NEC

Technical Note

Design Kit
(for ANSOFT Designer™ / Nexxim™)
User's Manual

Ansoft Designer and Nexxim are either registered trademarks or trademarks of Ansoft Corporation in the United States and/or other countries.

Windows and Windows XP are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

When the product(s) listed in this document is subject to any applicable import or export control laws and regulation of the authority having competent jurisdiction, such product(s) shall not be imported or exported without obtaining the import or export license.

Major Revisions in This Edition

Page	Description
Throughout	Addition of Nexxim
p.6	**2. DESIGN KIT DOWNLOAD AND INSTALLATION** Change of folder configuration created after unzipping the downloaded file
p.11	**3. DESIGN KIT APPLICATION (COMMON TO Designer AND Nexxim)** Addition of (2) How to use S-parameter library
p.13	Addition of **4. LAYOUT USING FOOTPRINT INFORMATION**

The mark ★ shows major revised points.

CONTENTS

★ 1. INTRODUCTION

This manual is intended for users who use the design kit (in which the parameters of NEC Compound Semiconductor Devices, Ltd. products are supplied for ANSOFT Designer and Nexxim: design kit hereinafter). This manual describes how to use the design kit, from installation to performing simulation on the schematic screen of the Designer or Nexxim.

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.

<Environment used in this manual>

Platform	:PC
OS	:Windows^{TM} 2000^{Note}, Windows XP^{TM}
ANSOFT Designer or Nexxim	:Version2.2
ANSOFT Designer or Nexxim installation directory	:C:/Ansoft/Designer2

Note Recommended

★ **2. DESIGN KIT DOWNLOAD AND INSTALLATION**

Download the design kit and unzip it using the compression/extraction application included with the kit.

- Unzip destination C:/Ansoft/Designer2/userlib
- After unzipping the downloaded file, the following folder will be created.
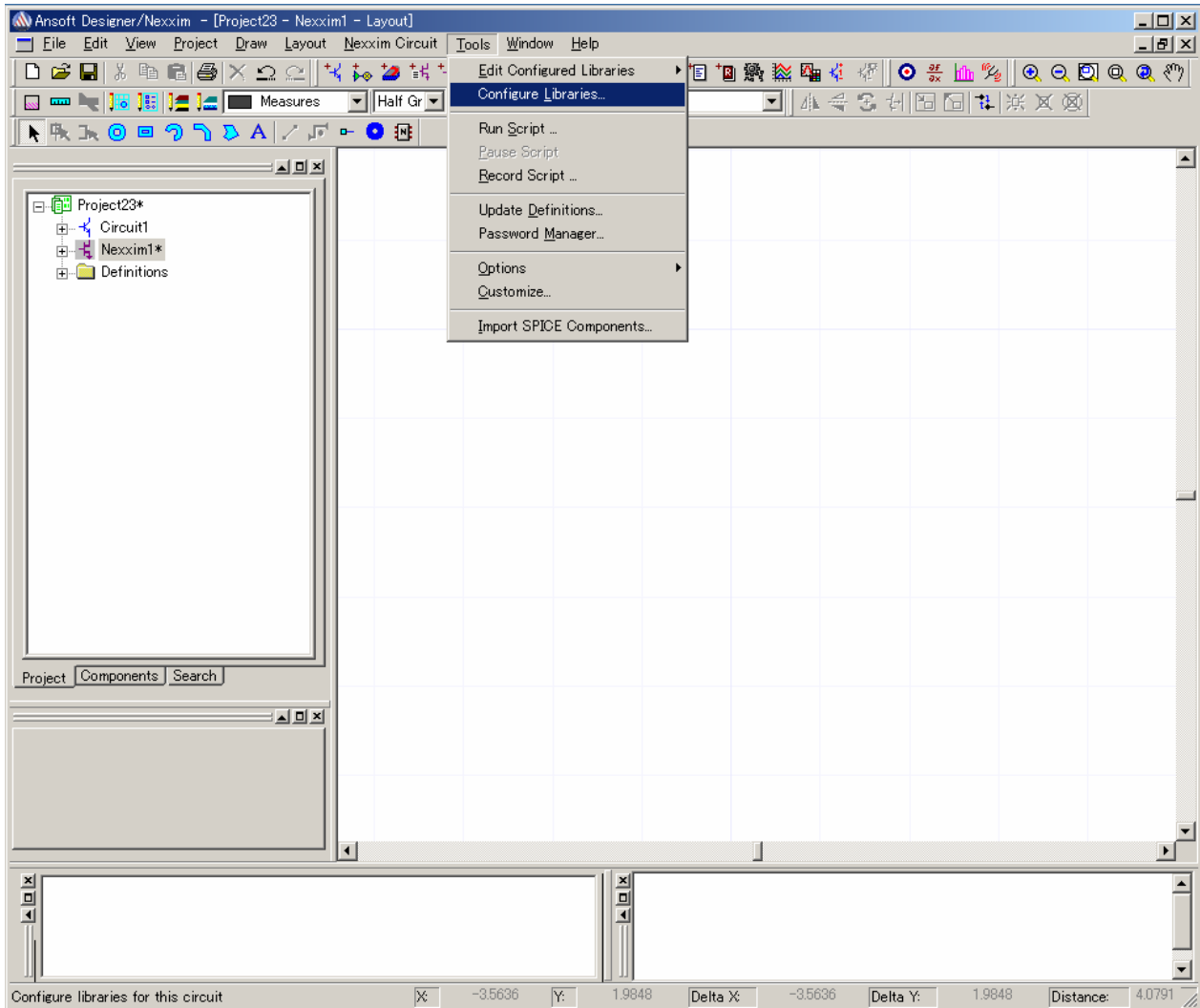 C:/Ansoft/Designer2/userlib/NEC

Library configuration
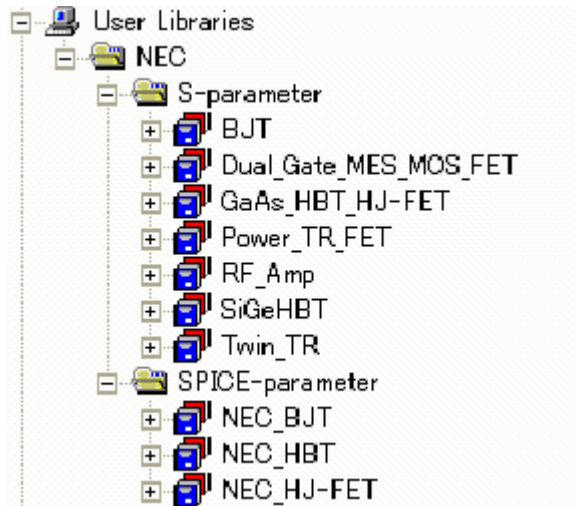
Caution NEC_HJ-FET in the SPICE-parameter folder can be used for Nexxim only.

## 3.   DESIGN KIT APPLICATION (COMMON TO Designer AND Nexxim)

(1) Startup of Designer or Nexxim

    <1> Create a Circuit Design or Nexxim Circuit Design folder for a new project (e.g., Project 1).
   Execute [Configure Libraries...] in the [Tools] menu.

<2> Select the [User Libraries] option button, and then
- select "Components" from the item list, select the NEC folder and click the $\boxed{>>}$ button;
"NEC" is then displayed in the right-hand screen.
- select "Symbols" from the item list, select the NEC folder again and click the $\boxed{>>}$ button;
"NEC" is then displayed in the right-hand screen.
-select "Footprints" from the item list, select the NEC folder again and click the $\boxed{>>}$ button;
-"NEC" is then displayed in the right-hand screen.
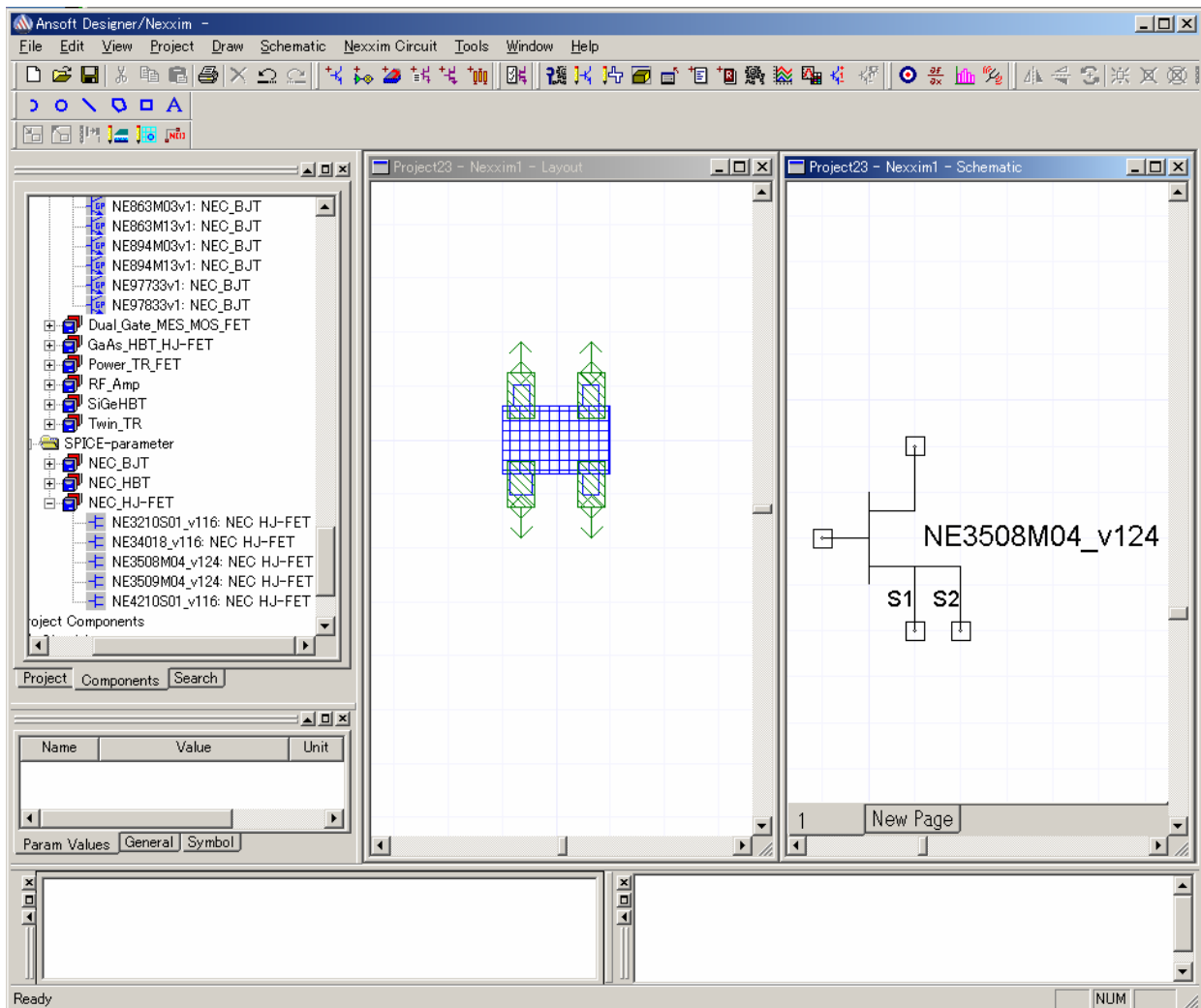

Technical Note PX10401EJ03V0TN
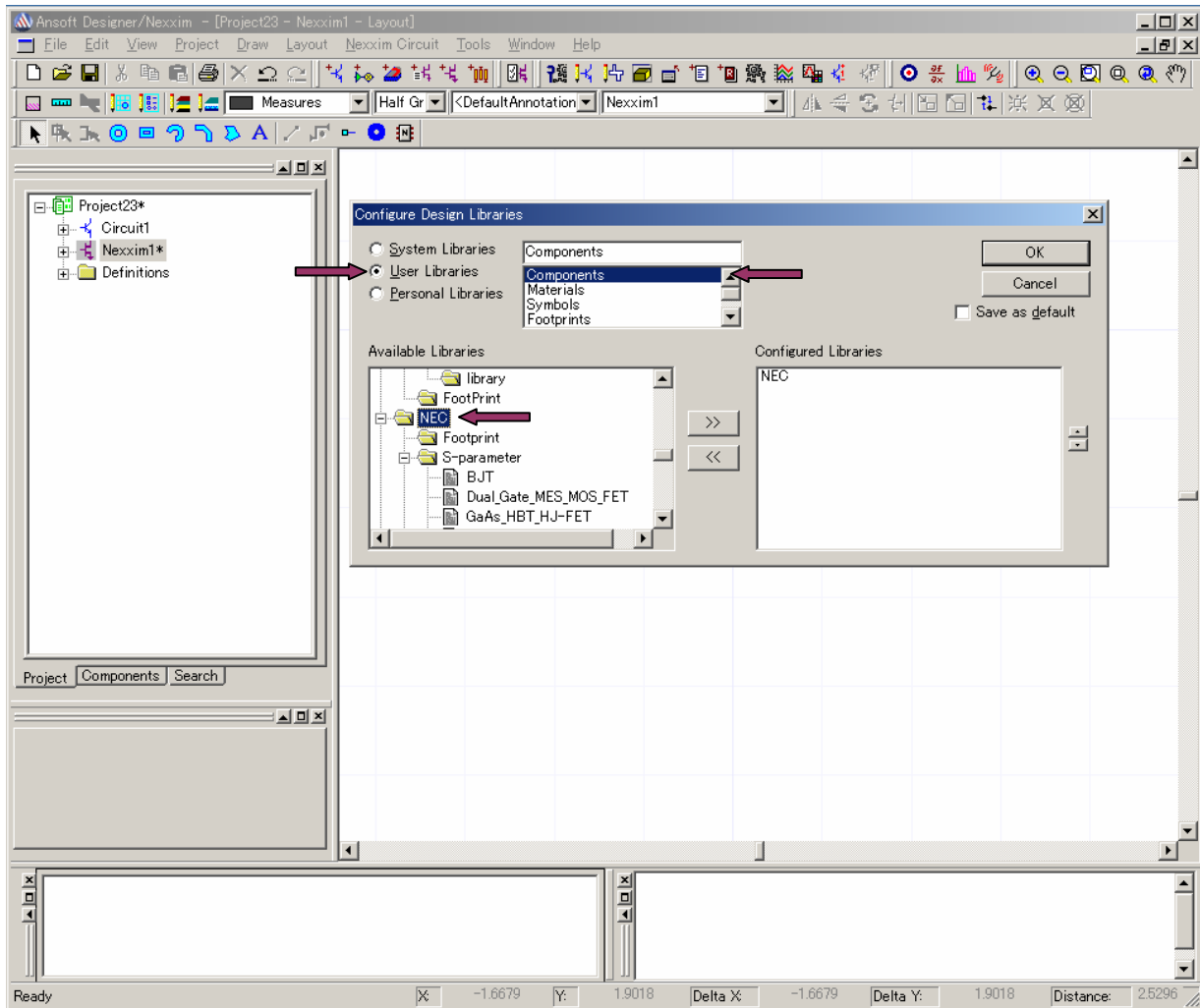
<3> All of the NEC_S-parameter and NEC_SPICE-parameter library components are displayed in the left-hand screen.
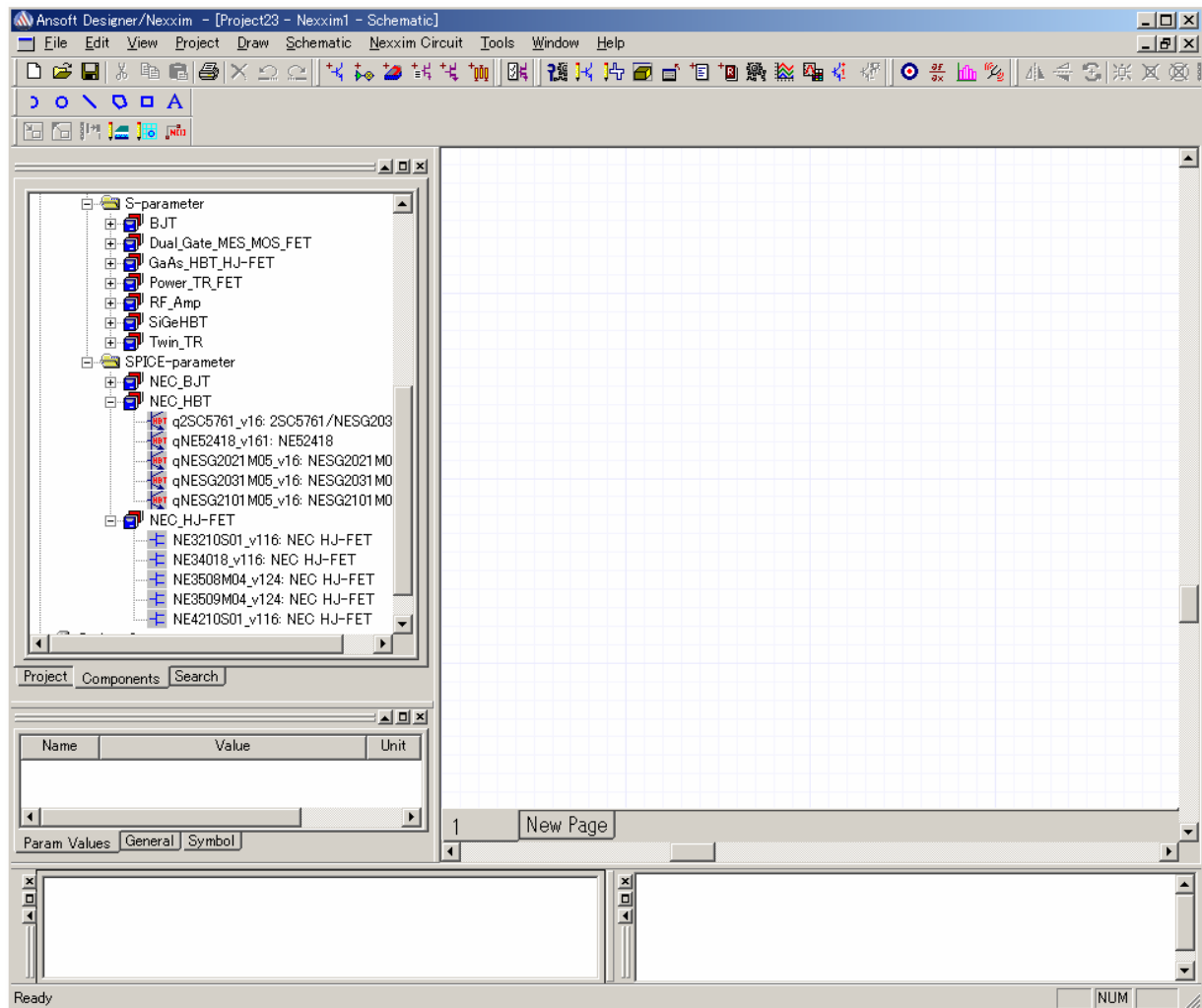
<4> Double-click a part number. The corresponding device component will then be displayed on the circuit diagram.
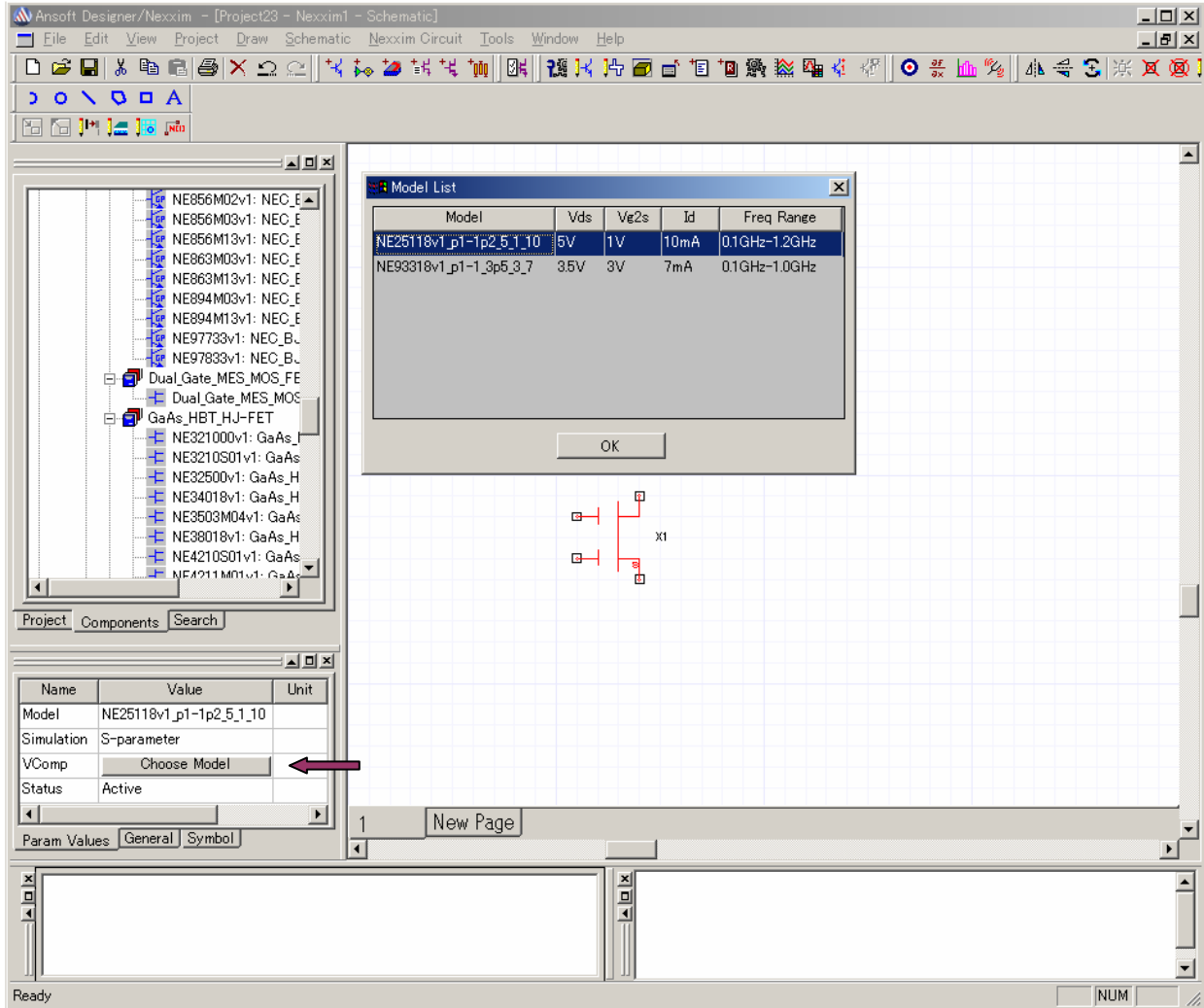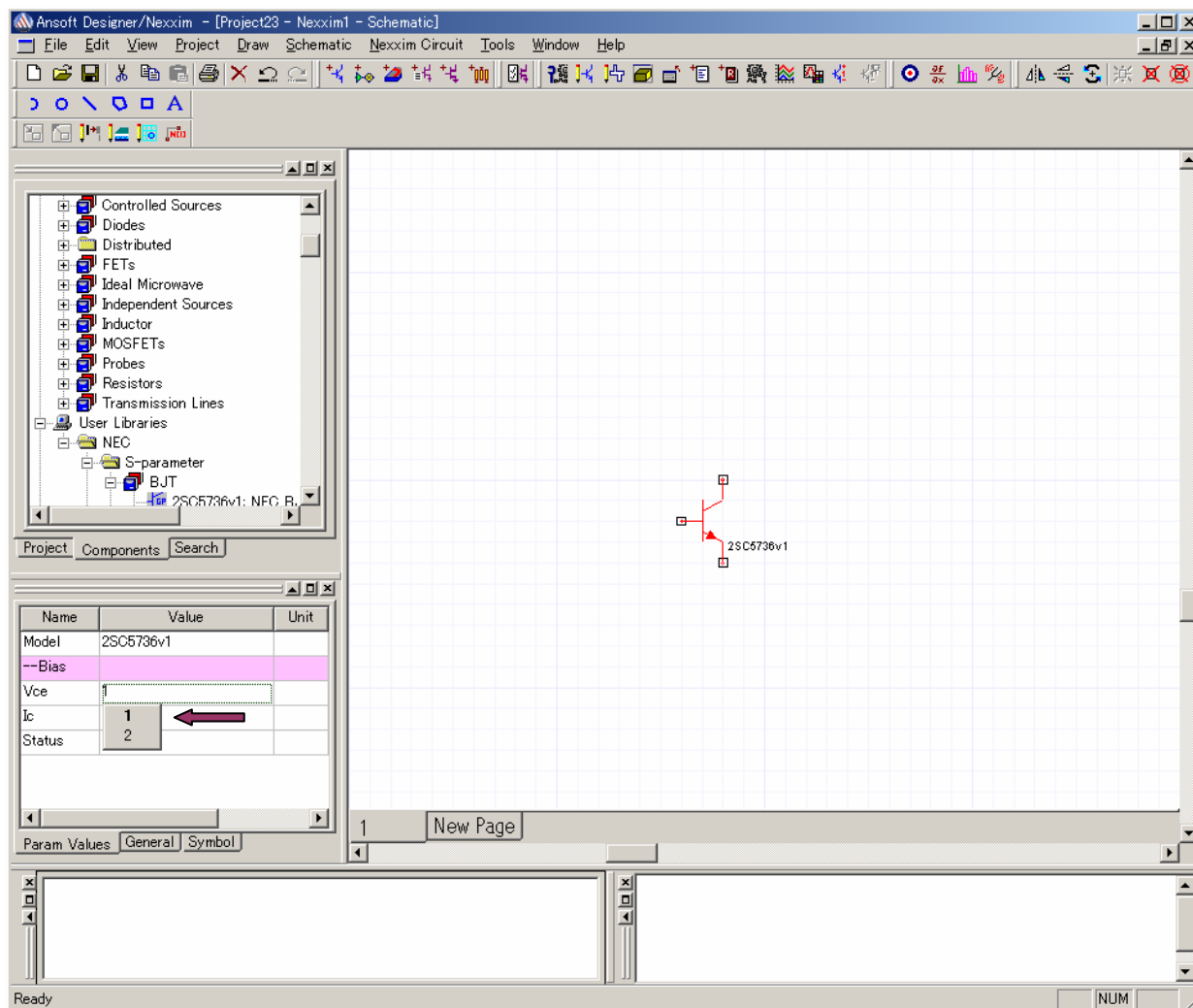
★   (2) How to use S-parameter library

The S-parameter library is divided into two structures, the uses of which differ.

Selection of a device or bias condition can be performed using items in the Property window that is displayed when a device component is placed on the circuit diagram.

<1> Call an S-parameter by clicking the [Choose Bias] or [Choose Model] button.

<2> Select the bias conditions such as V_{ce} and I_C to call the S-parameter.

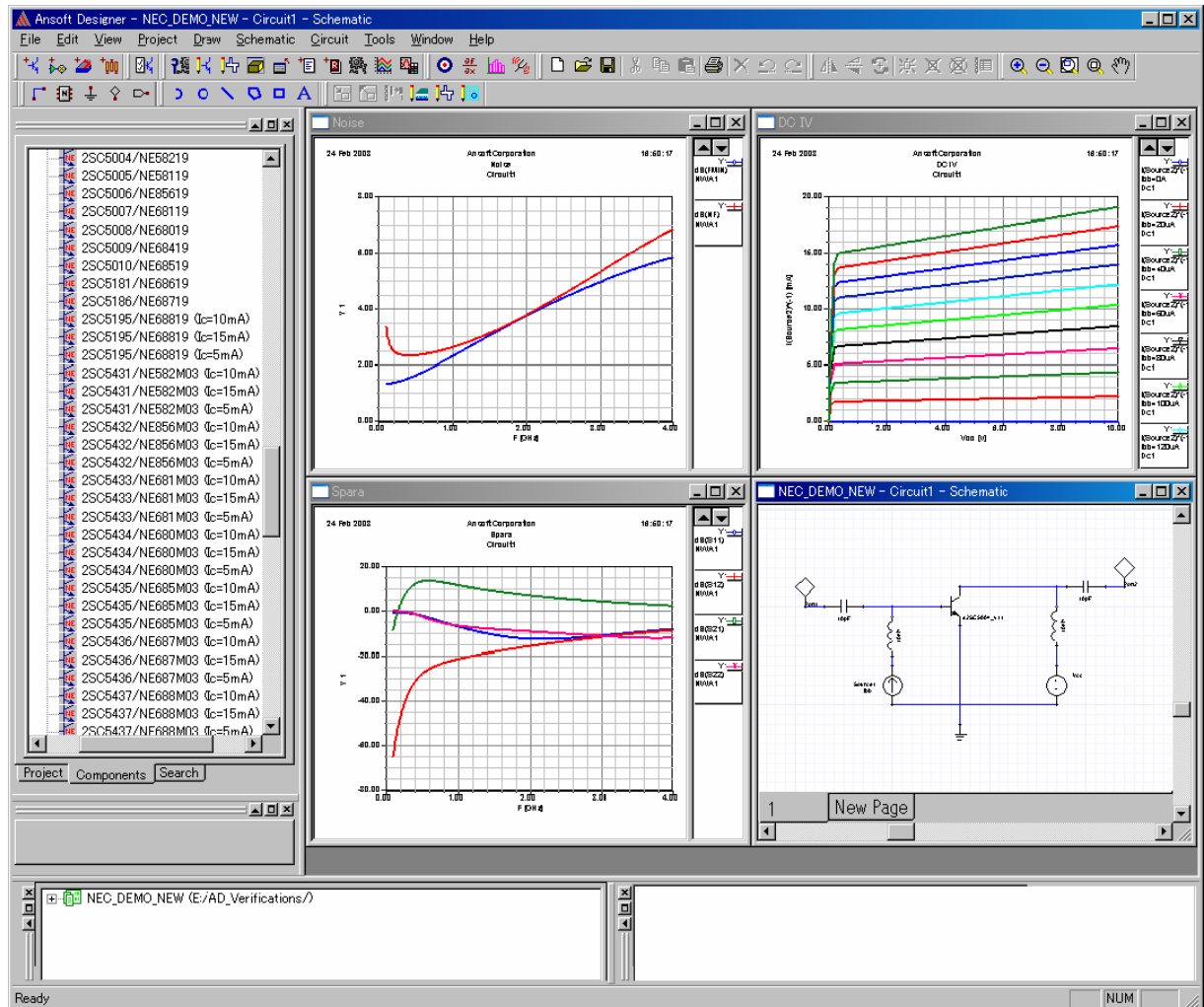★ **4. LAYOUT USING FOOTPRINT INFORMATION**

Footprint information of devices has been added to both the S-parameter and SPICE-parameter libraries, so use the information during board designing.

For devices that do not include footprint information, "Non Footprint" is displayed in the Property window.
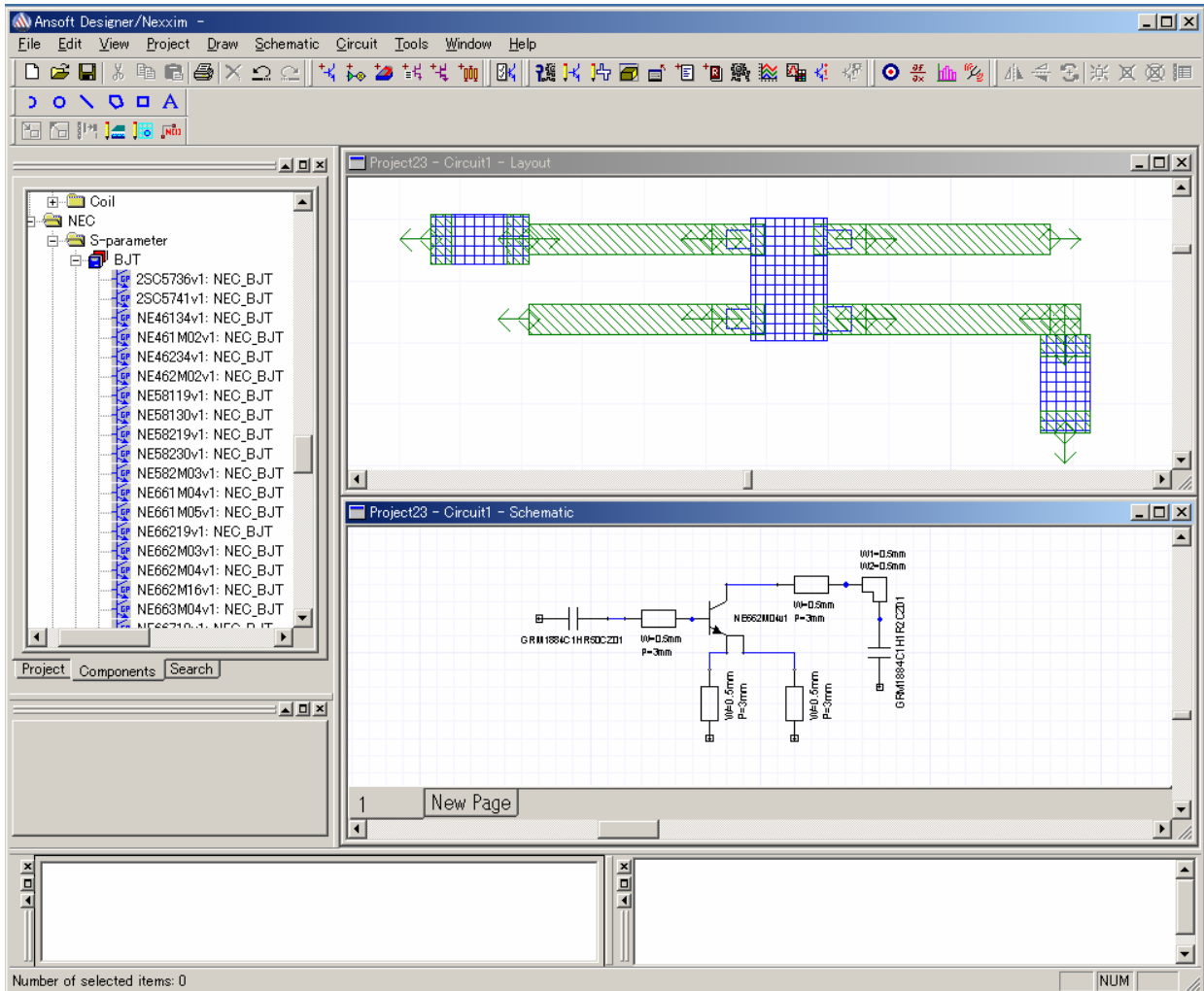
5. DEMONSTRATION

How to use library components

The handling of basic parts is the same as the handling of standard Designer components.

0504