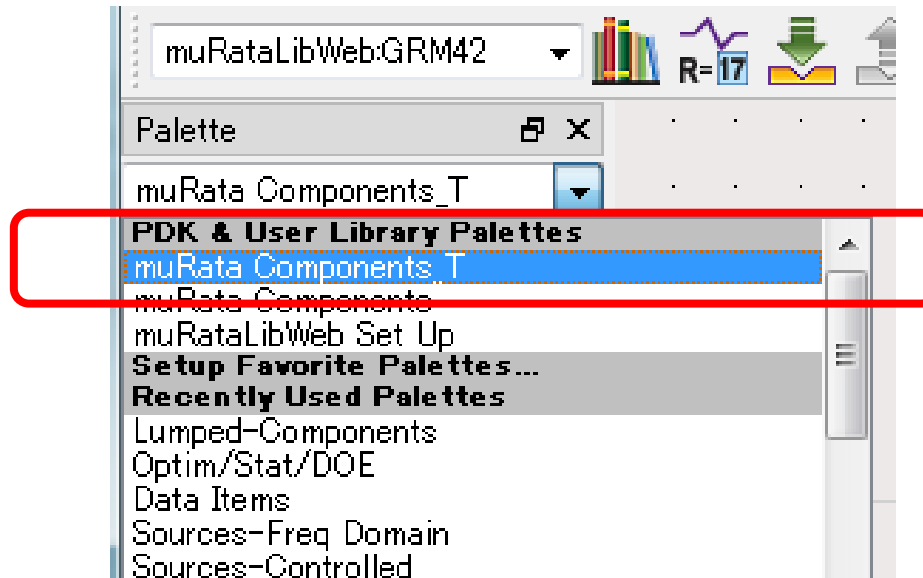
- This manual is supplemental explanation about "Tolerance model" added to the "Library for Keysight ADS".
- Tolerance model reflects the upper and lower tolerance in capacitance MLCC. It is used in Monte Carlo simulation etc.
  - Although operating the Library in accordance with this manual can basically perform the required operations, some operations may differ partially depending on the environment used.

## 2.Operation environment

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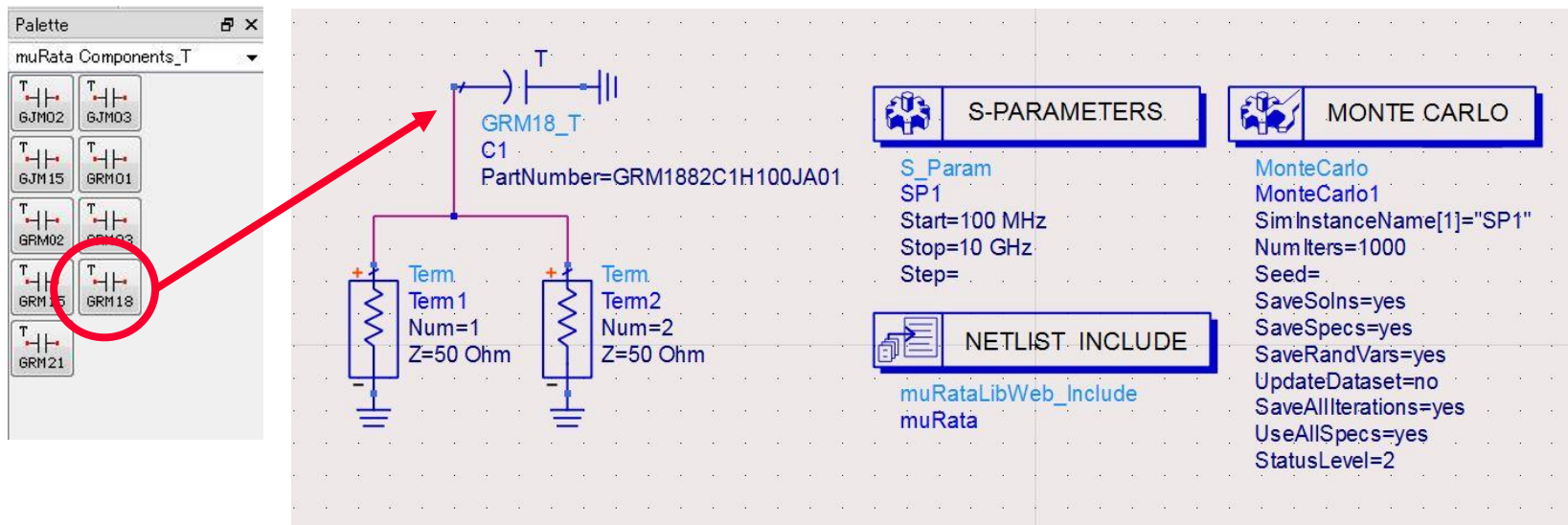
- When you installed "Library for Keysight ADS", Tolerance model is available at the same time.

### 3. How to use(1)



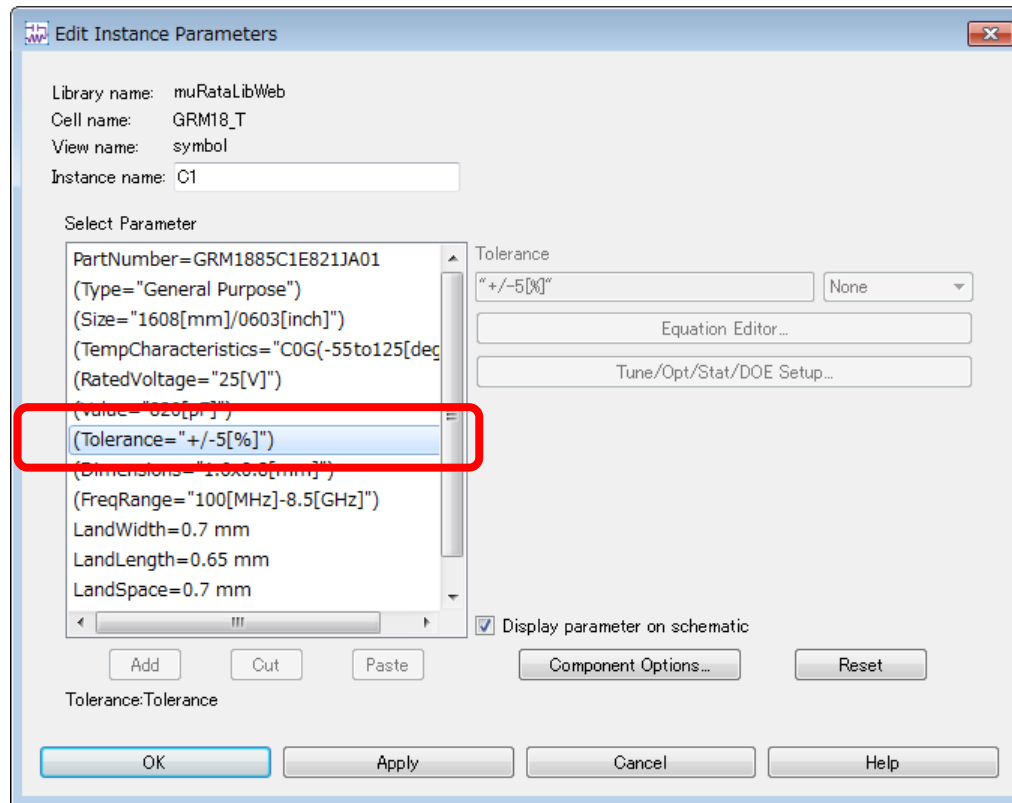
- In the schematic window, palette of Tolerance model(muRata\_Components\_T) is included.

### 3. How to use(2)



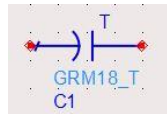
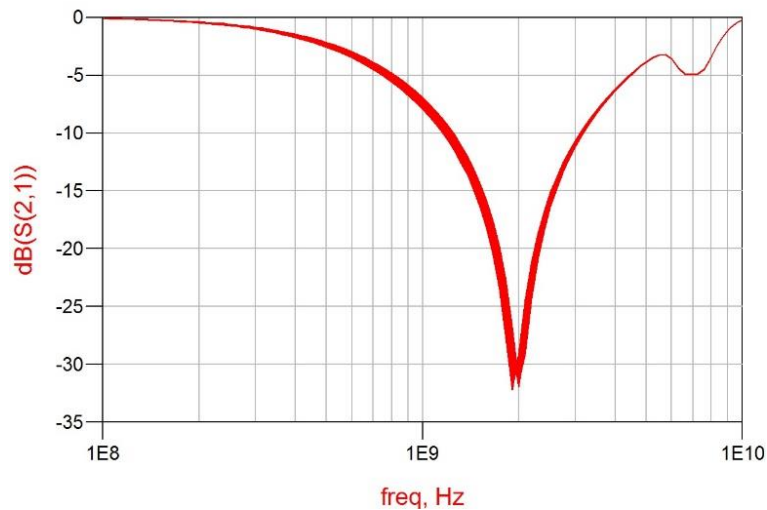
- Tolerance model components can be placed the schematic as well as traditional MLCC model.
- To identify, the names or icons have "T".

### 3. How to use(3)

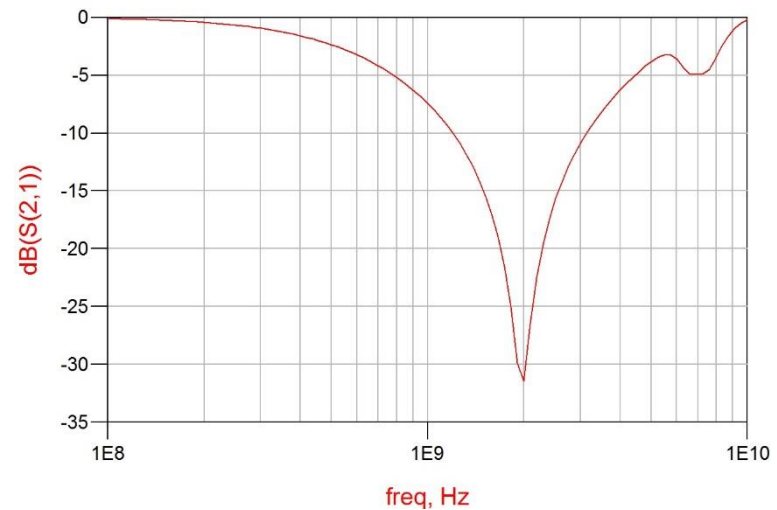


- The setting window is similar to the traditional one.
- Capacitance changes randomly within the Tolerance shown here.

### 3. How to use(4)



Result of Tolerance model.



Result of traditional model.

- This is an example of the MonteCarlo simulation.
- As the line in the graph has a width, the variation caused by tolerance is recognized.