Modelithics®
World's Best RF & Microwave Simulation Models

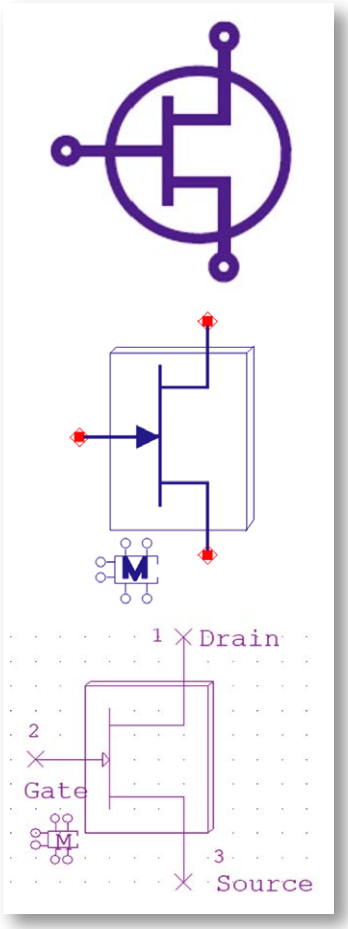
Modelithics Qorvo MVP Library
for High Accuracy Electronic Simulation

qorvo

Modelithics® Vendor Partner

Overview

The **Modelithics Qorvo MVP Library** is a collection of highly accurate measurement-based simulation models that are compatible with popular Electronic Design Automation (EDA) software tools. The Modelithics Qorvo MVP Library is a sub-set of models from within the **Modelithics COMPLETE Library**. 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!

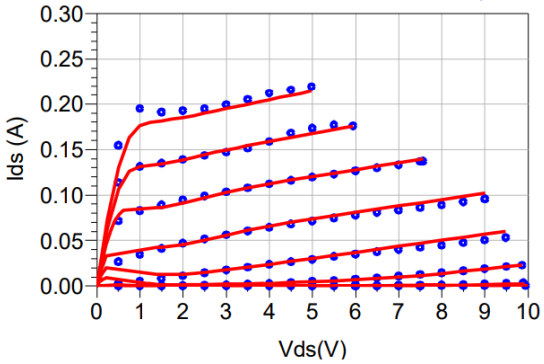


Model Features

The Modelithics Qorvo 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:

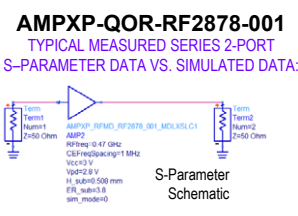
- **SUPPORT FOR POPULAR SIMULATION SOFTWARE TOOLS** - Model versions are available for Keysight PathWave Advanced Design System (ADS), Keysight PathWave RF Synthesis (Genesys), Keysight PathWave System Design (SystemVue), and the Cadence® AWR Design Environment® platform.
- **MEASUREMENT-BASED** - Each non-linear model is developed using multiple precision measurements under device-specific test conditions.
- **EXAMPLES** - The library includes example design project files that demonstrate the model features, show various test bench simulation setups, and plot simulated results.
- **WELL-DOCUMENTED** - Each model comes with a model datasheet that lists recommended model validity parameters, measurement and test fixture details, and model-to-measurement comparisons.

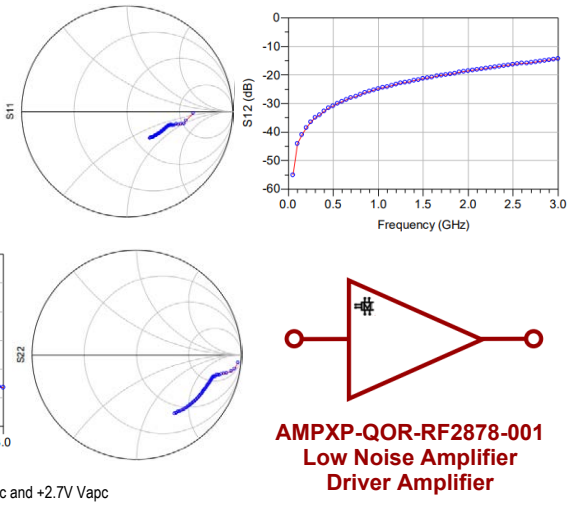
HMT-QOR-QPD2060D-001
DC I-V CHARACTERISTICS: VDSQ = 8V, 25C



Red Solid lines - Model data, O Symbols - Measured data. Simulated at 25C with VGS varying from -1.6 to 0V in steps of 0.2V, VDS varying from 0 to 10V in steps of 0.5V. Model self_heat = 0.

AMPXP-QOR-RF2878-001
TYPICAL MEASURED SERIES 2-PORT
S–PARAMETER DATA VS. SIMULATED DATA:





Red Solid lines - Model data. DC Voltage: +3.6V Vcc and +2.7V Vapc
S-Parameter Model results mounted on 21mil EMC370 substrate. model_mode=0 used

AMPXP-QOR-RF2878-001
Low Noise Amplifier
Driver Amplifier

Excellence in Modeling Since 2001

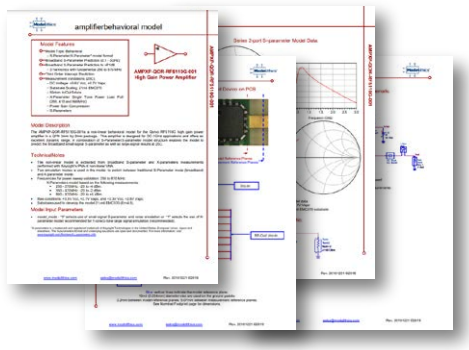
List of Components in the Modelithics® Qorvo MVP Library

Amplifiers	GaAs PHEMT		
AH101	QPD2018D	QPD2060D	QPD2160D
RF2878	QPD2025D	QPD2080D	TGF2040
RF5110G	QPD2040D	QPD2120D	TGF2060

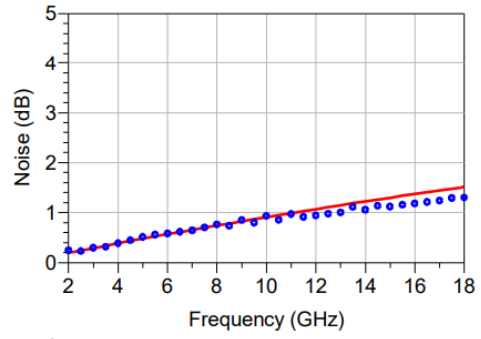
Visit the Modelithics website to view additional Pre-Release models.
Visit: www.Modelithics.com/MVP/Qorvo

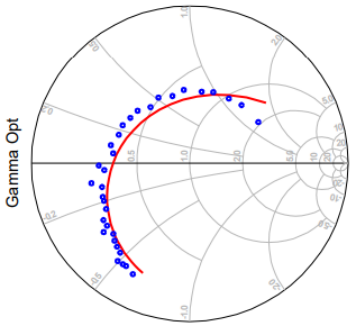
Advanced Model Features for More Accurate High Frequency Design

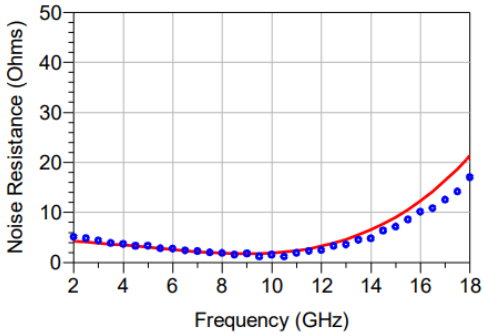
Datasheets



Each Modelithics model has a datasheet that provides detailed information about the model, such as the validation frequencies, reference planes, part value / pad scalability /substrate scalability ranges, model performance, and details about other features and model parameters.

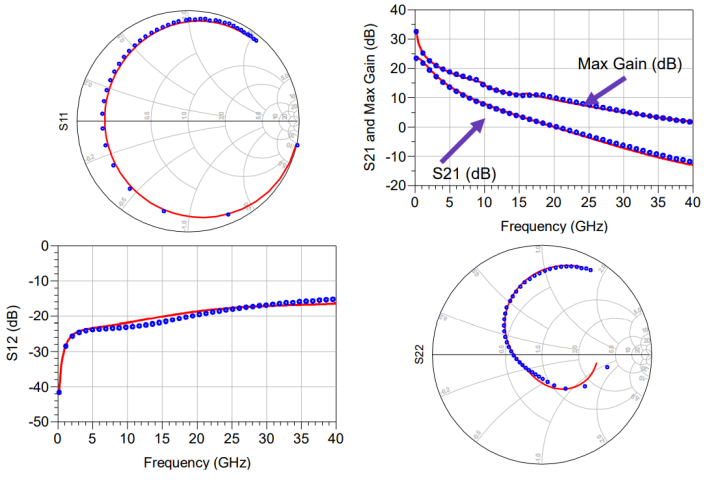






HMT-QOR-QPD2060D-001
QORVO QPD2060D
DISCRETE GaAs PHEMT
NOISE PARAMETERS MODEL VS. MEASURED: VDS = 2V, VGS = -0.59V, IDS = 48MA, 25C
Red Solid lines - Model data,
O Symbols - Measured data.
Simulated at 25C with the frequency range from 2 – 18GHz, BWremoval = 0. 50Ω Smith Charts

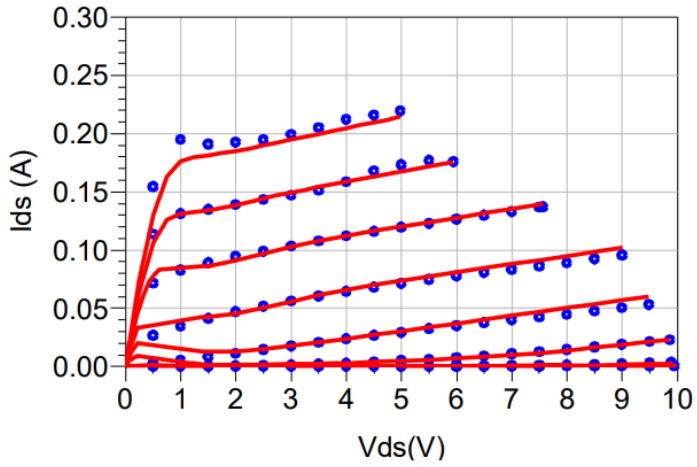
HMT-QOR-QPD2060D-001: QORVO QPD2060D DISCRETE GaAs PHEMT
S-PARAMETERS MODEL VS. MEASURED: VDS = 8V, VGS = -0.8V, IDS = 48MA, 25C



Red Solid lines - Model data, O Symbols - Measured data
Simulated at 25C with the frequency range from 0.5 – 40GHz. 50Ω Smith Charts. BWremoval = 0

HMT-QOR-QPD2060D-001:
QORVO QPD2060D DISCRETE GaAs PHEMT
DC I-V CHARACTERISTICS: VDSQ = 8V, 25C

: Red Solid lines - Model data
O Symbols - Measured data.
Simulated at 25C with VGS varying from -1.6 to 0V in steps of 0.2V, VDS varying from 0 to 10V in steps of 0.5V. Model self_heat = 0



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 Qorvo MVP Page on the Modelithics website to:
- Explore the current list of available Qorvo component models
- View model datasheets
- Browse literature collection for application notes, presentations, etc.
- Request a FREE* 90 day trial of the Modelithics Qorvo MVP Library

www.Modelithics.com/MVP/Qorvo#GaAs

*with approval and/or valid registration

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