

Design Kit (for Agilent ADS)

User's Manual

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How to Use This Manual

To gain a general understanding of functions, read this manual in the order of the CONTENTS. The mark “<R>” shows major revised points. The revised points can be easily searched by copying an “<R>” in the PDF file and specifying it in the “Find what:” field.

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<R> 1. INTRODUCTION

This manual describes how to use the design kit (kit that provides the device model parameters and layout information for Renesas Electronics High Frequency Devices 2SC/NE series or μP series for use in ADS, hereafter referred to as “design kit”) from installation to performing simulation on the ADS schematic screen.

Although the required operations can basically be performed by operating the design kit in accordance with the figures in this manual, some operations may differ partially depending on the environment used.

This manual is described based on the following environment. See the manuals for the PC, etc. used in the actual environment.

(Design kit supporting ADS) ADS2002C, ADS2003A, ADS2003C or later

<Environment used in this manual>

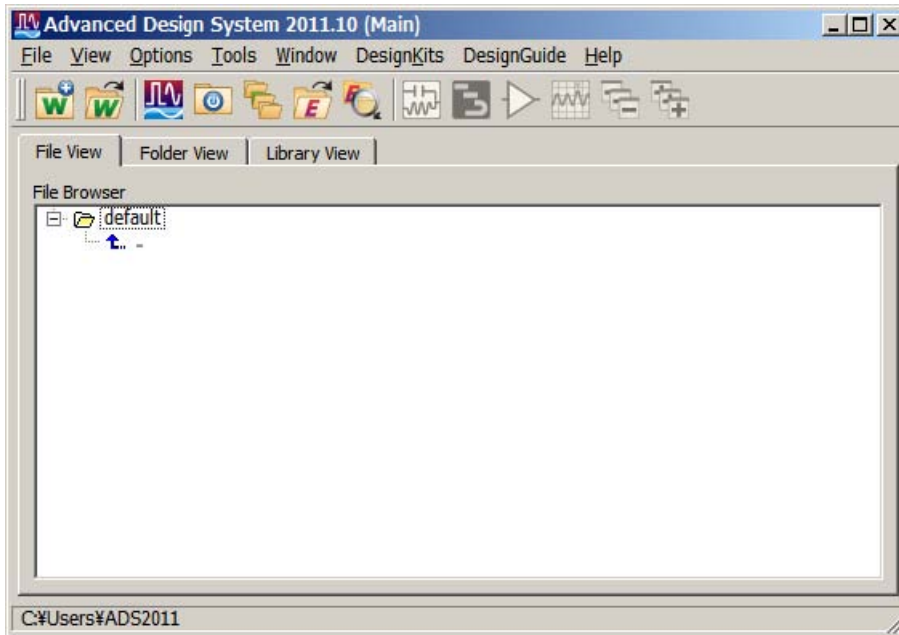
Platform	: PC
OS	: Windows™ 2000
ADS	: ADS2003C
ADS installation directory	: C:\ADS2003C
Design kit installation directory	: C:\ADS2003C\custom\design_kit

2. DOWNLOADING DESIGN KIT

Download the design kit (ZIP file) from the website.

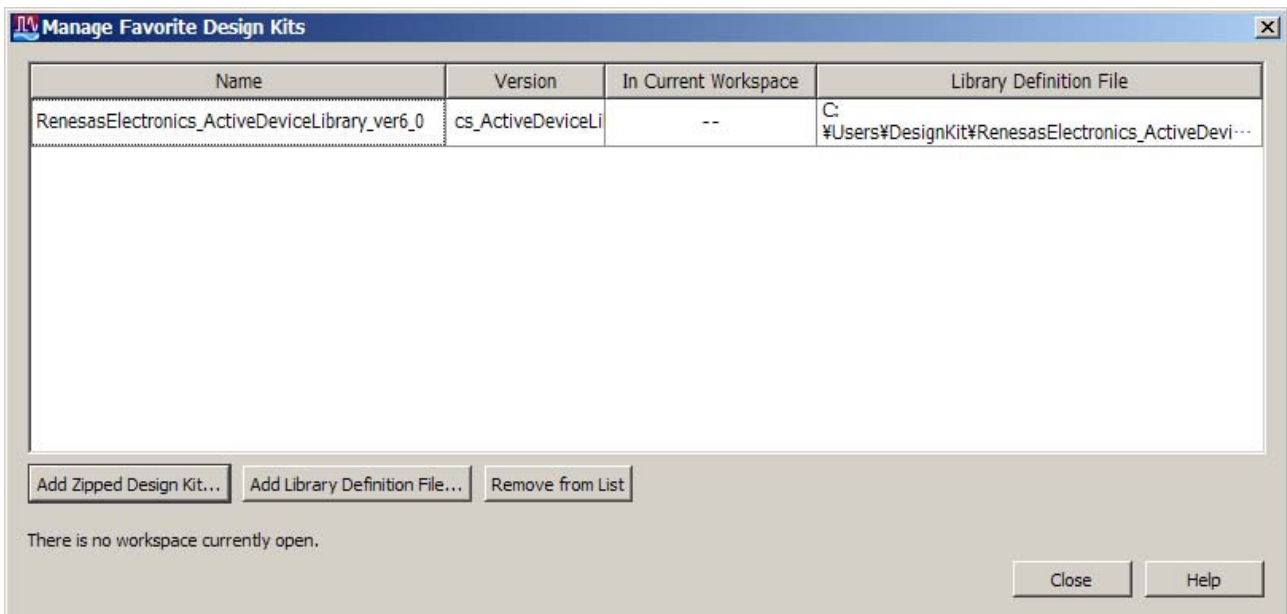
<R> 3. METHOD FOR UPGRADING VERSION TO ADS 2011.01 OR LATER

(1) Start ADS.



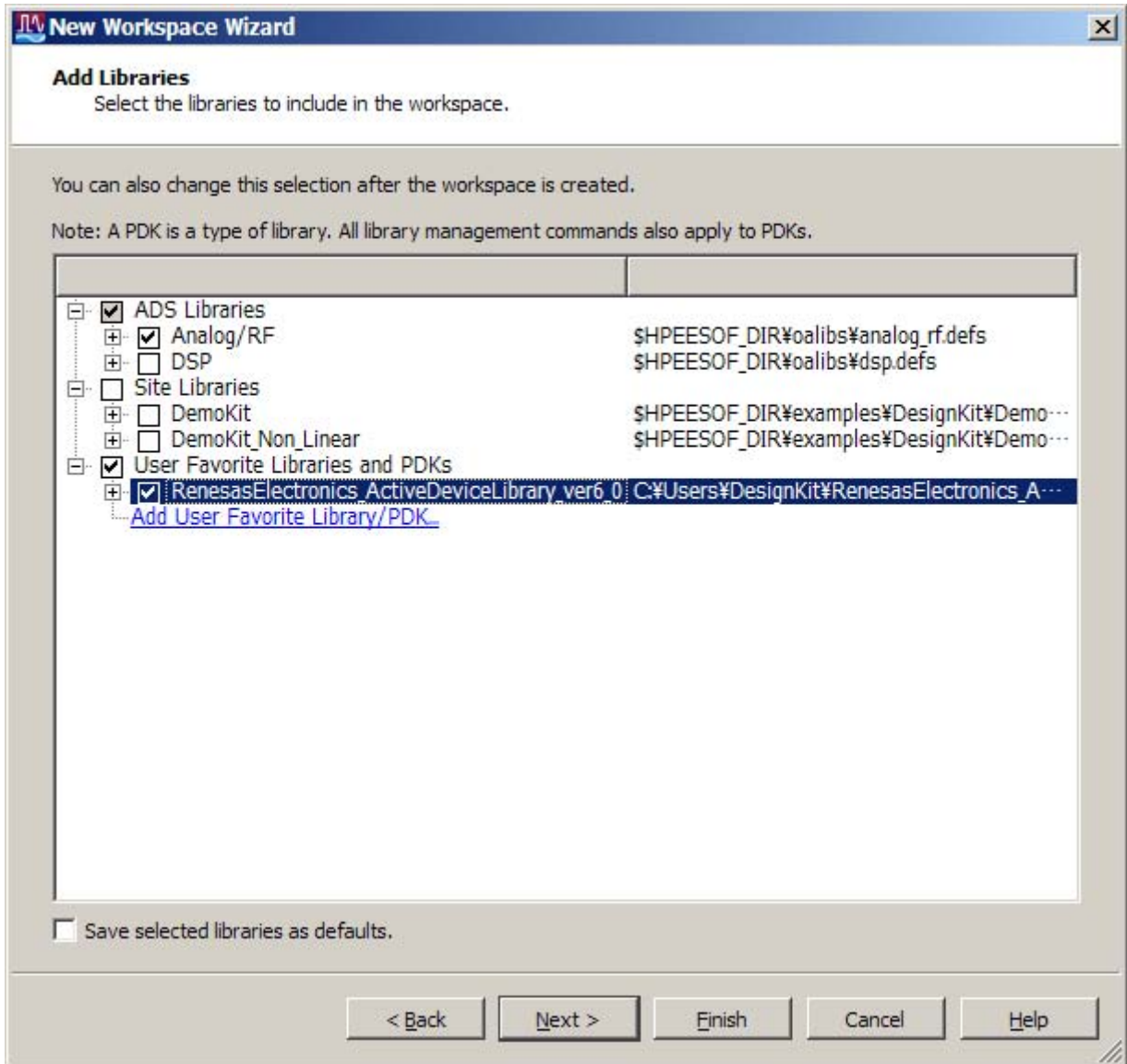
(2) Select [DesignKits] → [Manage Favorites Design Kits...] in the main window.

(3) After the **Manage Favorites Design Kits** window opens, click the **Add Zipped Design Kit** button to set a working directory for the downloaded RenesasElectronics_ActiveDeviceLibrary_ver6_0_5.zip file and the design kits.



Design Kit (for Agilent ADS)

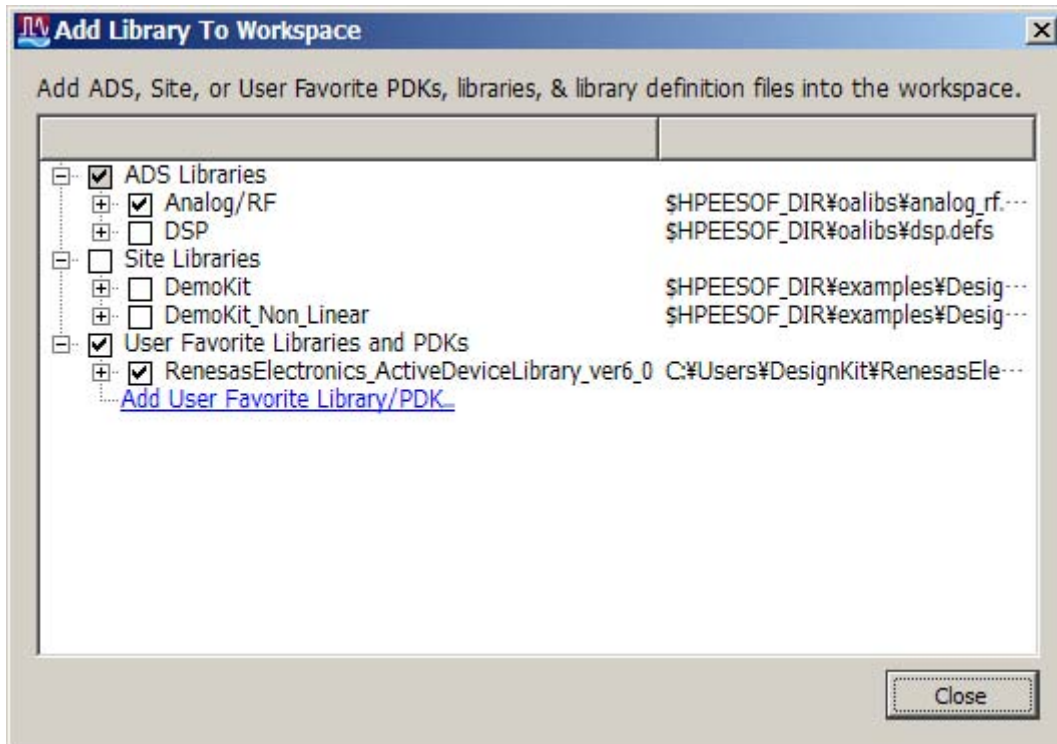
- (4) After the design kits are unzipped automatically under the set directory and the information is shown in the list, click the **Close** button to close the window.
- (5) When using the design kits in the new Workspace, select the **RenesasElectronics_ActiveDeviceLibrary_v6_0_5** checkbox in the library selection window of the third page of the **New Workspace Wizard** window.



- (6) When you want to use the design kits as defaults (i.e. you want to use the kits in the Workspace to be created next time), select the **Save selected libraries as defaults** checkbox and terminate the wizard.

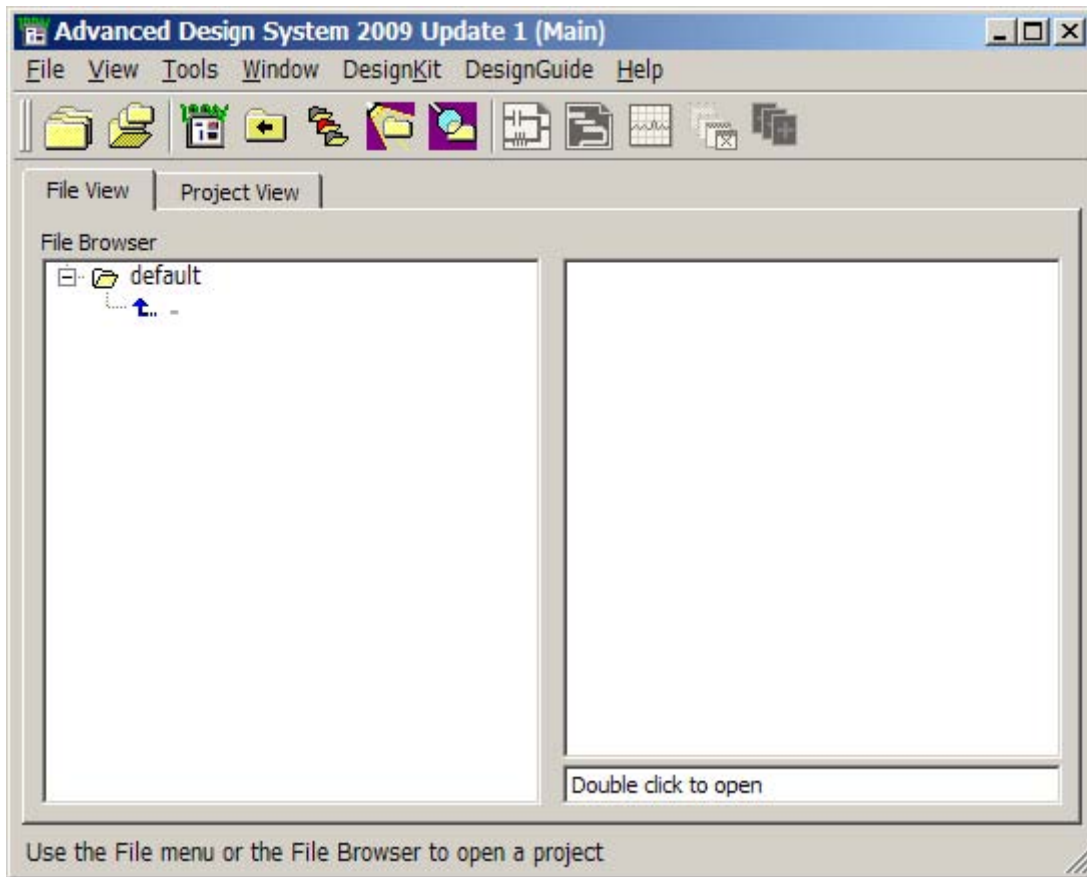
Design Kit (for Agilent ADS)

- (7) When you apply the design kits to the Workspace that has been already created, select [DesignKits] → [Manage Favorites Design Kits...] in the main window, click **Add Design Kit form Favorites...** button, and select **RenesasElectronics_ActiveDeviceLibrary_ver6_0_5** checkbox.



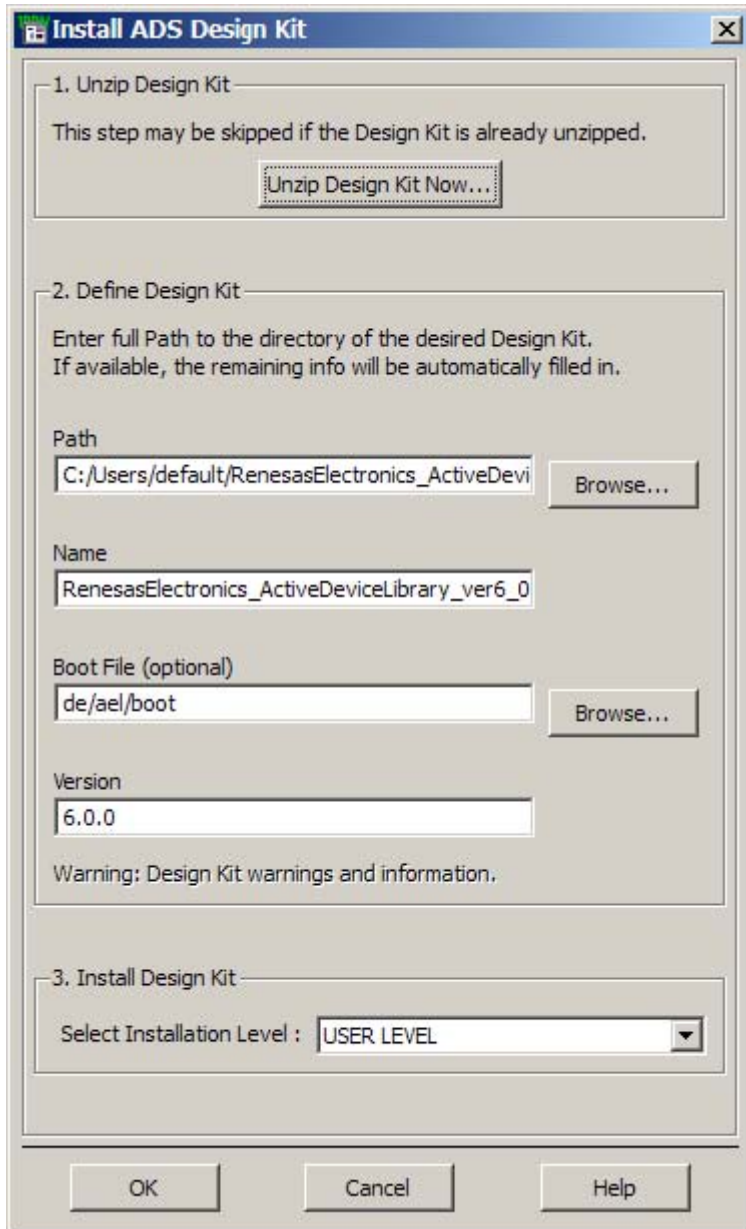
<R> 4. METHOD FOR INSTALLING DESIGN KITS TO
ADS 2009 UPDATE1 OR OLDER

(1) Start ADS.



Design Kit (for Agilent ADS)

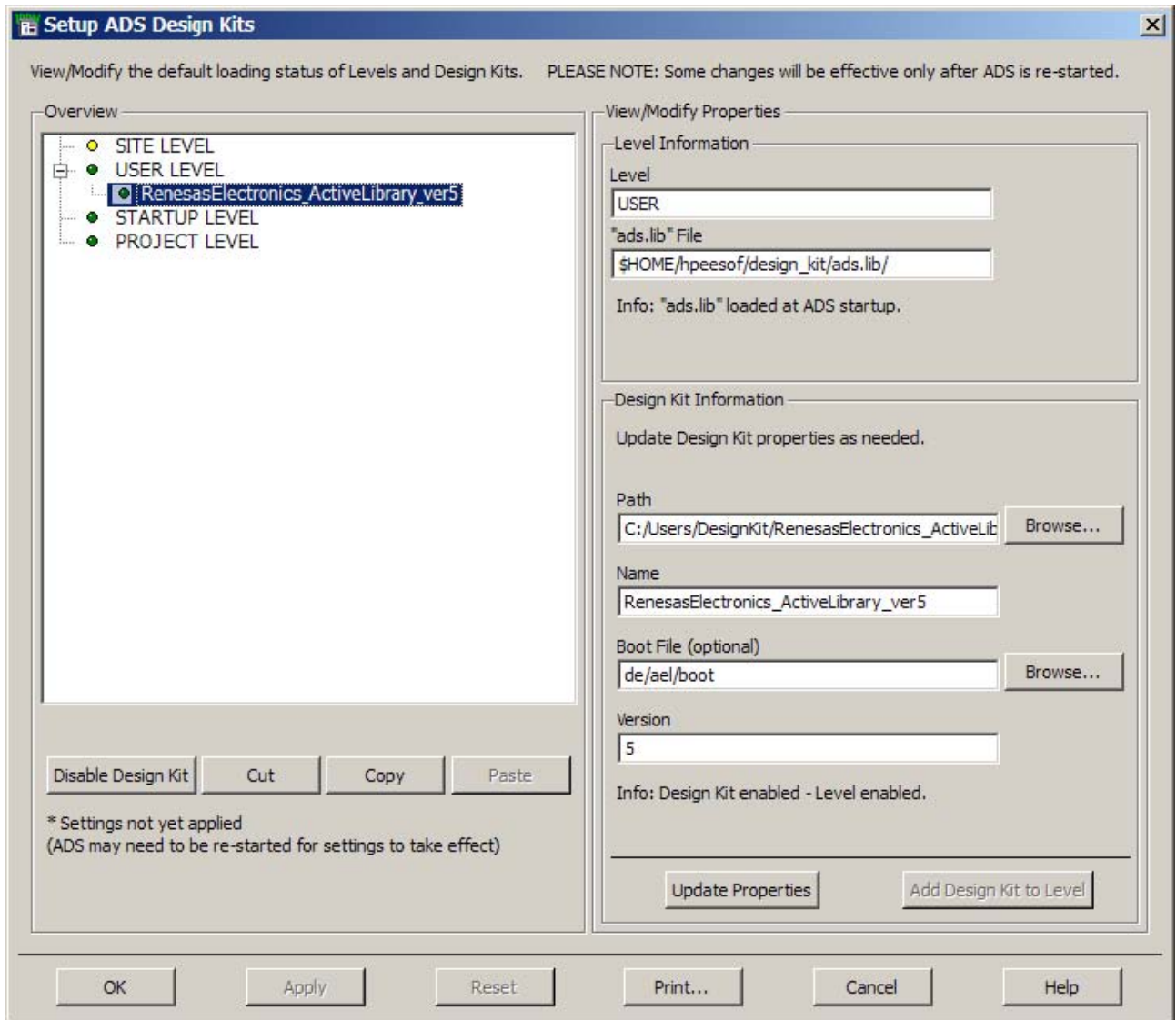
- (2) Select [DesignKits] → [Manage Favorites Design Kits...] in the main window.
- (3) After the **Install ADS Design Kit** window opens, click the **Unzip Design Kit Now** button, set the working directory for the downloaded RenesasElectronics_ActiveDeviceLibrary_ver6_0_5.zip file and the design kits, and the **OK** button.



- (4) The design kit file is unzipped and the installation information is automatically loaded. Confirm that there is no error (no letter shown in red) and click the **OK** button.

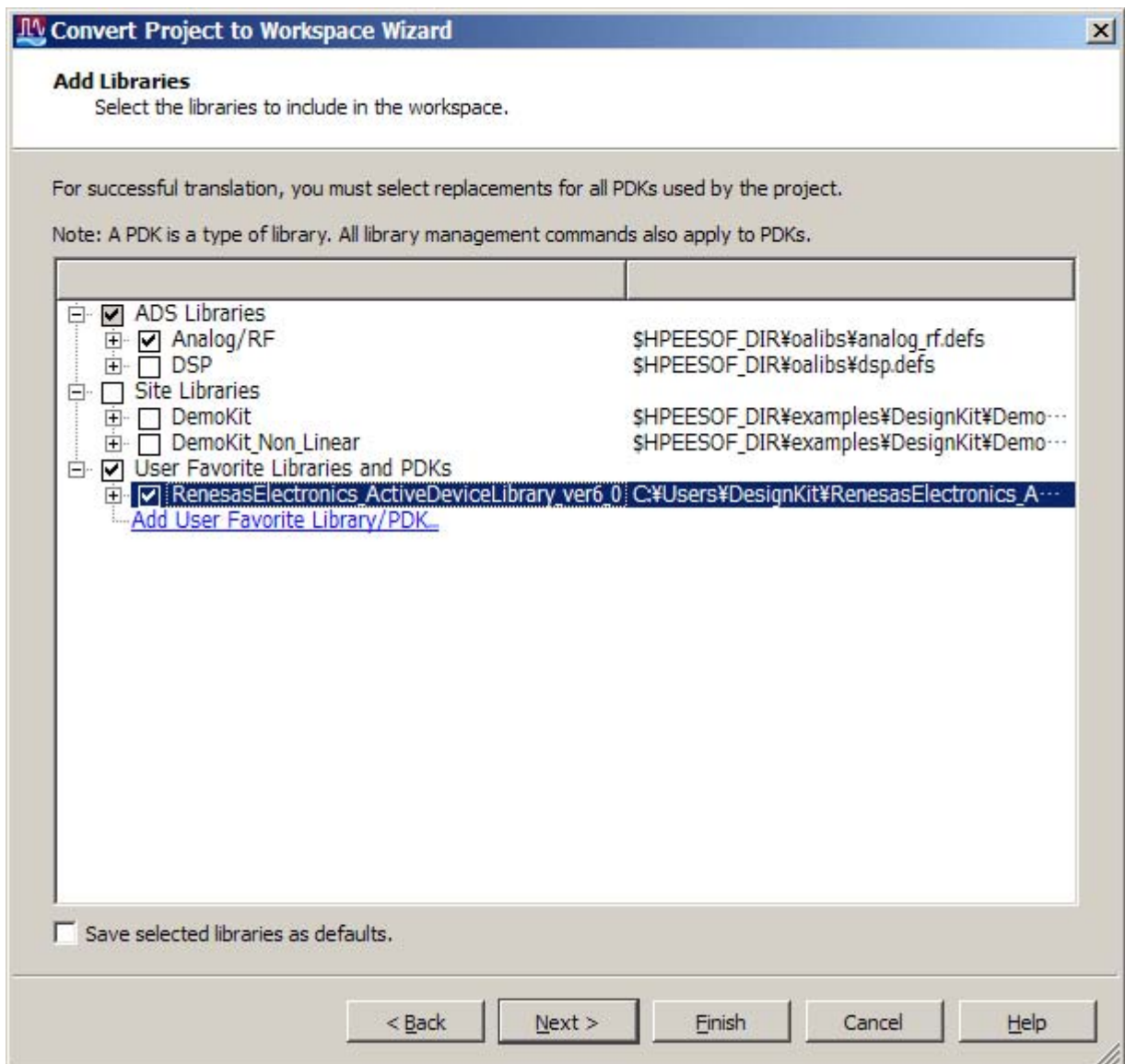
<R> 5. METHOD FOR UPGRADING DESIGN KITS IN ADS2009 UPDATE1

- (1) Start ADS2009 Update1.
- (2) Select [DesignKits] → [Setup Design Kits...] in the main window.
- (3) After the list of the installed design kits is shown in the **Setup ADS Design Kits** window, select old version kits in the list, and click the **Disable Design Kit** or **Cut** button.



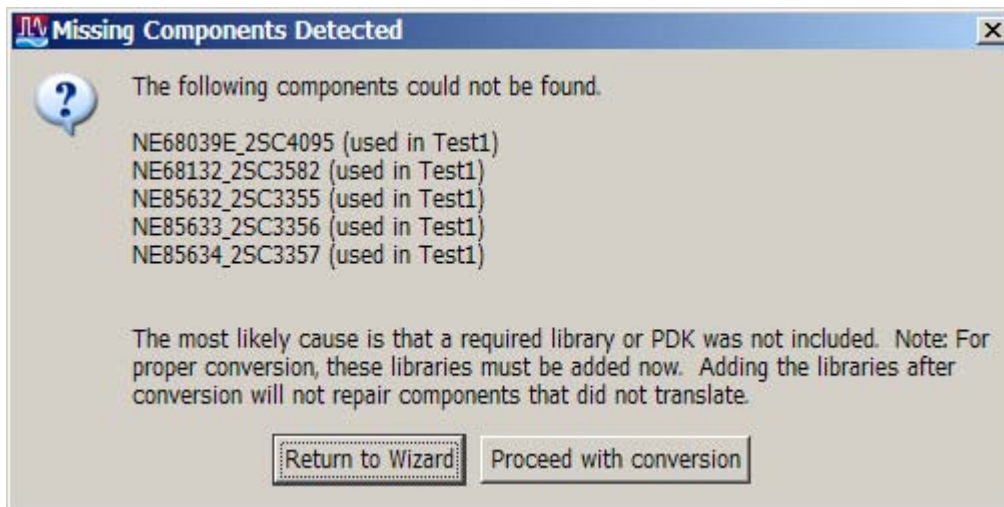
- (4) After clicking the **OK** button to close the window, install the new design kits with the method described in **2. DOWNLOADING DESIGN KIT**.

- <R> 6. METHOD FOR CONVERTING PREVIOUSLY USED PROJECT OF ADS2009 UPDATE1 TO WORKSPACE AND UPGRADING THAT
- (1) Start ADS whose version is ADS2011.01 or later.
 - (2) Open the project that you want to convert to Workspace, or select [File] → [Convert Project to Workspace...] in the main window.
 - (3) After the Convert Project to Workspace Wizard window is opened, according to the Wizard, convert the project to Workspace.
 - (4) Select the **RenesasElectronics_ActiveDeviceLibrary_v6_0_5** checkbox in the library selection window of the third page of the New Workspace Wizard.



Design Kit (for Agilent ADS)

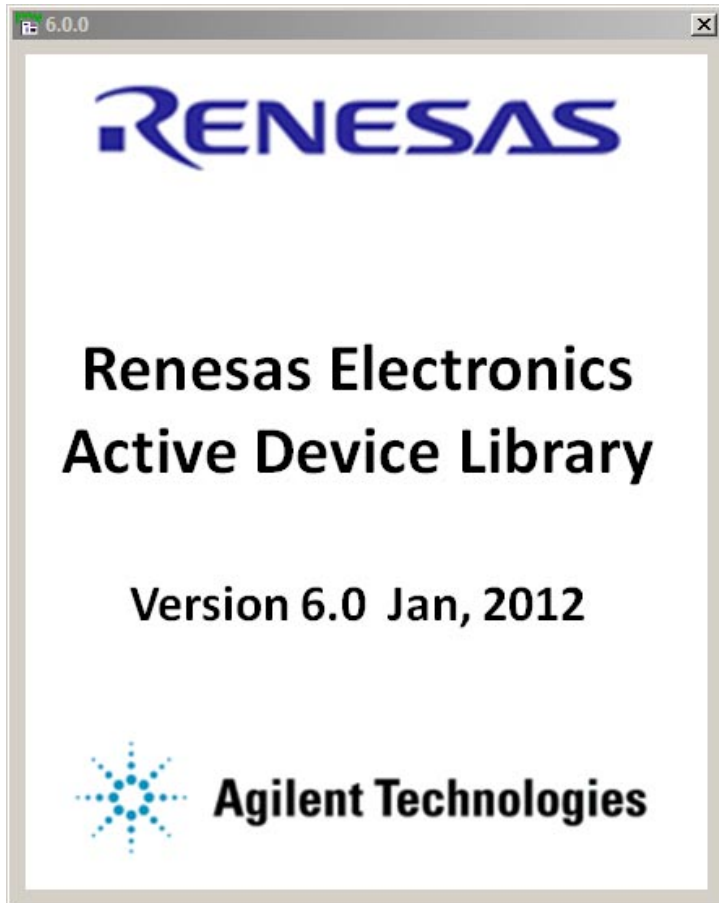
- Note If you miss selecting libraries, after conversion, the area where components of the design are shown becomes blank in the schematic.
In the above case, click the **Return to Wizard** button and reselect the libraries.



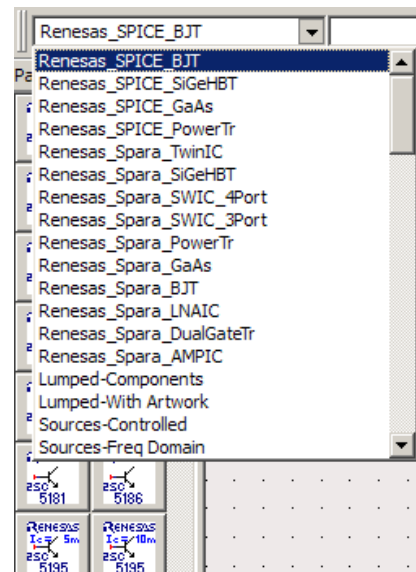
<R> 7. METHOD FOR USING DESIGN KITS

- (1) Start ADS.

When the ADS where design kits are correctly installed is started (in case of ADS2011.01 or later, when the used Workspace is opened), the following banner image is displayed.

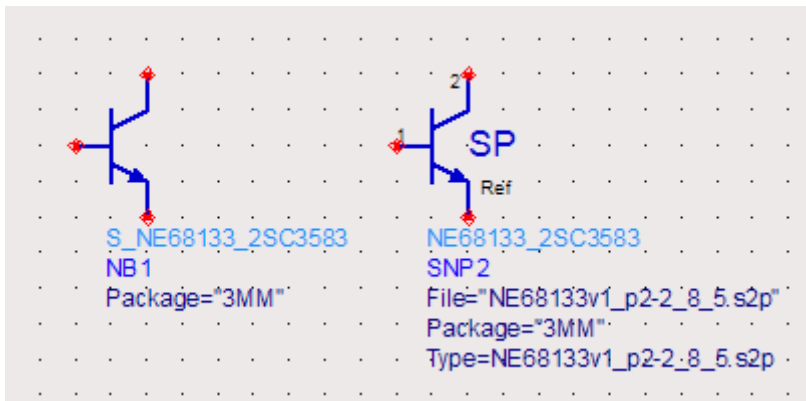


- (2) Open the Project or Workspace and create the schematics.
- (3) Confirm that the category called Renesas_XXX_YYY is shown in the list on the upper left of the schematic. The category is used as the installed design kits. Select the components that you want to use from the category and use the components by adding or locating those in the schematic.
- (4) The component can be classified into two types, SPICE type and Spara type, of components. SPICE type component has SPICE Model Parameter data, and Spara component has the measured S-Parameter data.

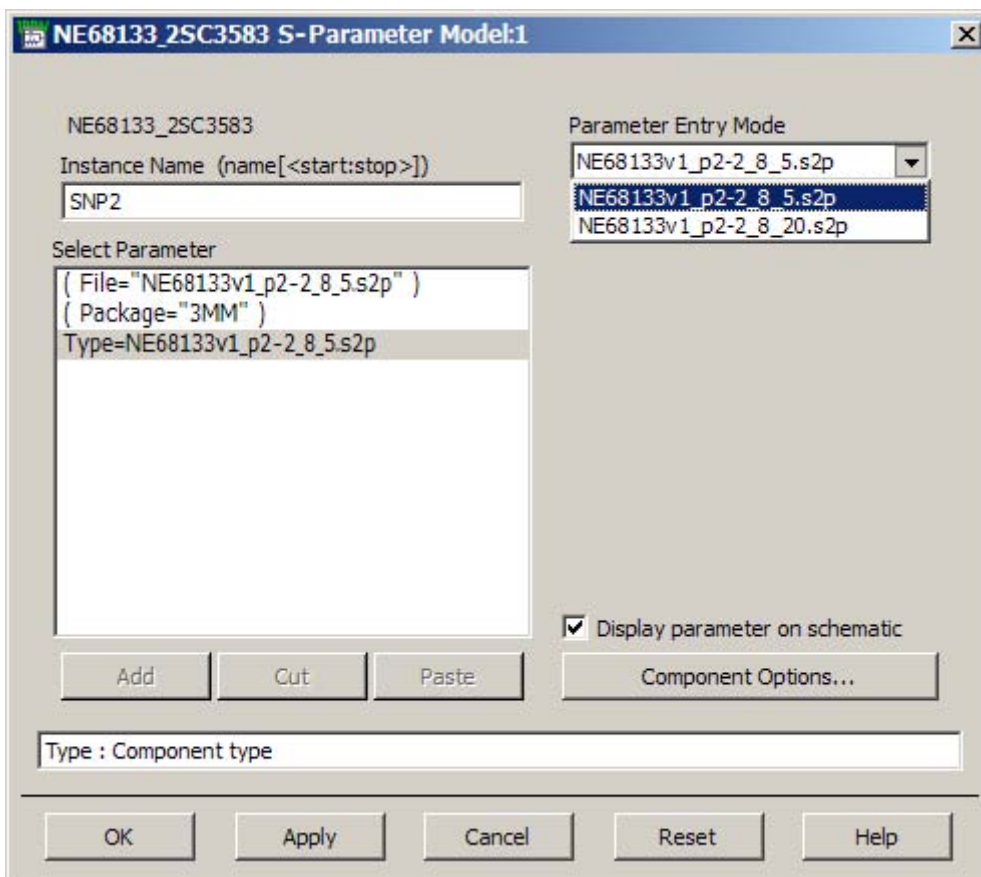


Design Kit (for Agilent ADS)

- (5) When the component type is Spara, the component data is shown with the letter “SP” in the symbol. In addition, the component definitely has Ref pin. Since the Ref pin has the same role as the SnP component as general component, connect the pin to Ground.



- (6) Many of Spara type component data has two or more S-parameter data files. By double-clicking the component, you can select the file with the parameter type.



- (7) The other operations are the same as the standard ADS. Combine the components and execute the circuit simulation.

REVISION HISTORY	Design Kit (for Agilent ADS) User's Manual
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Rev.	Date	Description	
		Page	Summary
1.00	Jul 12, 2002	—	First Edition issued
2.00	Jul 2, 2003	p.4 in previous edition	Delete the 3.INSTALLATION
		p.5	Addition of (Design kit supporting ADS), modification of description in <Environment used in this manual>
		p.6	Modification of description in 2. DOWNLOADING DESIGN KIT Addition of 3. WHEN UPGRADING FROM VER. 1.0
		p.7	Addition of 4. INSTALLING DESIGN KIT (ADS2002A OR LATER)
		p.8	Addition of 5. INSTALLING DESIGN KIT (ADS2001)
3.00	Aug 17, 2004	Throughout	Modification of figure
		p.8 in previous edition	Delete the 5. INSTALLING DESIGN KIT (ADS2001)
		p.5	Modification of description in (Design kit supporting ADS) Modification of description in <Environment used in this manual>
		pp.7, 8	Modification of 4. INSTALLING DESIGN KIT
4.00	Sep 11, 2012	Throughout the manual	The company name is changed to Renesas Electronics Corporation.
		p.5	Modification of 1. INTRODUCTION
		pp.6 to 8	Addition of 3. METHOD FOR UPGRADING THE VERSION TO ADS 2011.01 OR LATER
		pp.9,10	Addition of 4. METHOD FOR INSTALLING DESIGN KITS TO ADS 2009 UPDATE1 OR OLDER
		p.11	Addition of 5. METHOD FOR UPGRADING DESIGN KITS IN ADS2009 UPDATE1
		pp.12,13	Addition of 6. METHOD FOR CONVERTING PREVIOUSLY USED PROJECT TO WORKSPACE AND UPGRADING THAT
		pp.14,15	Addition of 7. METHOD FOR USING DESIGN KITS

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