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Overview, FAQ and Installation

RF High Power Product Design Kits for Agilent's Advanced Design System

Overview, FAQ and Installation



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I. RF HIGH POWER MODELS AND DESIGN KIT OVERVIEW

All RF High Power product MET and Root models available in Advanced Design System (ADS) design kits include package, bond wire and internal matching network effects.

MET Models

The MET model for RF High Power transistors and RF ICs is a nonlinear model that simulates electrical phenomena and accounts for dynamic self-heating. It was specifically developed to model high power RF transistors and RF ICs used in wireless base station applications. The MET model is capable of performing small-signal, large-signal, harmonic-balance, and transient simulations. Because of its ability to simulate self-heating, the MET model enables circuit designers to predict prototype performance more accurately.

RF High Power product MET models are available for Agilent's® EEsof® ADS using the RF High Power Model Kit.

Root Models

The Root model is an Agilent EEsof proprietary model. It is a table-based model and does not account for self-heating effects. The Root model is available for use in Agilent EEsof ADS only.

Product Model Design Kits

RF High Power model design kits are implemented as an ADS design kit and should be installed by following the Agilent EEsof design kit installation instructions.

II. RF HIGH POWER MODEL KIT

The RF High Power Model Kit contains the model definitions and the nonlinear electrothermal model required to run the product models. Only one RF High Power Model Kit is required per ADS installation.



Attention: The RF High Power Model Kit version installed must match the ADS installation version, i.e., if ADS is updated to a later version, the corresponding RF High Power Model Kit must also be installed. Conversely, if an earlier version of ADS is used the corresponding RF High Power Model Kit must then be installed.

III. PRODUCT MODEL DESIGN KIT

This design kit is for a single RF High Power product. Multiple product model design kits can be installed and used simultaneously.

IV. MODEL LIBRARY (for models introduced in 2006 and earlier)

The Model Library is a design kit that contains a selection of RF High Power models introduced in 2006 and earlier. Only one RF High Power Model Library is required per ADS installation. Revision 4 of the High Power Model Library requires an RF High Power Model Kit to run the simulation code.



Attention: All RF High Power models released after 12/2006 will be available only as a Product Model Design Kit. Models released in 12/2006 and earlier are available in the RF High Power Model Library.

V. PLATFORMS SUPPORTED

ADS Version	RF High Power Models	Platforms Supported ⁽¹⁾					
		MS Windows [®]		Linux [®]		Solaris [®]	
		32-bit	64-bit	32-bit	64-bit	32-bit	64-bit
ADS2008U2	Product Model Design Kits w/RFPDK	Y	Y	Y	Y	N	N
	Model Library w/RFPDK	Y	Y	Y	Y	N	N
ADS2006U3	Model Library w/RFPDK	Y	Y	Y	Y	N	N
ADS2005A	Model Library ⁽²⁾	Y	NA	Y	NA	Y	NA

RFPDK = RF High Power Model Kit

Y = supported by Freescale

N = not supported by Freescale

NA = not supported by Agilent EEsof EDA

(1) See ADS installation guide for a listing of platforms and operating systems supported.

(2) The RF High Power Model Library installed with ADS2005A has been archived.

VI. AGILENT'S ADVANCED DESIGN SYSTEM – DESIGN KIT & INSTALLATION

ADS Design Kit

A design kit is a logical grouping of files related to a set of ADS components. The design kit structure is self-contained to provide easy transfer between different users or computer platforms. All component information needed by ADS is stored within the design kit.

Installation

Use the following links and information to obtain instructions for unzipping, installing and set-up of design kits. Note that the design kit infrastructure has been developed and tested to provide a standard method for building, testing, installing and using design kits within ADS.

<http://agilent.com/find/eesof>: [Agilent EEsof EDA](#) > [Product Documentation](#) > [Advanced Design System Documentation](#)

Click on any of the above links to get to the level of information needed.

VII. INSTALLATION FAQ & SUPPORT

Below is a table of common problems and answers to questions that may help you complete your installation. Verify that the Product Model Design Kits were installed correctly by reviewing the ADS Design Kit installation procedures before attempting to troubleshoot problems.

Problem	Possible Solution
<p>The Product Model Design Kit palette exists within the schematic window, and I can pick and place model parts to the schematic; however, when I simulate, I receive the following error messages within the simulator window: Warning detected by HPEESOFSIM during netlist parsing. Error detected by HPEESOFSIM during netlist parsing 'FSLFET1' is an instance of an undefined model ...'</p>	<p>Verify that the FSL_Tech_INCLUDE element exists in the top-level circuit.</p>
<p>Under Linux/Unix, when starting ADS following the installation, the messages do not appear in the terminal window upon startup: Loading Freescale Semiconductor's ADSv 2006U3p1p0 RF High Power Model Library ... Freescale Semiconductor's ADSv 2006U3p1p0 RF Power ADS2006U3 DK Library Load Completed</p>	<p>Verify the design kit directory and all of its subdirectories are present in the ADS custom directory.</p> <p>Verify the design_kit directory exists within the design kit and the ads.lib file exists inside.</p>
<p>After ADS is open, the desired Product Model Design Kit does not appear in the schematic palette or within the Component Library Browser window.</p>	<p>Verify the design kit directory and all of its subdirectories are present in the ADS custom directory.</p> <p>Verify the design_kit directory exists within the design kit and the ads.lib file exists inside.</p>
<p>The desired Product Model Design Kit palette exists within the schematic window; however, when picking and placing an element, I receive several message windows stating the component symbol not found.</p>	<p>Verify the design kit directory and all of its subdirectories are present in the ADS custom directory.</p>
<p>The Product Model Design Kit palette exists within the schematic window and I can pick and place model parts to the schematic; however, when I simulate, a window pops up stating OPEN_SIMULATOR ERROR</p>	<p>The RF High Power Model Kit version installed must match the ADS installation version, i.e., if ADS is updated to a later version, the corresponding RF High Power Model Kit must also be installed. Conversely, if an earlier version of ADS is used the corresponding RF High Power Model Kit must then be installed.</p>

Freescale Support

Refer to [RF High Power Model Help](#) to submit a Service Request (SR) if you are experiencing installation and/or use problems with any of our model libraries or design kits.

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