Modelithics®

World's Best RF & Microwave Simulation Models

Modelithics Microwave Technology MVP Library

for High Accuracy Electronic Simulation

Modelithics® Vendor Partner

MwT MicroWave Technology

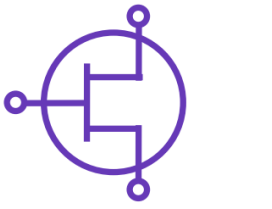
OVERVIEW

The **Modelithics Microwave Technology MVP Library** is a collection of highly accurate measurement-based simulation models that are compatible with popular Electronic Design Automation (EDA) software tools. These models offer accurate broadband prediction including parasitic effects and feature scalable design parameters such as component value, pad dimensions, and substrate properties. These state-of-the-art models install seamlessly into the EDA software, placing high accuracy models at your fingertips and allowing for first pass design success!

LIBRARY FEATURES

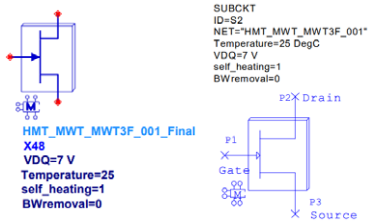
The Modelithics Microwave Technology MVP Library offers a collection of **Microwave Global Models™** that provide many advantages over ideal and S-parameter file-based models. Valuable features of the models include:

- **MEASUREMENT-BASED** — Each global model is developed using highly accurate measurements across multiple conditions including different substrates and pad dimensions. By developing models using measurements, designers can have confidence that their simulations will represent real-world conditions.
- **SCALABLE** — The models can be scaled for part value (when applicable), pad dimensions, and substrate properties, allowing designers to simulate based on their specific conditions.
- **OPTIMIZATION AND STATISTICAL ANALYSIS —** Model parameters can be tuned and optimized in certain EDA software tools to provide best case parameter selection and rapid achievement of design goals. Model parameters can also be set up for statistical analysis.
- **AVAILABLE FOR POPULAR EDA TOOLS** — Keysight Technologies' PathWave Advanced Design System (ADS), Cadence® AWR Design Environment®, Keysight Technologies' PathWave RF Synthesis (Genesys), and Keysight Technologies' PathWave System Design (SystemVue).
- **COMPLETE DOCUMENTATION** — Each model contains a comprehensive model datasheet that lists recommended model validity parameters, measurement and test fixture details, and model-to-measurement data comparisons.



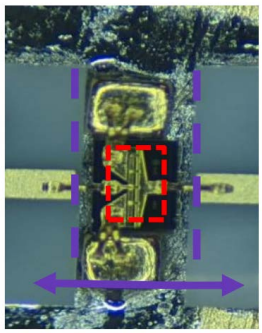
HMT-MWT-MWT3F-001
for MwT-3F Discrete GaAs MESFET

Model Representation



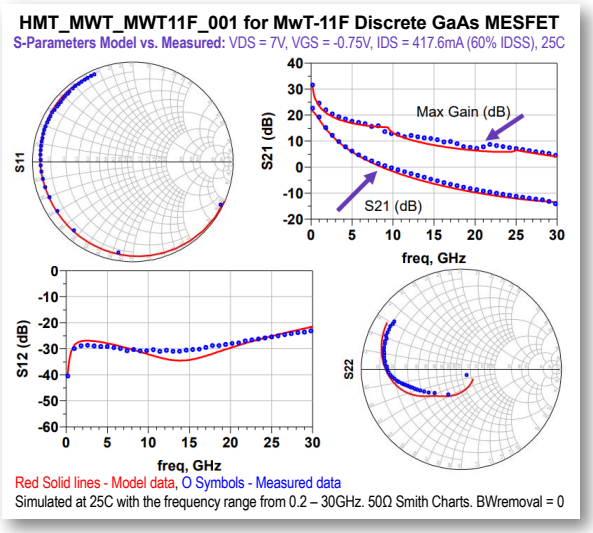
Keysight ADS AWR

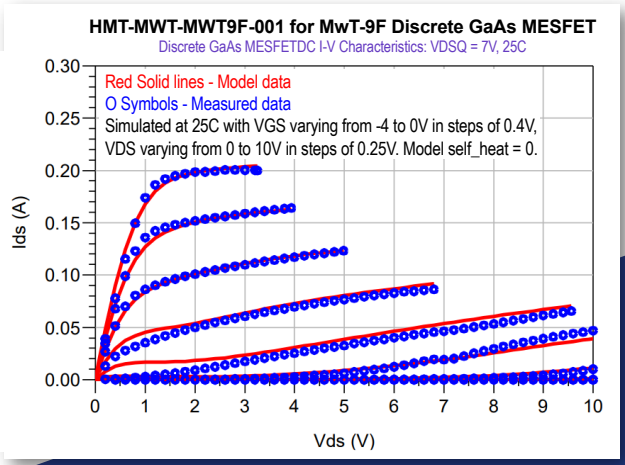
Reference Planes



Model and Measurement Reference Planes (BWremoval=1)

Model and Measurement Reference Planes (BWremoval=0)





Excellence in Modeling Since 2001

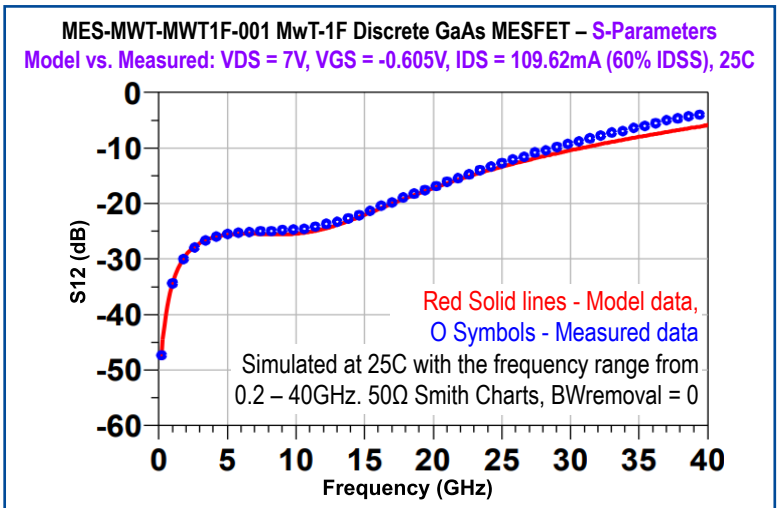
List of Components in the Modelithics® Microwave Technology MVP Library

Transistors		
MWT-1	MwT-3F	MwT-7F
MwT-11F	MwT-7	MwT-9F
MwT-1F		

Visit the Modelithics website to view additional Pre-Release models.
Visit: www.Modelithics.com/MVP/MWT

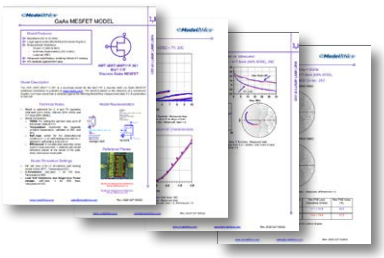
Advanced Model Features for More Accurate High Frequency Design

Broadband Validation



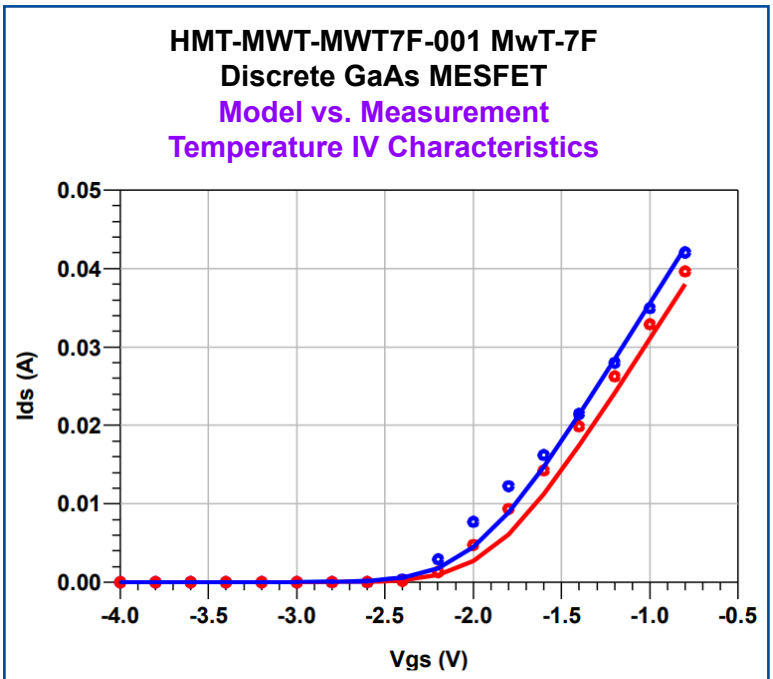
Modelithics world class models are developed by performing accurate lab measurements with techniques that have been refined over 20 years. Models are validated against broadband measurements made possible by Modelithics wide array of test capabilities.

Datasheets



Each Modelithics model has a data-sheet that provides detailed information about the model, such as the validation frequencies, reference planes, model performance, and details about other features and model parameters.

Temperature Scaling



Red Solid lines: 85C, Blue Solid lines: 25C.
Solid lines - Model data, Symbols - Measured data
Simulated at 25C and 85C, VDSQ of 7V.
Model self_heat = 0, BWremoval = 0

Modelithics added temperature dependence input parameter so the model predicts associated capacitance change for a particular DC voltage and temperature environment. The model solution was validated with RF/mmWave measurements performed at Modelithics lab facility.

What's in YOUR DREAM LIBRARY?

Help us build ***YOUR*** dream library! Pre-Release models are added based on customer demand. Share your desired models with **sales@modelithics.com**!

Visit the Microwave Technology MVP Page on the Modelithics website to:

- Explore the current list of available Microwave Technology component models
- View model datasheets
- Browse literature collection for application notes, presentations, etc.
- Request a FREE* 90 day trial of the Modelithics Microwave Technology model library: **www.Modelithics.com/MVP/MWT**

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**with approval and/or valid registration*

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