Modelithics®
Accelerating Your Design Success!

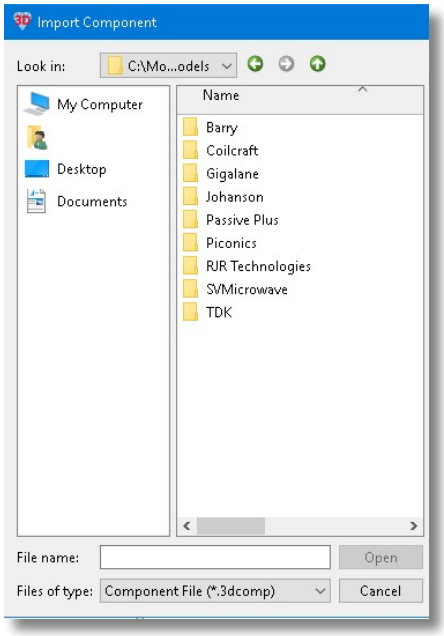
Modelithics® 3D Library
for Cadence Clarity™ 3D Solver

Modelithics Vendor Partner

cadence® Clarity 3D Solver

Overview

The **Modelithics 3D Library** for Cadence Clarity 3D Solver brings incredible flexibility and accuracy to the high frequency electronic design process. The integration of Modelithics' high accuracy scalable parasitic models into the Cadence Clarity 3D Solver design environment makes EM co-simulation a seamless process. The advanced-feature models, along with electromagnetic layout analysis, results in very accurate model-to-measurement agreement and fewer design iterations. The Modelithics 3D Library is an indispensable collection of full-wave 3D EM models. The 3D models take the design analysis a step further and capture electromagnetic interactions between components and surrounding elements. All models are measurement validated and designed to accelerate the design process.



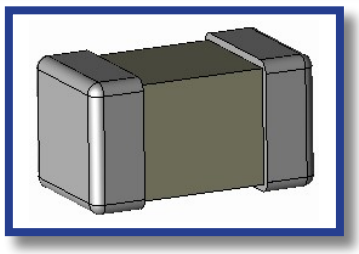
Library Features

The **Modelithics 3D Library** is a comprehensive collection of models, including approximately 400 3D Geometry models from many popular vendors, and offering powerful advanced features:

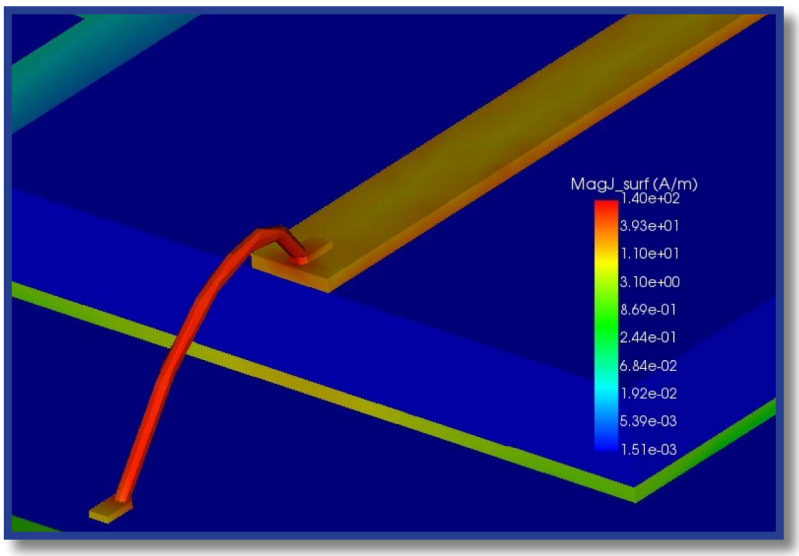
- **Substrate independent**
- **Full-wave 3D EM simulation**
- **Predict coupling effects**
- **Design necessary shielding**

All Modelithics Models

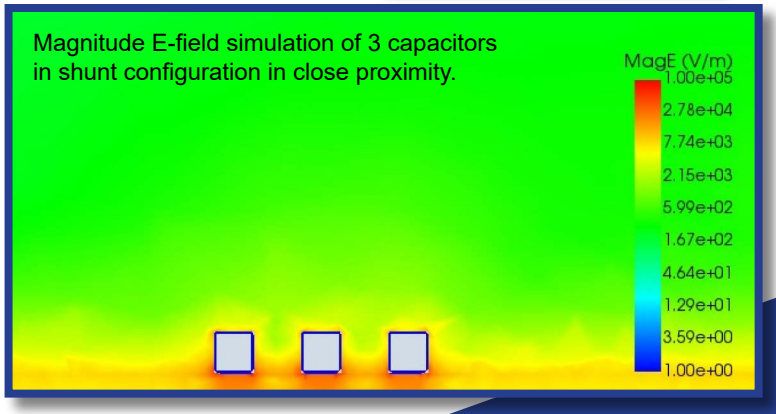
- **Measurement-based** — Each model is developed using specialized measurements under device-specific test conditions.
- **Model Documentation** — Each model contains a model datasheet that lists recommended model validity parameters, measurement and test fixture details, and model-to-measurement data comparisons.



Right: Johanson 0603 12pF capacitor.



Above: Surface current density plotted along PCB trace, QFN package, and bondwire thru path of 3D simulation.



Request a FREE Trial!

Accelerating Your Design Success!

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Modelithics 3D Geometry Models

Modelithics Vendor Partners (MVPs)

Barry Industries

PACKAGES
QFN5532-0521, QFN3312-0520, QFN3312-0521, QFN3312-0522

Coilcraft

INDUCTORS
0603CS, A0xT, B0xT

Gigalane

CONNECTOR
PSF-S00-000

Johanson

CAPACITOR
R14S

Mini-Circuits

FILTERS
HFCN-740+, HFCN-880+, HFCN-2700+, HFCN-3800+, HFCN-5500+, LFCN-80+, LFCN-120+, LFCN-320+, LFCN-400+, LFCN-490+, LFCN-530+, LFCN-630+

Mini-Circuits (Cont'd)

FILTERS (Cont'd)
LFCN-1000+, LFCN-1200+, LFCN-1200D+, LFCN-1575+, LFCN-1700+, LFCN-1800+, LFCN-1800D+, LFCN-2250+, LFCN-2850+, LFCN-3000+, LFCN-3800+, LFCN-4400+

Passive Plus

RESISTORS
R35-1209BB, R35-2010BB

RJR Technologies

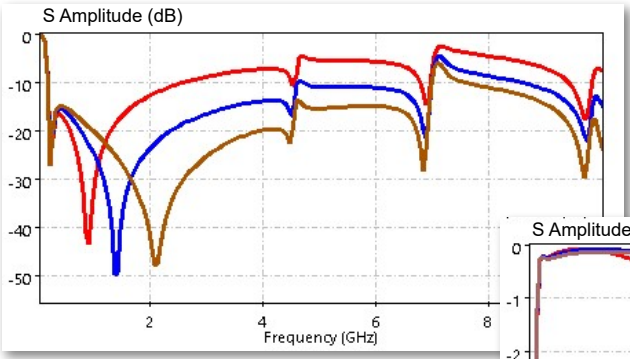
PACKAGE
QFN01

SV Microwave

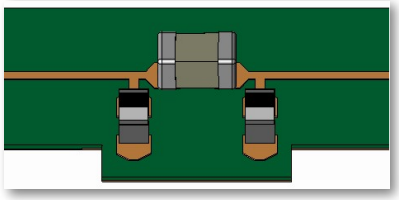
CONNECTOR
2985-6004

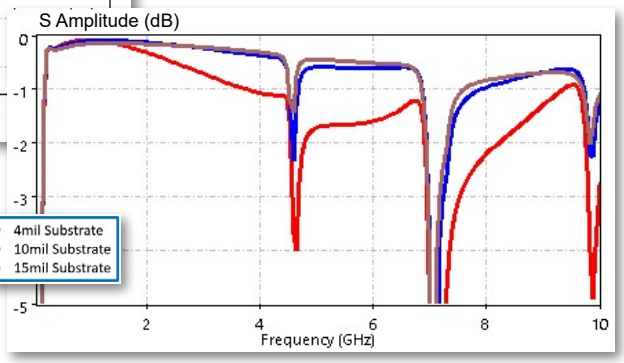
TDK

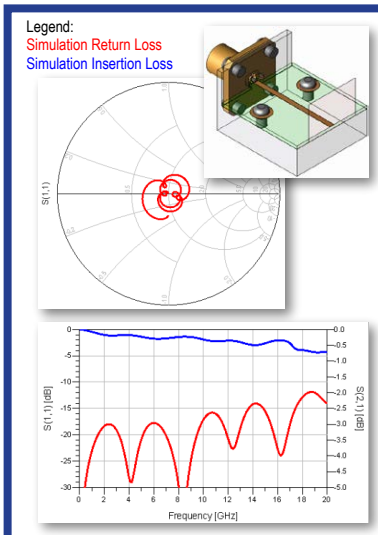
INDUCTORS
MHQ0402PSA, MLG0402Q, MLG0603P, MLG0603S, MHQ1005P



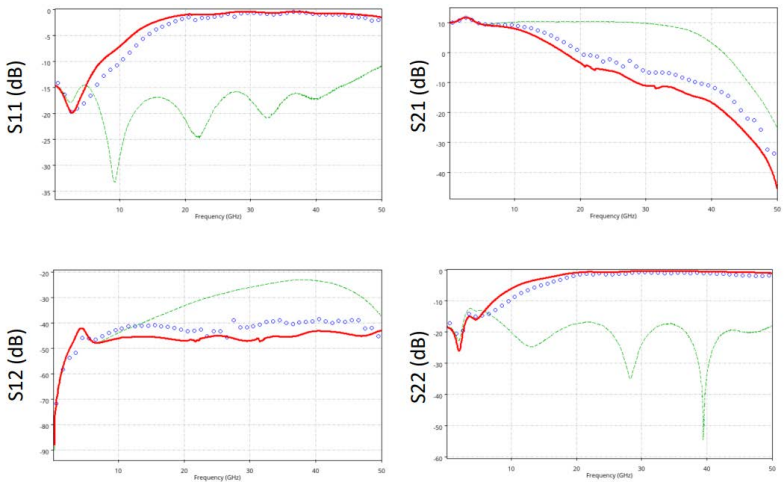
Simulated S-parameters of a simple high-pass filter on three different substrates to 10 GHz. Modelithics models incorporate complex geometric and material properties to accurately capture parasitic and on-ideal effects.

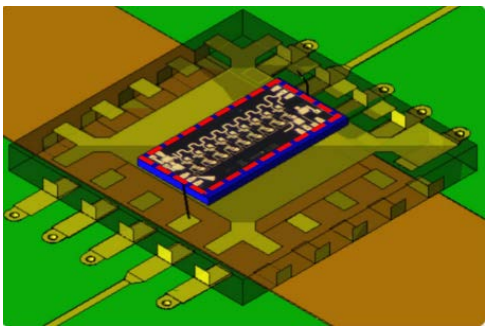






Gigalane SMA panel mount adapter mounted on a housing sectioncutout with 50W line. Substrate - 10mil Rogers 4350.





3D geometry model of RJR 4mm QF01N Package used in an EM co-simulation with measured SP data of a MMIC amplifier

Co-simulation of MMIC S-Parameters and 3D model of package and bondwires mounted on Alumina mother board– red trace
Measurement of MMIC mounted in package – blue line
Measurement of MMIC only – green line

**MMIC not included in 3D EM simulations

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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**!

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