

1st Quarter Newsletter—2013

What Designers are saying:

“Inmet’s partnership with Modelithics represents the first step in providing our customer base access to the information needed to speed up their design process and properly select the appropriate devices for integration into their circuit designs. This initial effort to provide S-Parameter data as well as equivalent circuit models for some of our commonly used catalog chip devices represents an easily accessible library intended to ultimately lower the cost and time associated with initial circuit design efforts by our customers.”

Craig Lindberg, President of Aeroflex / Inmet

NEW PRODUCT RELEASE!

Modelithics Library for Agilent ADS v10.0

Just released is the newest version of Modelithics COMPETE Library for Agilent ADS software. This release includes many new models, such as:

- Passive Plus capacitors
- Aeroflex attenuators and resistors
- Mini-Circuits attenuators
- Chilisin Inductors
- Piconics conical inductors

For more information see the [Version 10.0 Release Notes](#)



Modelithics Presents Poster at GOMACTech

March 11-14, 2013 in Las Vegas, NV

“Equivalent Circuit and Behavioral Modeling of an 8W FET Power Module”

By Alan Gruber and John Pistacchio of ITT Exelis, and Hugo Morales, Jiang Liu, and Larry Dunleavy of Modelithics



Abstract: An 8W microwave power amplifier module was modeled using two different methods: Internal, non-linear compact modeling, and behavioral modeling using X-Parameter* measurements. A high power X-parameter test bench, implemented at Modelithics, was used to develop a bias and temperature scalable X-parameter model for the PA module.



**IEEE Wireless and Microwave Technology Conference
WAMICON 2013**

April 7-9, 2013
Caribe Royale Hotel and Convention Center
Orlando, Florida

Visit us at Booth #6



Visit us at Booth #1241

Announcements:

Modelithics Welcomes Passive Plus into the Vendor Partner (MVP) Program



Passive Plus and Modelithics, Inc. have collaborated to develop Global Models™ for five families of Passive Plus ultra low ESR capacitors. These simulation models are substrate scalable, part-value scalable, pad scalable, and some are orientation selectable (vertical or horizontal surface-mount). Please visit the [Passive Plus MVP](#) page for more information.

New Chip Attenuator and High-Power Resistor Simulation Models



Aeroflex/Inmet, Inc. and Modelithics, Inc. have teamed to develop Global Models™ for Aeroflex/ Inmet, Inc. surface mount attenuators (PCAF and PCAAF series), and high power chip resistors (NPC50-50W and NPC50-100W series). All models are substrate scalable, pad scalable and part value selectable. The models are validated up to 20GHz and can be placed into high frequency design simulation schematics within Agilent Advanced Design System (ADS), AWR's Microwave Office™, and Agilent Genesys design software. Visit the [Aeroflex/Inmet MVP](#) page for more information.

Mini-Circuits and Modelithics Partner to Provide RF & MW Attenuator Models



Modelithics (www.modelithics.com) and Mini-Circuits have collaborated to develop a highly accurate set of electronic-design-automation (EDA) models of the YAT-Series attenuators in the form of Global Models™. They will be added to the Modelithics RF simulation model library. These models are extremely broadband, covering DC to 30 GHz, and are designed to simulate the behavior of the attenuators in microstrip, and grounded-coplanar-waveguide (GCPW) applications. To ease integration of Mini-Circuits precision attenuators into a circuit design, the Modelithics models are available for download from a dedicated Modelithics/Mini-Circuits web page free of charge and are also included in Modelithics SELECT PLUS free library version (see the [Mini-Circuits MVP](#) page for details). A presentation related to these new models, presented at EDI Con in Beijing China, downloaded [here](#).

Piconics and Modelithics Partner to Develop Broadband Models of Conical Inductors

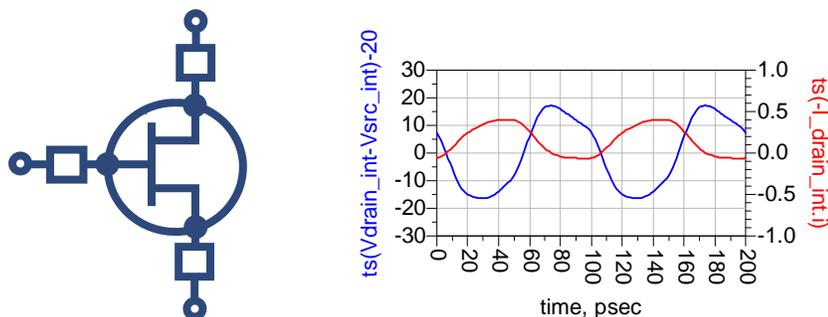


Piconics, Inc. and Modelithics, Inc. have collaborated to upgrade the previous Piconics conical inductor S-parameter models to full equivalent circuit models, now offering substrate scalability/selectability, series and shunt configurations, and broadband validation up to as high as 65 GHz for some configurations. These

models represent the first comprehensive, measurement-based equivalent circuit models for conical inductors in the Modelithics Library. The conical inductor models are currently available as Pre-Release models and will be added to the next version of the Modelithics Library of advanced high frequency simulation models in 2013. The models are compatible with Agilent ADS and Genesys and AWR's Microwave Office™ simulators. Visit the [Piconics MVP](#) page for more information and to request model downloads.

New Internal Voltage/Current Probe Feature for PA Designers

Introducing a new advanced feature for transistor models allowing intrinsic voltage/current sensing. This new feature will provide PA designers internal voltage/current access for waveform inspection and tuning.



Transistor model representation showing internal ports (inner filled-blue circles), extrinsic parasitic networks (squares), and external ports (outer circles). The plot shows the results of an example harmonic balance simulation of a transistor model with the new intrinsic current/voltage access capability. A GaN model included in Modelithics SELECT Plus free library now includes this new feature. Click [here](#) to request Modelithics SELECT Plus.

Current Promotions:

Special Order Modeling Discount or Credit Towards Library Purchase

Special Order models will expand your existing Modelithics Library to include specific simulation models that you may need for current or future designs. Such models can be added at a discount for existing Modelithics Library customers. New Library customers can receive a significant discount on Special Order modeling with the purchase of a Modelithics Library. For more information, contact sales@modelithics.com.

Pre-Release Library

Pre-Release models will expand your existing Modelithics Library to include specific simulation models in a short time at a low cost. These are models at various stages in the development process. For more information, contact sales@modelithics.com.

White Paper

Informational papers to help you get the most out of our models.

[Equivalent Circuit Based Models For surface Mount RLC Components](#)

This tutorial discuss the best practice surface mount component modeling.

Recent Articles

Printed articles you may have missed in industry related magazines.

[Modelithics Releases a Major Update of Its Active and Passive Model Library for Genesys](#)

Published by Agilent EEsof EDA Newsletter

[The measurement-based substrate model libraries can significantly improve the accuracy and efficiency of RF/microwave printed-circuit-board design simulations](#)

Published by Microwave & RF Newsletter

[Tiny Attenuators Set Levels To 18 GHz](#)

Published by Microwave & RF

[Broad-Band Surface Mount Attenuators with Accurate Models Broad-Band Surface Mount Attenuators with Accurate Models for High Frequency Design Success](#)

Presented at EDI CON, Beijing China, March 2013.

Check out the new layout and feel of our [Promotions and Free Tools Page](#)



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