PathWave Device Modelling IC-CAP Training

Keysight Technologies invites you to join our training on IC-CAP

Overview

You will learn:

- Navigating the IC-CAP user interface.
  - Driving measurement systems from IC-CAP to collect data.
  - Organizing the measurement data and checking them for consistency.
  - Extracting the model parameters.
  - Simulating the model and comparing the results to measured data.
  - Optimizing the fitting between measurements and simulation results.
- Writing PEL programs (Parameter Extraction Language) to enter custom extraction methods and to automate IC-CAP.
  - Importing data from IC-CAP into the IC designer's simulator like Spectre or ADS (Advanced Design System)

Course Type: Basic user training

Audience: Modeling engineers who need to understand the functions of the IC-CAP software

Course Length: 3 days, 8 hours per day.

Course Format: The course combines lecture presentations with instructor guided hands-on labs.

PathWave Modelling IC-CAP

Date: TBD

Delivery: Virtual/Onsite

Cost: Please contact us for pricing at: eda.training@keysight.com

Language: English

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PATHWAVE

Schedule

PathWave Device Modelling IC-CAP Training

Day 1	**Making reliable Baseband and RF Measurements**
	<u>**DC measurements tutorial:**</u> • Force-Sense technique, shielding, self-heating, self-oscillation, handling DUTs with big capacitances.
	<u>**CV measurements tutorial:**</u> • Measurement principle, how to handle unused pins during measurements and simulations, max. signal level, the right CV frequency, max. DC bias.
	S-parameter basics for modeling engineers
	<u>**NWA measurements tutorial:**</u> • Accounting for DC bias losses, max. applicable RF signal, NWA calibration & verification, de-embedding and its verification, data consistency checks.
	<u>**Automating on-wafer measurements:**</u> • Keysight WaferPro/DataPro
Day 2	**Introduction to IC-CAP** • Modeling Overview • IC-CAP User Interface and Model Structure • Linking to DC, CV and RF Instruments • Measurements and Data in IC-CAP • Model Extraction • Circuits, Simulation and Optimization • Plot Features and Using the Plot Optimizer • PEL Programming for Custom Extraction and Automation • Build and Run a Diode Model Extraction
Day 3	**Getting further with IC-CAP** **Device Modeling extensions (sub-circuits, Verilog-A)** • Verilog-A Model of a diode • Keysight ICCAP Toolkits: example on GaN FET Modeling **Programming in ICCAP and creating GUIs (Graphical User Interfaces):** • PEL/Python commands, variables & strings & arrays • PEL/Python Programming: extracting Parameters, executing Programs, accessing data setting up GUIs and execute them from programs

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