

# ANSYS Electronics Desktop Circuit Simulator

(The former ANSYS  
Designer/Nexxim)

User Manual





# 0. 目次

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1. About this manual
2. Operation environment
3. How to install
4. How to use
5. What to do if you can't install a library
6. 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 10
  - ANSYS Electronics Desktop Circuit Simulator: 2019R3 or later

### 3. How to install (1)

- Unzip the download file.
- Copy the whole "Murata" folder into <ANSYS Installation Folder>/userlib. \*

ANSYS® Electronics Desktop Circuit  
シミュレータ - ライブラリ

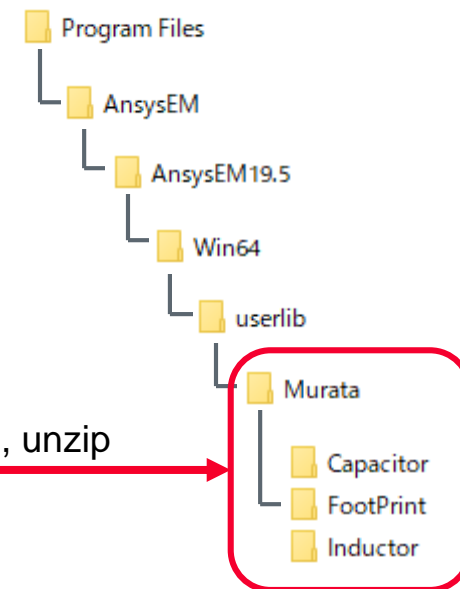
ANSYS Electronics Desktop Circuit シミュレータは、ANSYS社の高周波電磁界、回路&システム統合設計ツールです。  
本ライブラリは、同シミュレータ専用で使用できる当社製品のコンポーネントライブラリです。

概要

ダウンロードには生産を終了している部品が含まれる場合があります。最新の生産状況についてはお問い合わせください。

上記に同意してダウンロード ↓

Download, unzip

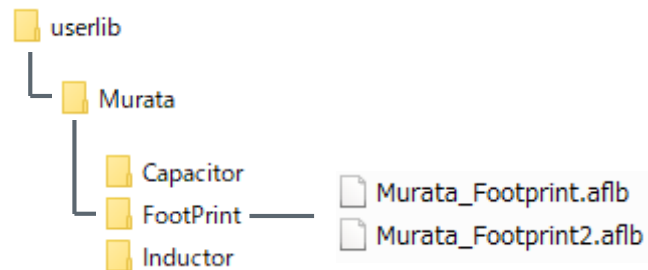


\*If "Murata" folder of previous version exists, delete it in advance.

# 3. How to install (2)

<About FootPrint data>

- FootPrint data is of two types namely; FootPrint and FootPrint2. FootPrint data is written in units of mm.
  - FootPrint: minimum external terminal width  
ex) <http://psearch.en.murata.com/capacitor/product/GRM329B11H103JA01%23.html>
  - FootPrint2: land pattern size  
ex) <http://search.murata.co.jp/Ceramy/image/img/A01X/G101/ENG/GRM329B11H103JA01-01.pdf> (p.26)



Note: **Please make a choice** between two FootPrint data, so delete or rename FootPrint file you don't use in installation folder. (ex "Murata\_Footprint.aflb" -> "Murata\_Footprint.aflb.bak")

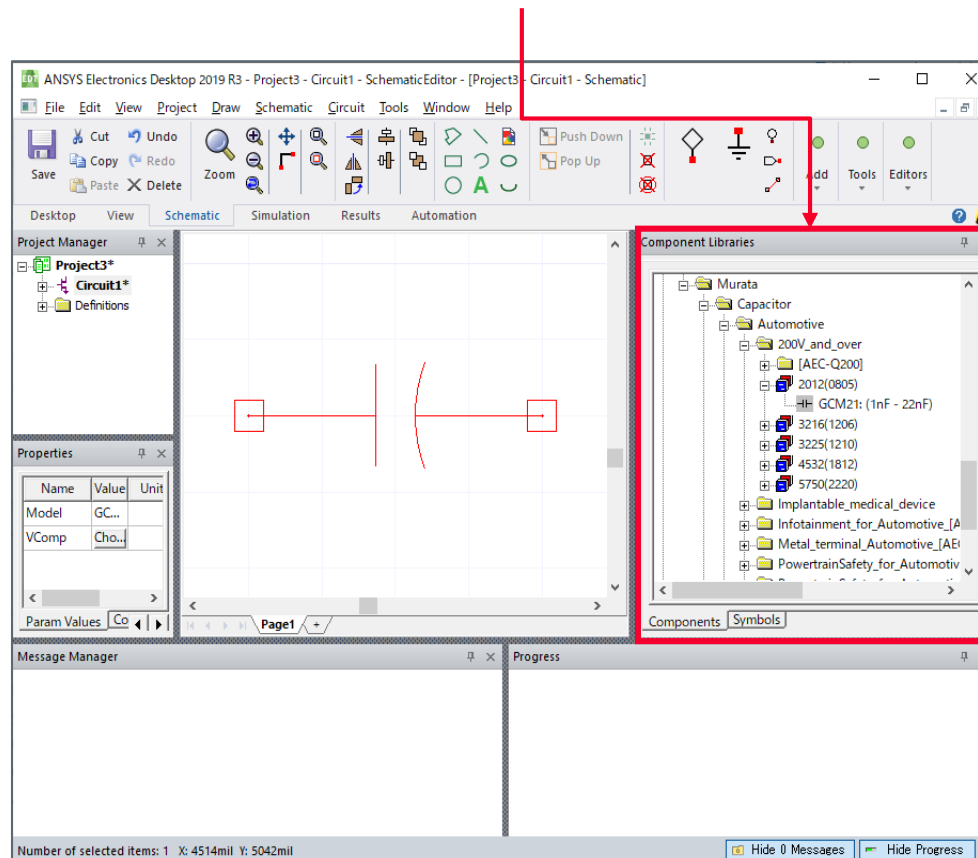
- This completes the installation of the library.

**\*Because of the administrator permission, the library may not install correctly. In that case, please refer to p.14,15.**

# 4. How to use (1)

<Selecting Components>

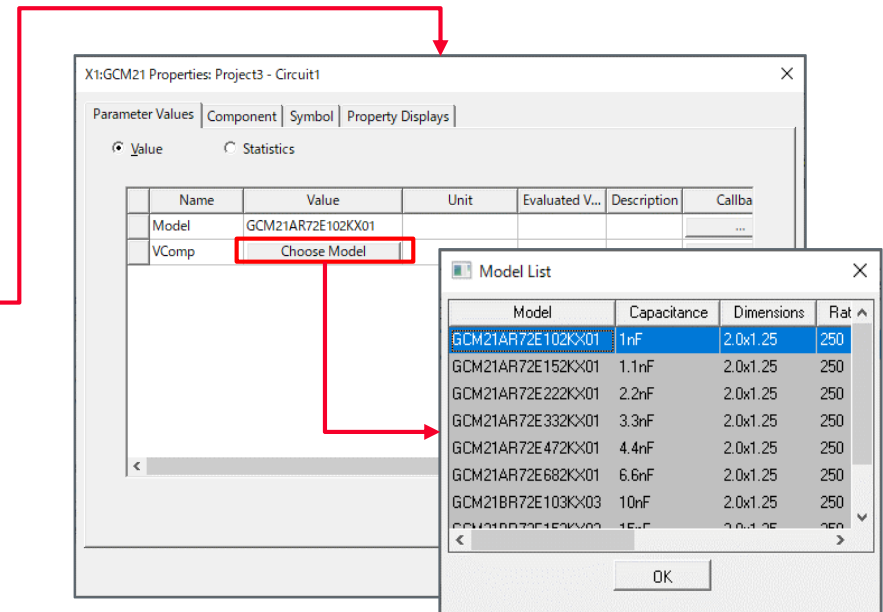
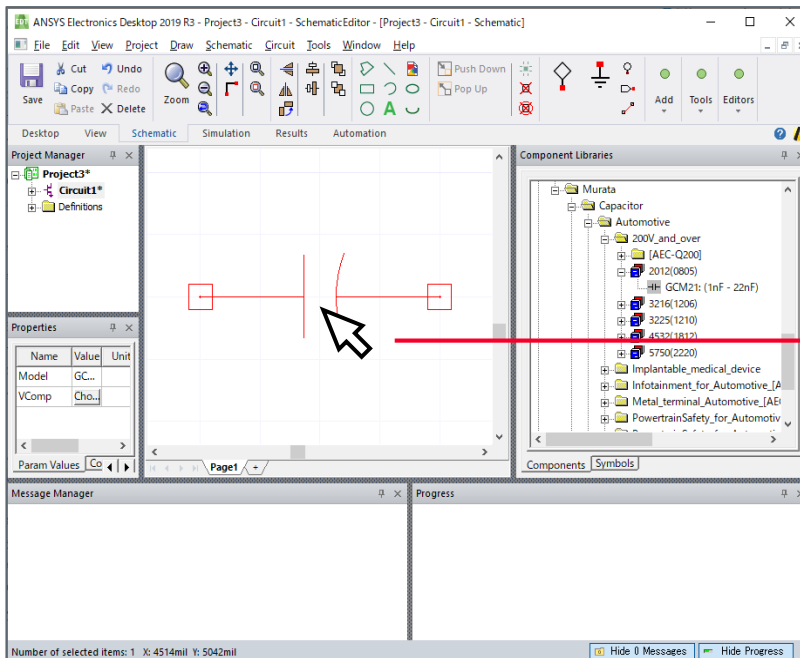
Choose a component from  
Component Library > Components Tab > User Libraries > Murata.



# 4. How to use (2)

## <Selecting Components>

Open properties window by double-clicking over the component. Choose a model number you want from “Choose Model” button.





## 4. How to use (3)

### <Displaying Simulation Results>

Here is an example to conduct an analysis for the S-parameter of a single component.

1. Start Ansys Electronics Desktop.
2. Click “Circuit” button in Desktop ribbon.(Fig.4-1)  
When the board information is requested, select None and click OK.

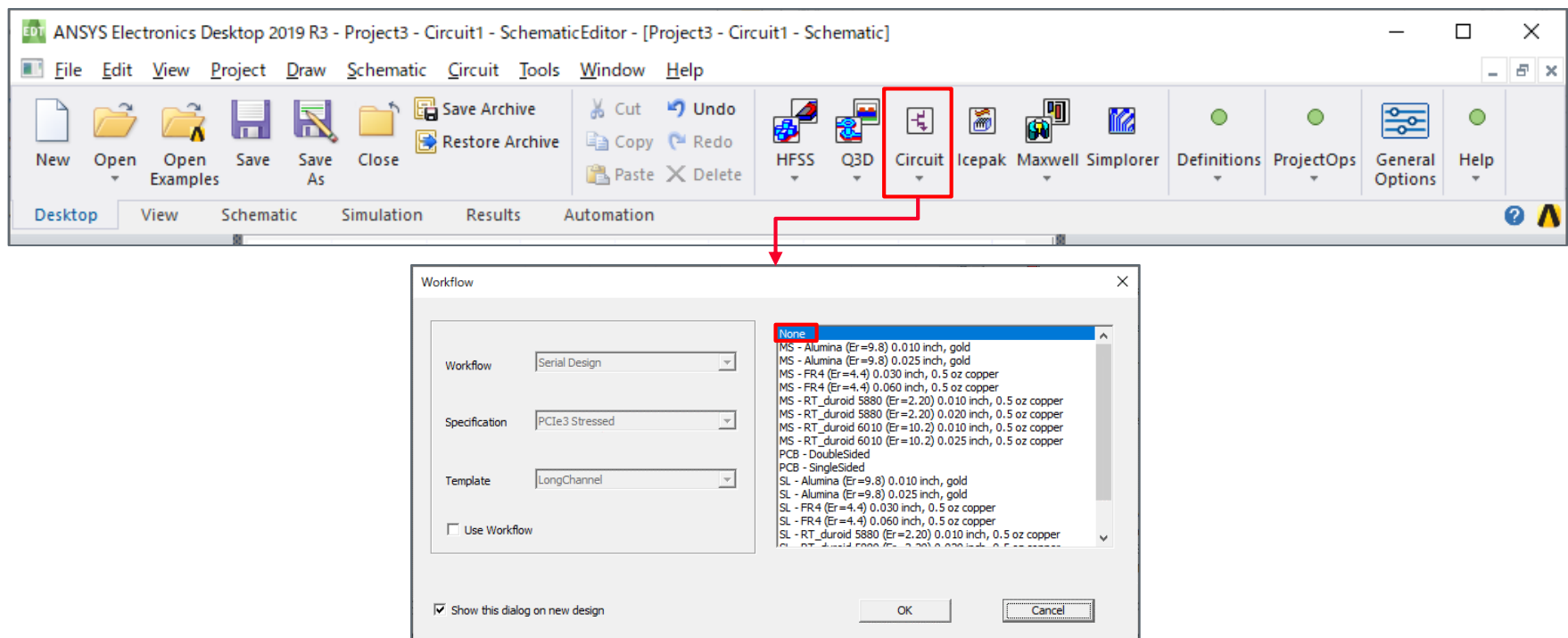


Fig. 4-1 Desktop ribbon

## 4. How to use (4)

### <Displaying Simulation Results>

3. Put an arbitrary component from Component Library > Components Tab > User Libraries > Murata.
4. Connect Ports to the component.(Fig.4-2)

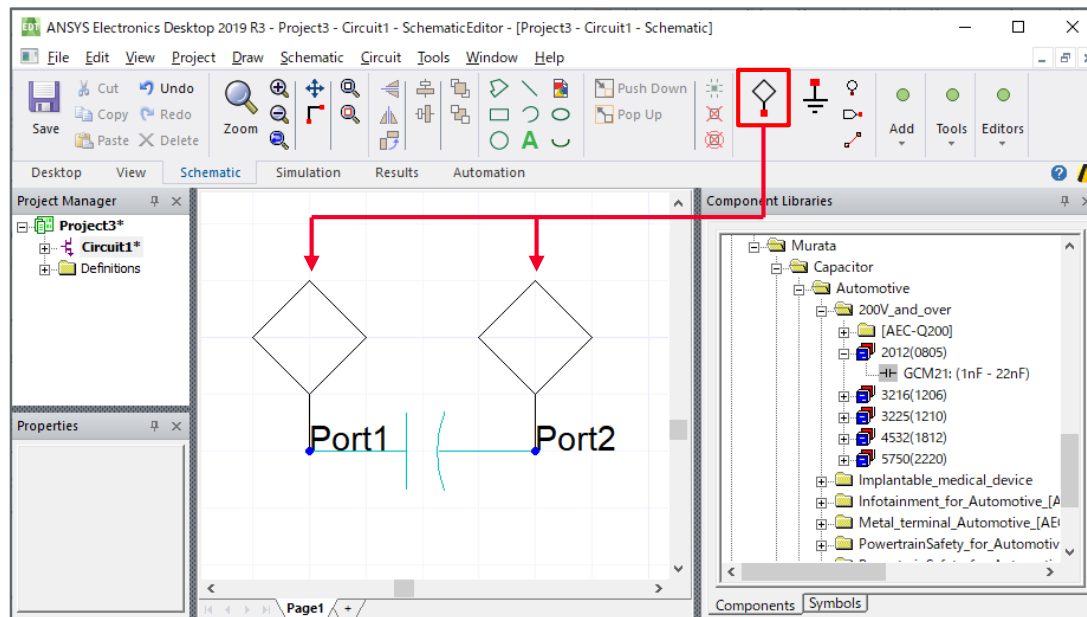


Fig. 4-2 Schematic ribbon

# 4. How to use (5)

## <Displaying Simulation Results>

5. Click “LNA” button in Simulation ribbon.(Fig.4-3)

6. Click “add” button.(Fig.4-4), and enter analysis conditions.(Fig.4-5)

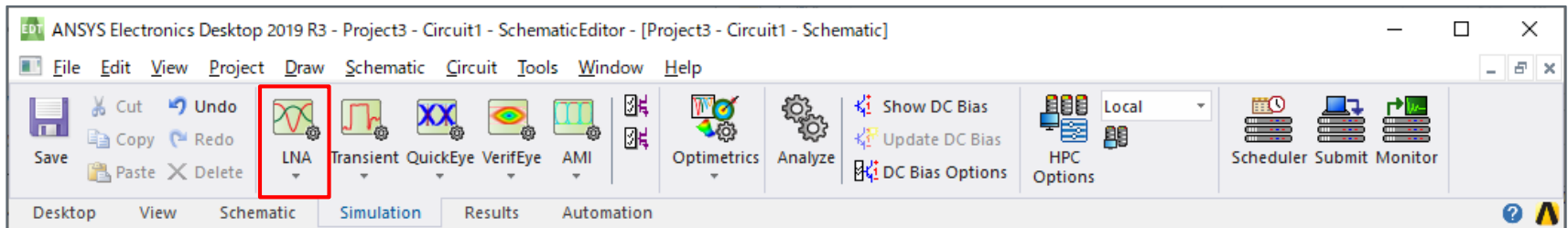


Fig. 4-3 Simulation ribbon

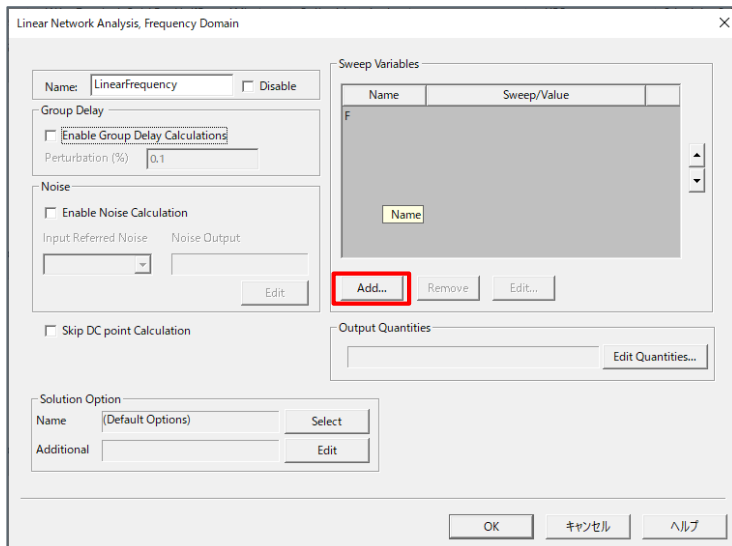


Fig. 4-4 analysis condition

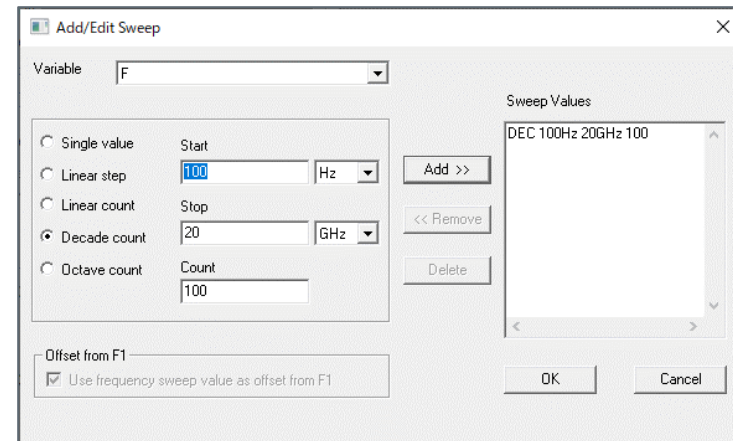


Fig. 4-5 frequency condition

## 4. How to use (6)

<Displaying Simulation Results>

7. Click “Analyze” button.(Fig.4-6)

8. Click Standard Report > 2D in Results ribbon.(Fig.4-7)

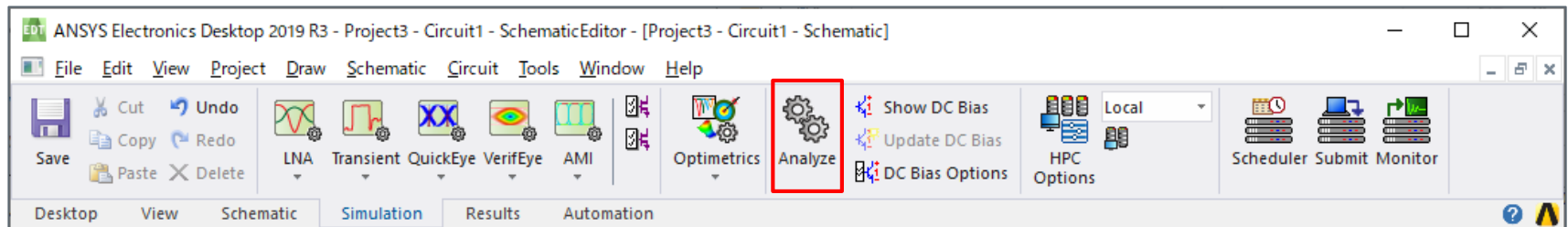


Fig. 4-6 Run Analyze

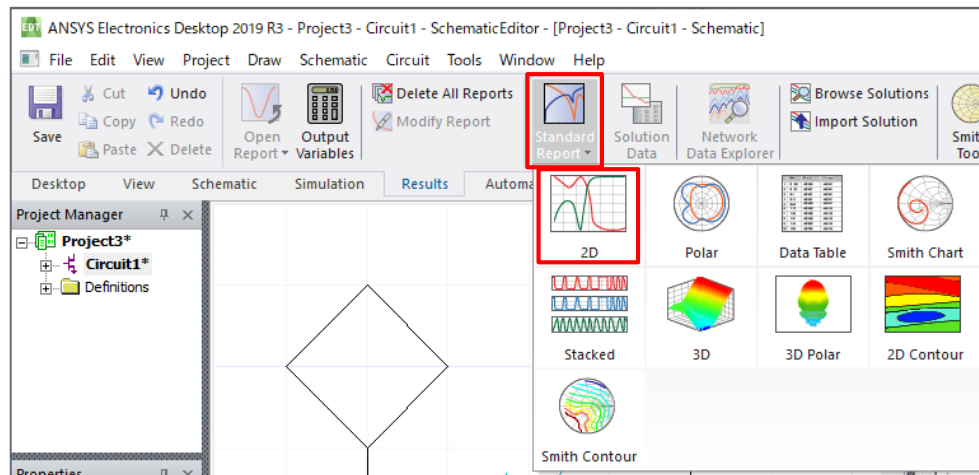


Fig. 4-7 Results ribbon

# 4. How to use (7)

## <Displaying Simulation Results>

9. Choose the parameters you want show. In this case, chose  $S_{11}$  and  $S_{21}$ .(Fig.4-8)

10. The analysis results are displayed.(Fig.4-9)

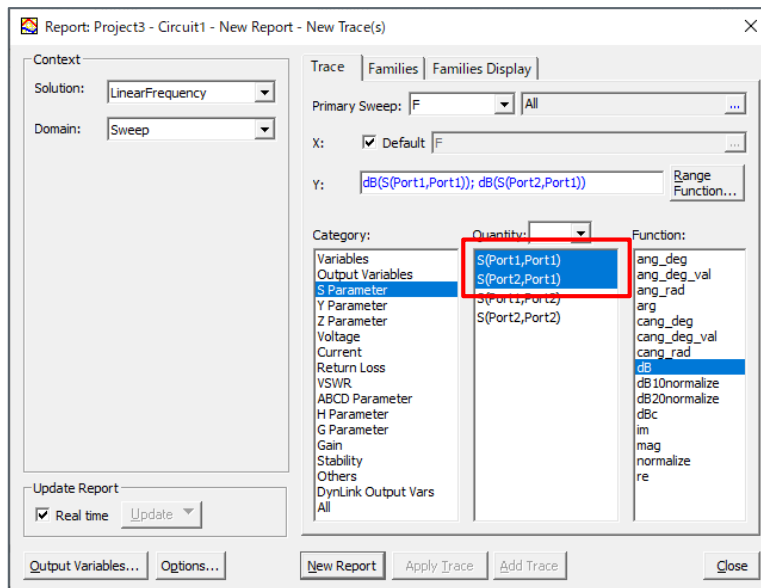


Fig. 4-8 Report window

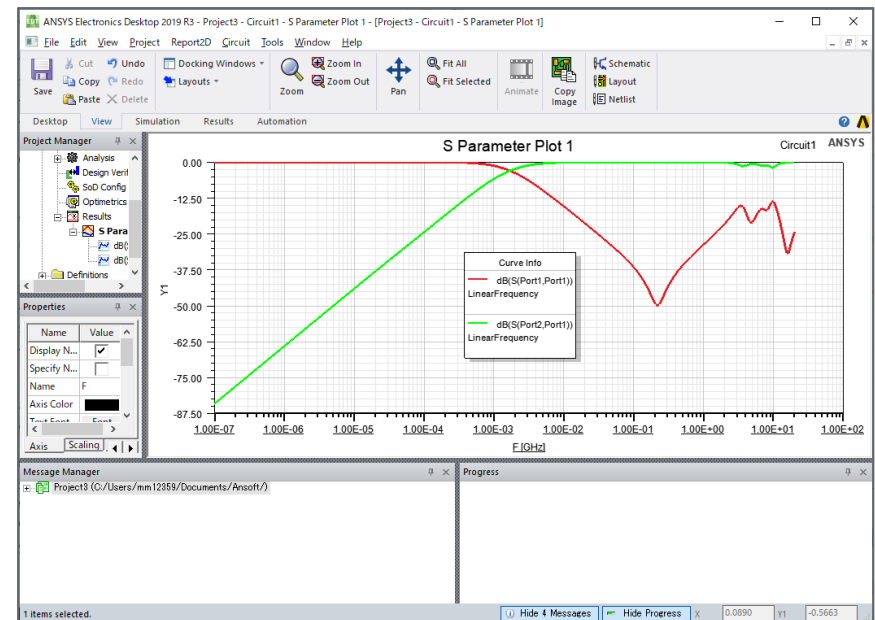


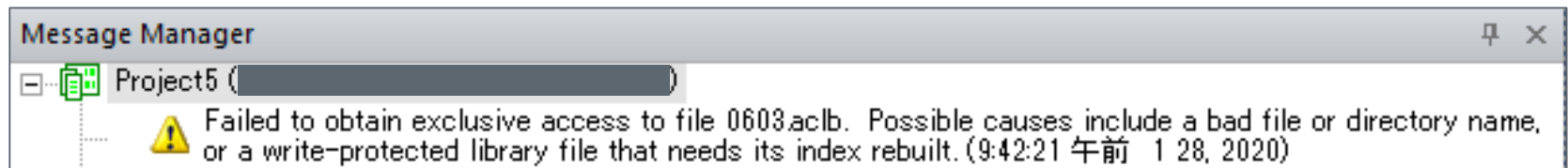
Fig. 4-9 Results

# 5. What to do if you can't install a library (1)

※Please refer to the following procedure when the procedure in p.5~6 doesn't work.

<Symptom>

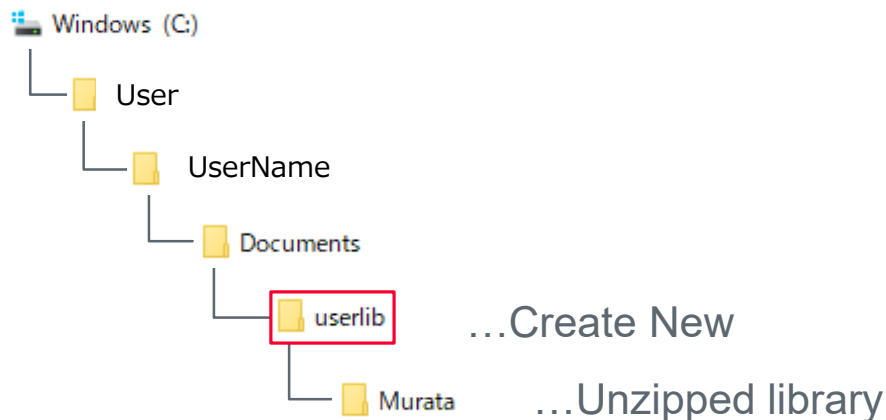
When Ansys Electronics Desktop starts, the error message is shown and the library isn't installed.



<Measure>

1. Create "userlib" folder under the directory where the administrator permission exists and save the library downloaded from our web site.

Ex.) C:¥Users¥<UserName>¥Documents¥userlib¥Murata



# 5. What to do if you can't install a library (2)

<Measure>

2. Start Ansys Electronics Desktop.
3. Click Tools > Options > General Options.(Fig.5-1)
4. Select “userlib” folder in Directories > UserLib box. (Fig.5-2)
5. Restart Ansys Electronics Desktop.

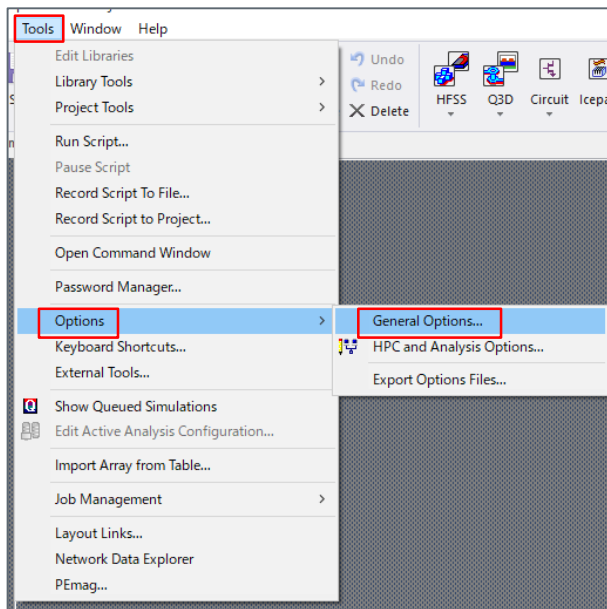


Fig.5-1 General Options

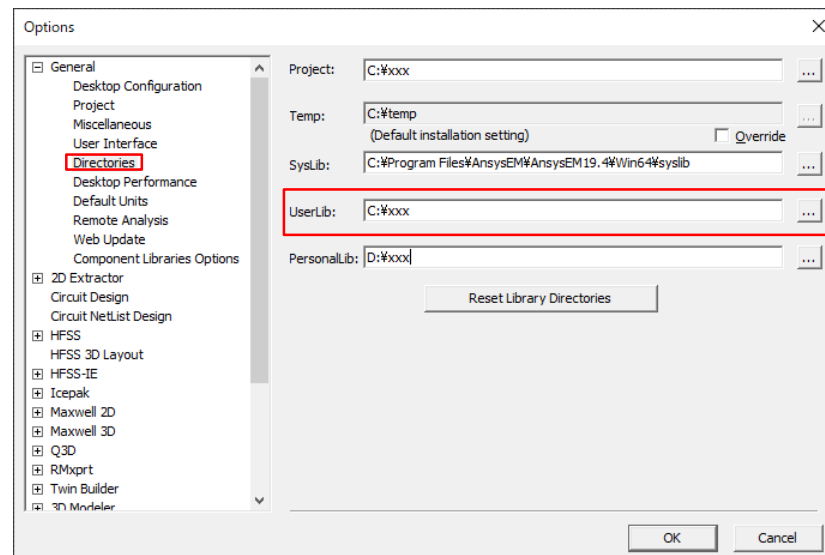


Fig.5-2 Select UserLib box

## 6. 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>