Infineon Component Library Installation Guide AWR Microwave Office®

Installation Guide

About this document

Infineon Technologies AG provides its component libraries as Design Kits for the MWO® simulation environment. This manual describes how to operate library installation in the workspace of the MWO® simulation environment.

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1 How to Get Access to Infineon Component Library for AWR Microwave Office®

(valid for RF and Protection Devices)

Infineon Technologies provides its Component Library for its RF and protection devices for usage in the AWR Microwave Office®. It is brand new and re-bulit for the convenience of customers to use Infineon models for simulations.

Infineon Component Library is in the AWR standard XML format. It includes spice models, small signal s-parameter files in MDIF (- fullname -) and package foot print information. You have the following three ways to get access with Infineon component library:

1. (web-based library) link through AWR Microwave Office online library
2. (web-based library) link by adding the web address of Infineon component library into your local main library file of Microwave Office, lib.xml
3. (local library) download, install and link Infineon component library locally

The three methods to get access of the library will be explained:

2 Link through AWR Microwave Office online library

Infineon component library is embded in the AWR online library for new AWR Microwave Office.
If you have Microwave Office with version xx.xx or higher, you can directly get access to Infineon component library as following.

Elements Menu -> 𝛑 Libraries -> Parts by Vendor -> Infineon

If you have Microwave Office with versions lower than version xx.xx, please use the method 2 or 3 to get access to Infineon Component Library.

3 Linking of Infineon WebLibrary for AWR Microwave Office

Infineon libraries are provided in standard AWR XML format and can be included from Infineon Web Server directly in AWR Design Environment. On-line library provides you with models which are updated instantly from Infineon engineers and providing the best models quality and models collection.

The model copied in MWO Project in copied then locally into the project and do not requires the internet connection any more.

Installation of Infineon Web Library

1. *Open* lib.xml file in sub-folder „Libraries" in installation folder of AWR using Notepad or other *text editor.*
2. *Add following string inside of* </XML_COMPONENT_DATA> *block*

   <FILE Name=" Infineon Component Library (Web)"*>*
   <http://www.infineon.com/cms/media/mwo_models/xml/infineon_top.xml</FILE>

3. Restart MWO and see new library under Elements Menu -> Libraries

4 Local installation of Infineon RF Component XML Libraries

Infineon RF and Protection devices library can be installed on local PC or server and used without internet connection. Users in one company will be able to use same version of component models installed on corporate server or work with library installed on local drive offline. It's recommended to check for updates of a library in Infineon Web and update it as Infineon improves models and adds new elements permanently.

Installation for local library is provided in different version: Version with all components presented in Web version or versions for categories separately: MMIC, TVS Protection Devices, RF Transistors and RF Diodes for compact installation.

Installation of local library version on local drive or corporate server

1. Download zip with Library of required components from Infineon Web page
Link: http://www.infineon.com/32lib
2. Unzip downloaded file to any place on your PC or to dedicated place on network drive of corporate server
3. Open Lib.xml placed in folder "Liraries" inside of AWR installation folder using text editor.
4. Add following entries to lib.xml file depending on required components set:

AWR Full:
<FILE Name="* Infineon Component Libray"><|Path to unzipped folder|<>/xml/infineon_top.xml</FILE>

RF Transistors:
<FILE Name="RF Bipolar Transistors" Icon="BJT"><|Path to unzipped folder|>/xml/rf_transistors_nonlinear.xml</FILE>

RF Diodes:
<FILE Name="RF Diodes" Icon="Diode"><|Path to unzipped folder|>/xml/rf_diodes_nonlinear.xml</FILE>

TVS Diodes:
<FILE Name="TVS Protection Diodes" Icon="Diode"><|Path to unzipped folder|>/xml/tvs_diodes_nonlinear.xml</FILE>

MMICs:
<FILE Name="MMICs" Icon="Active"><|Path to unzipped folder|>/xml/rf_mmic_data.xml</FILE>

5 Installation of Infineon customization files in AWR Design Environment

The RF and Protection devices library is using special symbols and Layer Process Files to improve visualisation of components in library view, schematic capture, layout and 3D view. User needs to add Infineon symbol file and LPF file to his AWR Design Environment to be able to use it.

You can install these files from Web XML library version, using direct links from this document or from local installation.

Installation of Infineon schematic symbol file

Direct download

1. Download Infineon Symbol File for RF components (infineon_32.syf) from web under http://infineon.com/MWOLib_Symbol
   You can find this file also in “xml” folder of libraries for local installation.
2. Copy the file in sub-folder Symbols in installation folder of AWR Microwave Office
3. Restart the MWO Design Environment to see effect of new symbols

Installation from Infineon WebLibrary

1. Go to Infineon Web Library
2. Open “Customization files”\”Schematic Symbols” folder
3. Make Right-Mouse-Click on “Infineon Symbol Files” and click “Element Help...”
4. Download Zip archive with symbol file
5. Open zip file and save Infineon_32.syf under Symbols in AWR Installation folder.
6. Restart the MWO application

Using of Infineon Layer Process Files for proper layout presentation

Infineon XML Library provides layout settings as Layer Process Files (LPF) for correct presentation of layout in 2D and 3D views, layer settings and technology lines.
This allows easy start of PCB Board design and simulation using Infineon components.

LPF files are provided for single, 2, 3 and 4 layers PCB boards. They introduce required line types and technology layers.

AWR provides number of tutorials proper creation of layout in MWO and meaning of layout settings technology files. See for instance:
https://awrcorp.com/download/faq/english/appnotes/pcb_layout_1.aspx

Download of LPF Files

1. *Make Right-Mouse-Click on “Infineon Layer Process”*
2. *Select PCB layer setting with number of layers you need and click “Element Help...” to start download*
3. *Open zip file and save LPF file in any location*

4. *Go to layout tab, make Right-Mouse-Click on "Layer Setup" and select "Import Layer Process definition"*
5. *Select LPF file saved before*

This action will update you layer definition and 3D layout presentation.

6 Q&A

1) On Infineon Download Webpage for Component Libraries only the latest Version is provided. Please contact the Infineon Customer Support to get older versions.
2) Please find more details in MWO® Help: **https://awrcorp.com/download/faq/english/start.aspx**

Revision History

Major changes since the last revision

Page or Reference	Description of change

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Document reference

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Information

For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office. Infineon Technologies components may be used in life-support devices or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.