

Overview

The **Modelithics System Components Library** is an indispensable collection of simulation models active RF & Microwave devices engineered to enable designers to go from concept to product faster and easier. These models for discrete die, surface mount and packaged devices are a must-have for anyone involved in PCB-based RF & Microwave circuit or module design.

Library Features

The Modelithics System Components Library offers an extensive selection of models, representing thousands of components. The installed models are fully integrated with various electronic design automation (EDA) software. Modelithics System Components Library also features a substrate library containing measurement-based substrate parameters for many of the most commonly used substrates.

- **Measurement-based** — Each model is developed using specialized measurements under device-specific test conditions.
- **Scalability** — Part-value, substrate, pad-size and temperature scalability are incorporated into many models.
- **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.
- **X-Parameter* models** — An alternative to compact non-linear equivalent circuit models for transistors that can speed up non-linear simulations and facilitate model portability between simulation platforms. They provide accurate non-linear model representations of complex integrated circuits for which equivalent circuit modeling is not practical.

Multiple EDA Tool Compatibility

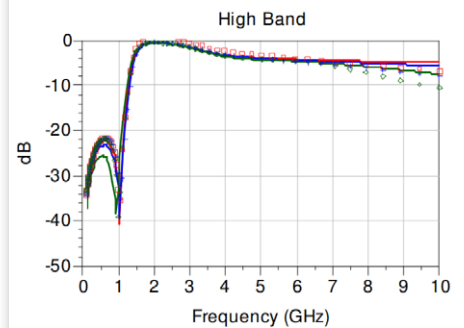
The Modelithics Systems Component Library models for discrete die, surface mount and packaged devices are a must-have for anyone involved in PCB-based RF & Microwave circuit or module design. Our Model Library software product is available for use with Keysight SystemVue, Keysight Technologies' Advanced Design System (PathWave ADS), Keysight Technologies' PathWave RF Synthesis (Genesys), and Cadence AWR Design Environment®.

Modelithics System Components Library Supported Simulators

KEYSIGHT TECHNOLOGIES
PathWave Advanced Design System (ADS)
PathWave RF Synthesis (Genesys)
PathWave System Design (SystemVue)

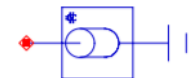
cadence®
Cadence AWR Design Environment®

DPL-AVX-DP05A-001 - Broad-Band Frequency Sweep: Substrate Effects

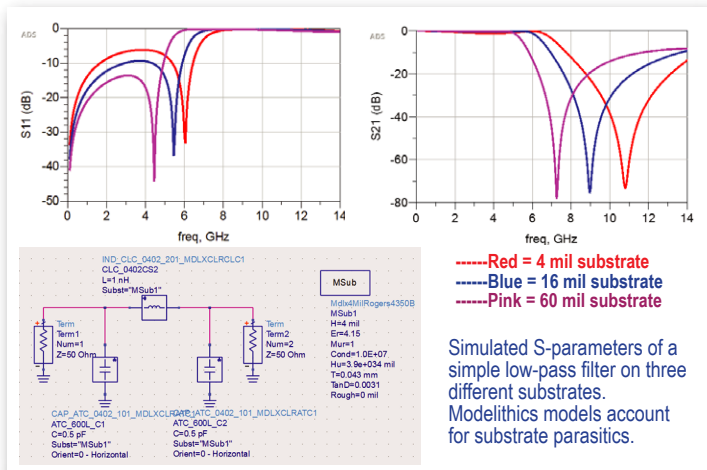


**Modelithics Model for the
Kyocera-AVX DP05A1920 Diplexer Series**
Lines - Model, Symbols - Measured data
Red - 6.6 mil Rogers 4350B,
Blue - 10 mil Rogers 4350B,
Green - 30 mil Rogers 4003C

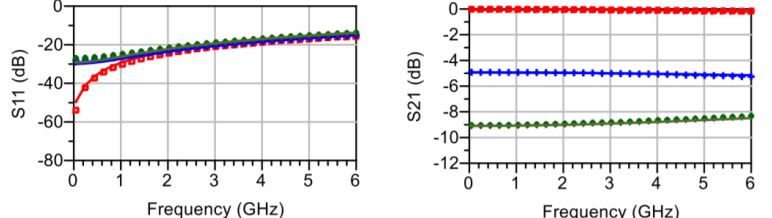
Example Modelithics Resonator Model in ADS



RSN_MUR_4100_001
MUR_DRR0204G100PTC01R_1
H_sub=0.127 mm
Er_sub=4.05
T_mtl=0.0432 mm
TanD=0.022



ATT-IMS-0402-001 - Model vs. Measured Series 2-port S-parameter Data



Modelithics Model for the IMS A-0402WA-C Attenuator Series. 60 mil Rogers 4003C (H/Er = 16.7 mil)
Solid lines - Model data, Symbols - Measured data; Red □ - 0 dB, Blue + - 5 dB, Green ◇ - 9 dB

*"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.

Avago
AMPLIFIERS MGA86576
Alpha
ATTENUATOR AA101
API Inmet
ATTENUATORS PCAF, PCAF, PCA, PCA, TCAF
Barry Industries
ATTENUATORS AK0405CB, AT0904CB
PACKAGES QFN3312-0520, QFN3312-0521, QFN3312-0522, QFN4420-0520, QFN4420-0521, QFN4420-0522, QFN4424-0520, QFN4424-0521, QFN4424-0522, QFN5532-050x, QFN6636-0520, QFN6636-0521, QFN6636-0522, QFN7744-0520, QFN7744-0521, QFN7744-0522, QFN8848-0520, QFN8848-0521, QFN8848-0522
Freescale
AMPLIFIER MWE6IC9100NR1
Gigalane
INTERCONNECTS PSF-S00-000
Guerrilla RF
AMPLIFIERS GRF2070, GRF2071, GRF2072, GRF2073, GRF2501, GRF2093, GRF2100, GRF2106, GRF4002, GRF4014

IMS
ATTENUATORS A-0402WA-C, IMS2652, A-0603-C, IMS2533, VDR3725SG, IA3-0805WA, IA3-1206WA, A-0805, IMS1141
Kyocera-AVX
COUPLERS CP0402AxxxxAN, CP0402AxxxxBN, CP0402AxxxxCN, CP0402AxxxxDN, CP0402AxxxxEN, CP0402AxxxxFN, CP0402W2700FN, CP0603AxxxxAL, DB0603N2140AN, DB0603N2400AN, DB0603N3000AN, DB0603N3500AN, PC2025A2100, PC2025A2700
ATTENUATORS RP10975AxxDB (ATC) FA10975PxxDB
DIPLEXERS DP03A5425, DP03B5425, DP05A1920, DP05A1940, DP05A5250, DP05B5425, DP06A1945, DP03C1580, DP06B2180, DP06A2180
MACOM
AMPLIFIER MAAL-010704
LIMITER 2691011
SWITCH MASWSS0204
MAXIM
AMPLIFIERS MAX2371, MAX2373
MIXER MAX2681

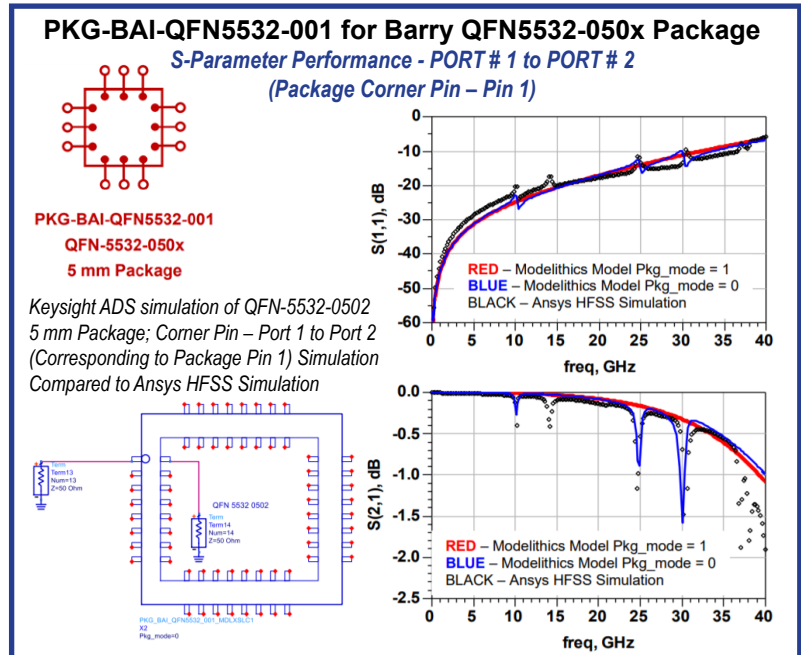
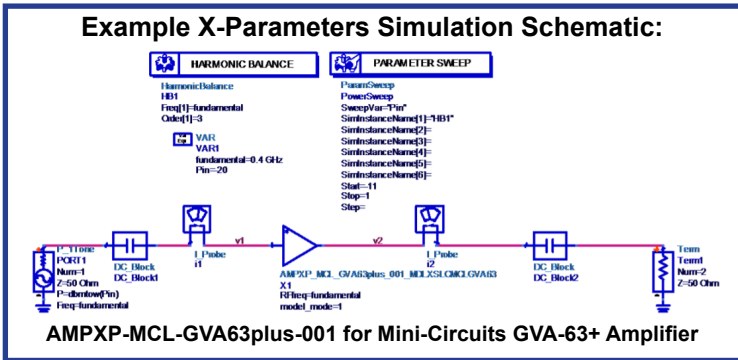
Mini-Circuits
AMPLIFIERS GVA-62+, GVA-63+, GVA-84+, PGA-102+, PGA-103+, PGA-105+, PHA-1+, PHA-22+, PSA4-5043+, AVA-183+, PMA2-133LN+, PMA2-33LN+, PMA2-43LN+, PMA3-83LN+, PMA-545+, PMA-5451+, PMA-5452+, PMA-5453+, PMA-5454+, PMA-5455+, PMA-5456+
BAND PASS FILTERS XBF-163+, XBF-183+, XBF-282+
COUPLER JRB-D+
SPLITTERS EP2C+, EP2K1+, EP2K+, EP2W1+, EP2W+, EPQ-133+, EP2KA-DG+
LOW PASS FILTERS LFCN-80, LFCN-120, LFCN-400, LFCN-490, LFCN-630, LFCN-1000, LFCN-1200, LFCN-1200D, LFCN-1700, LFCN-1800, LFCN-1800D, LFCN-2250, LFCN-3000, LFCN-3800, LFCN-4400, XLF-42M+, XLF-641M+, XLF-14+, XLF-63+, XLF-63H+, XLF-73+, XLF-122+, XLF-123+, XLF-133+, XLF-151+, XLF-173+, XLF-192+, XLF-221+, XLF-252+, XLF-312H+, XLF-332+, XLF-362+, XLF-421+, XLF-551+, XLF-732+, XLF-762+, XLF-861+, XLF-961+, XLF-982+
HIGH PASS FILTERS HFCN-740, HFCN-880, HFCN-2700, HFCN-3800, HFCN-5500, XHF-581M+, XHF-721M+, XHF-53H+, XHF-292M+, XHF-23+, XHF-252+, XHF-392+, XHF-14M+, XHF-63M+, XHF-143M+

Mini-Circuits (Cont'd)
ATTENUATORS RCAT, YAT, KAT, YAT-A
TRANSFORMERS NCS1-63+, NCS2-83+, NCS1-422+, NCS2-392+
Murata
RESONATORS DRM020KER930TCTX, DRR030KE1R225TC, DRR0201G350KTC01R, DRR02011G450KTC01R, DRR0204G100PTC01R
BAND PASS FILTER SFELA10M7GAA0-B0
TRIPLEXER LMTP33AA148
Premier Magnetics
TRANSFORMERS DB2791S, DB2795S
Qorvo
AMPLIFIERS RF110G, RF2878
RJR
PACKAGE RQFN44-12A
Sawtek
DIPLEXER 856331
Skyworks
SWITCHES AS193-73, AS204-80, AS211-334
Smiths Interconnect
ATTENUATOR TT9
FREQUENCY EQUALIZER CExxxxN0xxSMTF

Southwest Microwave
CONNECTORS 1092-01A-5, 1093-04A-5
SV Microwave
CONNECTOR 29856004
Toko
BAND PASS FILTERS ELFC455E, ELFY455E, ELFY455G
TRANSFORMER 617DB-1007
Toyocon
BAND PASS FILTERS HF373A, HFF101A, HFF101B
UBE
RESONATORS K020-03, AO-K016-08
Vanguard
TRANSFORMERS K Series, M Series, R Series, S Series, 100205

See available Pre-Release models (www.Modelithics.com/Model/PreRelease). Available models may vary between simulators.

Visit our website for an updated complete list (www.Modelithics.com/Model/SCL2).



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

Email sales@Modelithics.com or visit www.Modelithics.com to request a FREE trial!