Modelithics®

World's Best RF & Microwave Simulation Models

Modelithics EXEMPLAR Library

For Keysight PathWave Advanced Design System (ADS)

ex · em · plar (n.) Something that serves as a typical example or excellent model.

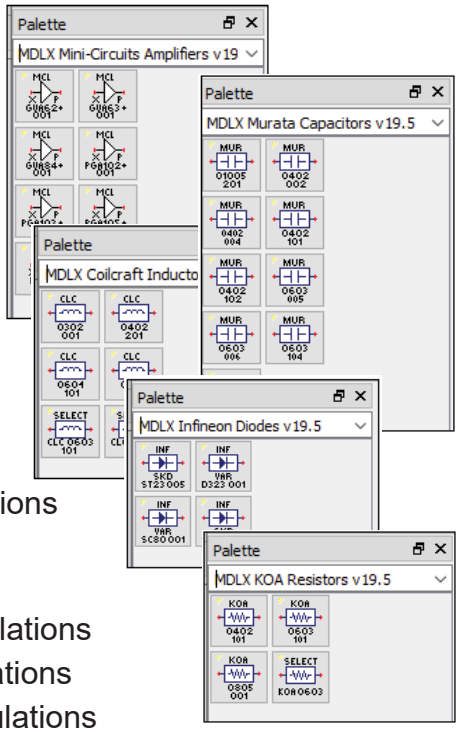
Overview

The Modelithics EXEMPLAR Library is an expanded trial library containing more models than the free SELECT+ Library, which can be downloaded online at **www.Modelithics.com/Model/FreeModels**. The EXEMPLAR Library is a representative subset (*about 15%*) of all models available in the Modelithics COMPLETE Library, which contains passive CLR component and filter models, non-linear transistor and diode models, the Modelithics SUBSTRATE Library, and more. The EXEMPLAR Library is designed to include all models needed to run the many example tutorial projects available on the Modelithics website.

The EXEMPLAR Library is available to approved customers for a FREE trial and is also available to students and faculty members through the Modelithics University Program for educational wireless electronic design projects. See **www.Modelithics.com/Model/Exemplar** for more details.

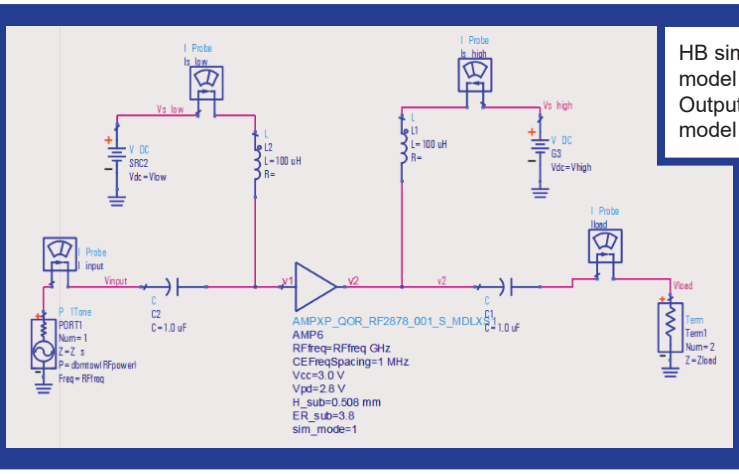
Model and Library Features

- Modelithics models offer scalability by substrate, part value, pad size, temperature, and other characteristics.
- The models are engineered to simulate typical device response including related parasitics.
- The Modelithics EXEMPLAR Library includes many example design projects, and all of the Modelithics models needed to run those projects.
- The Modelithics SELECT+ Library and SUBSTRATE Library are included in the Modelithics EXEMPLAR Library for convenient access.

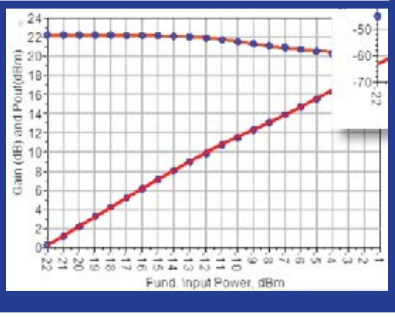


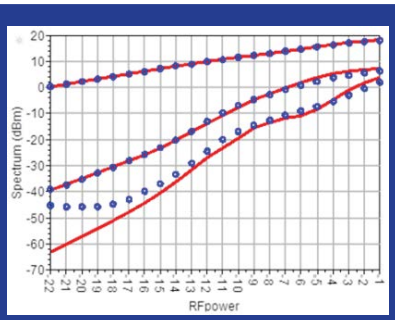
Example Projects in Modelithics EXEMPLAR

- Part Value Tuning
- Part Value Optimization
- Substrate Scaling
- Statistical Analysis
- Varying Bias Simulations
- Power Sweep
- Varying Temperature Simulations
- Harmonic Balance
- Noise Parameters
- 1/f Noise
- 2-Tone Intermodulation
- Load Pull Simulations
- Amplifier Model Simulations
- Filter Model Simulations
- Resonator Simulations
- Transformer Simulations



HB simulation of an amplifier X-parameter model in the Modelithics EXEMPLAR Library. Output spectrum, gain and Pout are shown, model (red line) vs. measured (blue symbols).





* "X-parameters" is a trademark of Keysight Technologies, Inc. The X-parameters format and underlying equations are open and documented. For more information, refer to X-parameters Open Documentation, Trademark Usage & Partnerships.

List of Components in the Modelithics EXEMPLAR Library for Keysight ADS

Modelithics Vendor Partners (MVPs)

Amotech
CAPACITOR
A60L

Avago
AMPLIFIER
MGA86576

NPNBJT PACKAGES
AT-41533, AT-64023

Barry Industries
RESISTORS
RK0603ZZ

Coilcraft
INDUCTORS
0302CS, 0402CS, 0604HQ, 0805CS

Excelics
MESFET
EFA060BS5

Freescale
AMPLIFIER
MWE6IC9100NR1

Infineon
DIODES
BAS70, BB535, BBY51-02W

NPNBJT
BFP420, BFR949F

Johanson
INDUCTORS
L-05Cxxx, L-07Wxxxx, L-14C

CAPACITOR
R15S

KEMET
CAPACITORS
C0805 (X7R), CBR04

KOA
RESISTORS
RK73B1J(RK73H), RK73B2A, RK73x1E(RK73H)

Kyocera-AVX
CAPACITORS
Accu-P, UQCL, 08051A
(ATC)
100A, 600F, 600L

COUPLER
CP0603

MACOM
SWITCH
MASWSS0204

DIODE
MLP7110

HEMT
NPTB00004A

PIN LIMITER
26901011

Maxim
AMPLIFIERS
MAX2371, MAX2373

MIXER
MAX2681

Microsemi
DIODES
UPP9401

Mini-Circuits
AMPLIFIERS
GVA-62+, GVA-63+, GVA-84+,PGA-102+, PGA-103+, PGA-105+, PHA-1+, PHA-22+

Motorola
MOSFET
MRF1570

Murata
RESONATORS
DRM020KER93, DRR030KE1R2

CAPACITORS
GJM15, GQM188, GRM022, GRM1555C1H, GRM155R71H, GRM1885C1H, GRM188R71H

NXP
NPNBJT
BFS540

On_Semiconductor
DIODES
MMBD301LT1

Passive Plus
CAPACITORS
0402N-ultra-low-ESR, 0603N-ultra-low-ESR

Qorvo
AMPLIFIERS
RF2132, RF5110G

Rohm
DIODE
RB715F

Sawtek
DUPLEXER
856331

SEDI
MESFET
FLL120MK

Skyworks
DIODE
SMV1147, SMV2204-040LF

TDK
INDUCTOR
MLG0402Q

Toko
INDUCTOR
LL1608-FSL

Toyocom
BAND PASS FILTERS
HFF-101B

Vanguard
TRANSFORMER
100205

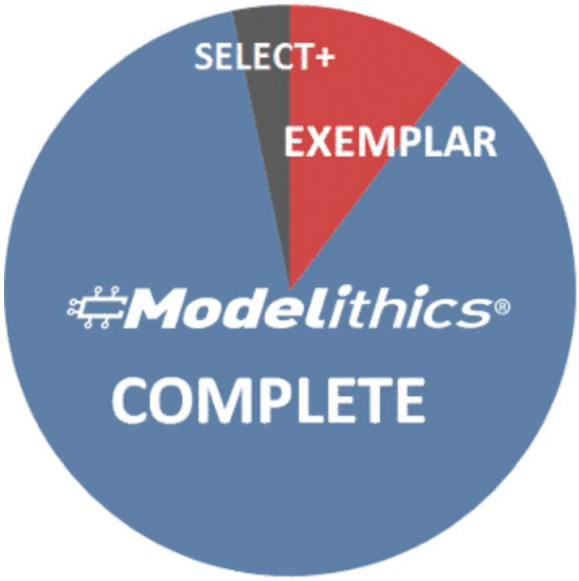
Vishay
CAPACITORS
HPC0402A, VJ0402D

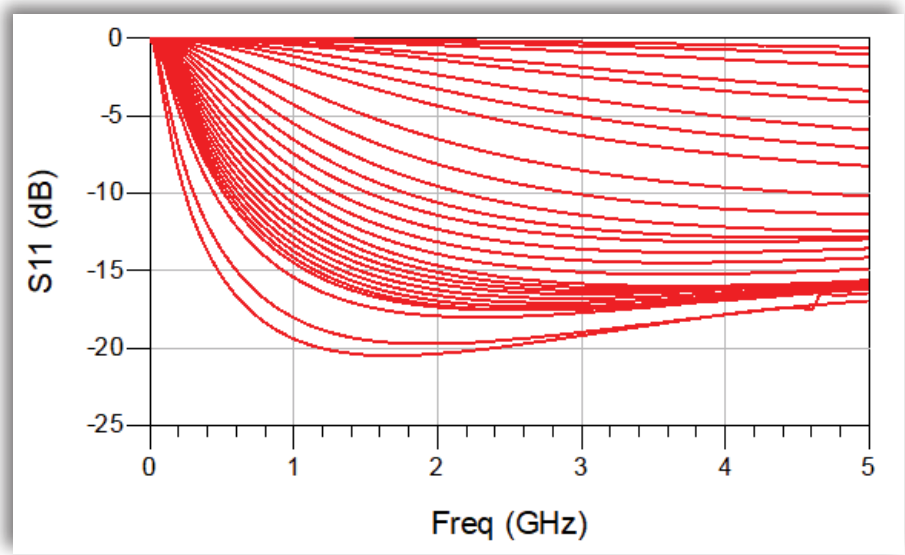
Würth Elektronik
INDUCTOR
WE-KI

Review the full list of available models in the ***Modelithics COMPLETE Library****. Also, be sure to check out the* ***Modelithics Pre-Release model list****.*

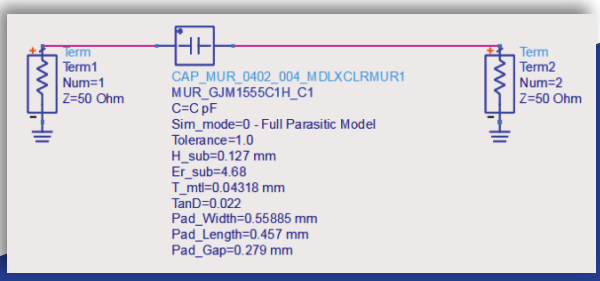
EXEMPLAR: 78 Models representing 3,671 Parts

COMPLETE: **>825 Models representing >25,000 Parts**





Discrete part value sweep using a Modelithics capacitor model of the Murata GJM1555C family from 0.1 to 20 pF.



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