



Overview

The **Modelithics COMPLETE Library** for Keysight PathWave RF Synthesis (Genesys) brings incredible flexibility and accuracy to electronic designs. Modelithics models are highly scalable, taking into account important design considerations, such as substrate and pad characteristics. The Modelithics COMPLETE Library includes thousands of popular passive and non-linear active device models, plus some Keysight X-Parameters* models, all with accuracy to deliver first-pass design success.

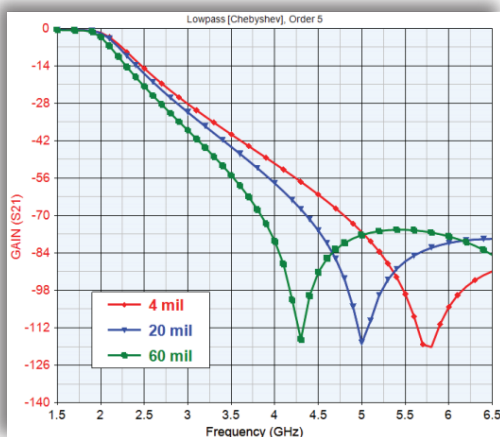
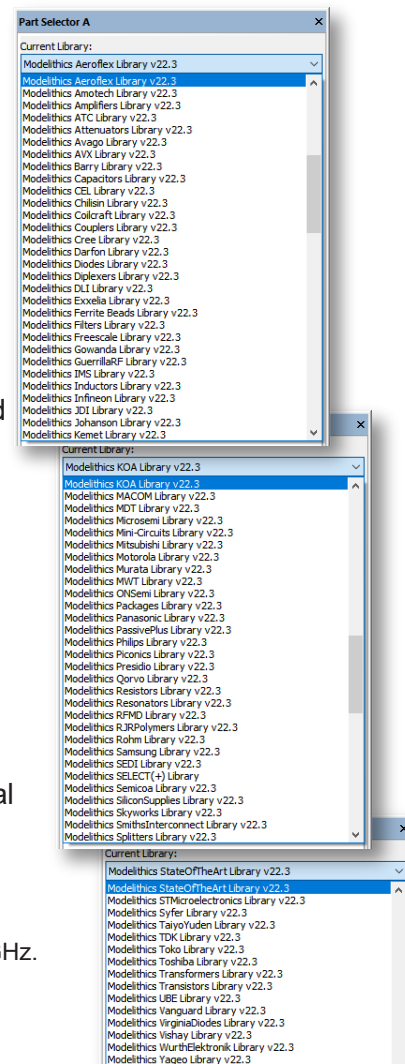
Library Features

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

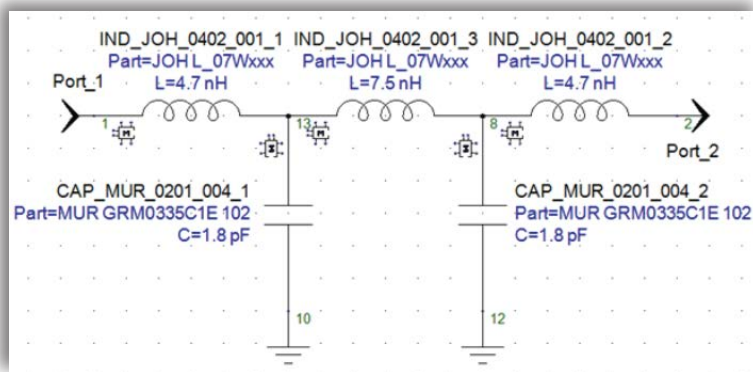
- **Measurement-based**—Each model is developed using specialized measurements under device-specific test conditions.
- **Scalability**—Part-value, substrate, pad-size and temperature scalability are incorporated into many models.
- **Model documentation**—Each model has an associated datasheet which lists the measurement validation ranges, measurement and test fixture details, and model-to-measurement data comparisons.
- **Keysight PNA-X VNA-Based X-Parameters Models**—Extend the capability of certain compact models, enabling them to predict mathematically-correct large-signal conditions.

Sub-Libraries of the Modelithics COMPLETE Library

- **CLR Library** — Capacitor, inductor and resistor **Microwave Global Models™**
- **mmWave & 5G Library** — All models validated to a minimum of 30 GHz, with some validated up to 125 GHz.
- **System Components Library** — Models for discrete die, surface mount and packaged devices.
- **Small Parts Sub-Library** — A sub-library of the Modelithics CLR library of components with body sizes smaller than 0502, including 0402, 0201 and 01005.
- **Single-Vendor Sub-Library** — Includes all models for one selected vendor. Choose from the nearly 60 vendors within the COMPLETE Library.



(Left) Simulated S21 of a simple low-pass filter on three substrates. Modelithics models account for substrate parasitics.



* "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.

Amotech
CAPACITORS A60F, A60L, A60S, A60Z, A80B
API-Inmet
RESISTORS ANC50-100W, ANC50-50W, NPC20-40S, NPC50-100W, NPC50-50W, PPC100-200AW
ATTENUATORS PCA, PCAA, PCAAF, PCAF, TCAF
Avago
NPBNTJ PACKAGES AT-41511, AT-41533, AT-64023
Barry Industries
ATTENUATORS AK0405CB, AT0904CB
RESISTORS RE0805CT, RE1005CT, REC1206T, RK0603ZZ, RY0805CT, RY1005CT, RYC1206CT (1-port, 2-port)
PACKAGE QFN5532-050x, QFN3312-0520, QFN3312-0521, QFN3312-0522, QFN4420-0520, QFN4420-0521, QFN4420-0522, QFN4424-0521, QFN4424-0522, QFN6636-0520, QFN6636-0521, QFN6636-0522, QFN7744-0520, QFN7744-0521, QFN7744-0522, QFN8848-0520, QFN8848-0521, QFN8848-0522
CEL
LOW NOISE FET CE3512K2
HMT CE3512K2
Chilisin
INDUCTORS CL2012, CLH1608, CLH2012
FERRITE BEADS GBY160808T, PBY160808T, SBY100505T
Coilcraft
INDUCTORS 0201DS, 0201HL, 0302CS, 0402CS, 0402DC, 0402HP, 0403HQ, 0603CS, 0603CT, 0603HL, 0603HP, 0603LS, 0604HQ, 0805CS, 0805HQ, 0805HT, 0805LS, 0806SQ, 0807SQ, 0906, 0908SQ, 1008CS, 1008CT, 1008HQ, 1008HS, 1111SQ, 1206CS, 132-xxSM, 1508, 1515SQ, 1606, 1812CS, 1812SMS, 2222SQ, 2508, 2929SQ, 4310LC, AxxT, BCL, BCR, BxxT, GA309X
Cree
PACKAGED PHEMT CGH35030F
MDT
DIODE MP6250-P2715
Microsemi
DIODES UPP9401, GC1500879
NPBNTJ SD1495-03
Darfon
CAPACITORS C0402NP0, C0603NP0
Exxelia
CAPACITORS CLX, CLE, SHF251
Freescale
AMPLIFIER MWE619100NR1

Gigalane
INTERCONNECTS PSF-S00-000
Gowanda
INDUCTORS C050FL, C050SM, C100FL, C100SM, C100SMC, C225FL, CC0603
Guerrilla RF
AMPLIFIERS GRF2070DS, GRF2071DS, GRF2072DS, GRF2073DS, GRF2501DSR
IMS
RESISTORS NDX-1020EZV, RC3-0402PW, RC4-0302PW
ATTENUATORS A-0402WA-C, A-0603-C, IA3-0805WA, IA3-1206WA, IMS2652, IMS2533
Infineon
DIODES BAR64-03W, BAR88-02V, BAS40, BAS40-04, BAS40-05, BAS40-06, BAS70, BAS70-04, BAS70-05, BB535, BB639, BB833, BBY51-02W, BBY52-02L
BJT BFP420, BFR949F, BFY193C
MOSFET BF999
JDI
CAPACITORS R14, R15
Johanson
CAPACITORS R05L, R07S, R14S, R15S, R15G, S42E
INDUCTORS L-05Cxxx, L-07Wxxx, L-07Cxxx, L-14C, L-14W
KEMET
CAPACITORS C0402(CoG), C0402(X5R), C0402(X7R), C0603, C0805(BX), C0805(CoG), C0805(NP0), C0805(X5R), C0805(X7R), CBR02, CBR04, CBR04 Auto, CBR05, CBR06, CBR06 Auto, CBR08
Knowles
CAPACITORS (Syfer) HighQUltraLowESR (Dielectric Labs) C06BL, C06UL, C08BL, C11UL, Milli-cap, Opti-cap
KOA
RESISTORS RK73H, RK73B1J(RK73H), RK73B2A, RK73B2B, RK73x1E(RK73H), RK73x1H(RK73B), RK73x1J, RK73x2E, RK73x3A, WK73S3A
CAPACITOR HFC1005
Kyocera-AVX
ATTENUATORS FA10975PxxDB, RP10975AxxDB

Kyocera-AVX (Cont'd)
CAPACITORS 0101YA, 02013A, 0201YC, 0201YD, 0402XJ, 0603XA(CoG), 0603XC(X7R), 0603XU, 08051A, 08051C, 0805XU, 100A, 100B, 1206XC, 12101U, 200A, 200B, 400L, 400S, 400Z, 504L, 520L, 530L, 550Z, 550U, 600L, 600S, 700A, 700B, 800A, 800B, 800R, Accu-P, AQ12, CU01, DLA0902A, DLA0902S, ML03, MP01, MP02, MP03, SQCA(NP0), SQCA(P90), SQCA(X7R), SQCB(NP0), SQCB(P90), SQCB(X7R), SQCF, SQSC(NP0), SQSC(NP0), UQCB, UQCF, UQCL(NP0), UQCR(NP0), UQCS(NP0)
RESISTORS UBR0402, CS12010T0050GBK, CS12010T0100GBK, CS13737T, CT11020T0050, CW12010T0050GBK, CW12010T0100GBK, CW13725T0050GBK, CW13725T0100GBK, CZ12010T0050GBK, CZ13725T0050GBK, CZ13737T0050GBK, RP42010R0050GTTR, RP42010R100GTTR, RP43737, RP52010R0050GTTR, RP52010R100GTTR, RP53725R0050GTTR, RP53725R100GTTR, RP81020T0050, RP92010T0050GTTR, RP93725T0050GTTR, RP93737T0050GTTR
INDUCTORS Accu-L(L0201), Accu-L(L0402), Accu-L(L0603), Accu-L(L0805), DLA11017, DLA11018, DLA11019, HL02, HLC02, HLQ02, MOL
COUPLERS CP0402AxxxxAN, CP0402AxxxxBN, CP0402AxxxxCN, CP0402AxxxxDN, CP0402AxxxxEN, CP0402AxxxxFN, CP0402W2700FN, CP0603, DB0603N2140AN, DB0603N2400AN, DB0603N3000AN, DB0603N3500AN, PC2025A2100, PC2025A2700
DIPLEXERS DP03A5425, DP03B5425, DP03C1580, DP05A1920, DP05A1940, DP05A5250, DP05B5425, DP06A1945, DP06A2180, DP06B2180
MACOM
LIMITER 2920-1011
AMPLIFIER MAAL010704
GaN HEMT NPT1012B, NPTB00004A
DIODES MA4PH235-1072, MAVR-000230-1141, MAVR-001330-1279, MLP7100, MLP7101, MLP7110, MLP7120, MMP7065-11, MSD7110, SMV20413
COUPLER MACP-011088
SPLITTER MAPD-0011062
TRANSFORMER MABA-011125
Microsemi
DIODE GC1500879
Mini-Circuits
PHEMT SAV-331+, SAV-541+, SAV-551+, SAV-581+, TAV2-14LN+
ATTENUATORS RCAT, YAT

Mini-Circuits (Cont'd)
LOW-PASS FILTERS LFCN-1000+, LFCN-120+, LFCN-1200+, LFCN-1200D+, LFCN-1700+, LFCN-1800+, LFCN-1800D+, LFCN-2250+, LFCN-2250D+, LFCN-3000+, LFCN-3800+, LFCN-400+, LFCN-4400+, LFCN-490+, LFCN-630+, LFCN-80+
BAND-PASS FILTERS XBF Series
HIGH-PASS FILTERS HFCN-2700+, HFCN-3800+, HFCN-5500+, HFCN-740+, HFCN-880+
AMPLIFIERS AVA-183+, GVA-62+, GVA-63+, GVA-84+, PGA-102+, PGA-103+, PGA-105+, PHA-1+, PHA-22+, PMA-545+, PMA-5451+, PMA-5452+, PMA-5453+, PMA-5454+, PMA-5455+, PMA-5456+, PMA2-133LN+, PMA2-33LN+, PMA2-43LN+, PMA2-43LN+, PMA3-83LN+, PSA4-5043+
Mitsubishi
HEMT MGF4953A, MGF4953B
MOSFET RD01MUS1, RD07MMUS2B
Motorola
MOSFET MRF1513, MRF1570
Murata
INDUCTORS LQG15HS, LQG18, LQP02HQ, LQP02T, LQP02TQ, LQP03HQ, LQP03TN, LQP15M, LQP18M, LQW04A, LQW15AN_00, LQW18AN_00
BAND-PASS FILTER SFELA10M7GAA0_B0
RESONATORS DRM020KER93, DRR02011G45, DRR0201G350, DRR0204G100, DRR030KE1R2
CAPACITORS BBSC_939_113_424_610, BBSC_939_113_733_510, GJM022, GJM03, GJM15, GQM1555C, GQM187, GQM188, GQM219, GQM22M, GRM022, GRM022 (X5R, X7R), GRM0335, GRM1555C1H, GRM155R71E, GRM155R71H, GRM1885C1H, GRM188R71H, GRM188R72A, GRM165C2A, GRM219, GRM32ER71J, GRP033, XBSC_939_118_492_510-xxS
TRIPLEXER LMTP33AA148
FERRITE BEADS BLM15AG, BLM15EG, BLM18A, BLM18HG102SN1, BLM21P, BLM31P, BLM41P
MWT
MESFET MWT-1, MwT-7
NXP
NPBNTJ BFQ540, BFS505, BFS520, BFS540, PBR941
On Semiconductor
DIODES MBD330DWT1, MMBD301LT1
NPBNTJ MMB13904LT1

Panasonic
INDUCTORS ELJRG, ELJRF, ELJRE
RESISTOR ERJ2GE0R00X
Piconics
INDUCTORS CCxxxTxkx240G5-C
Passive Plus
RESISTORS R35-1209BB, R35-2010BB
CAPACITORS 01005BB104, 0201BB104, 0201N-ultra-low-ESR, 0505C, 0402N-ultra-low-ESR, 0505C, 0603N-ultra-low-ESR, 0708N, 0805N-ultra-low-ESR, 1111C, 1111N-ultra-low-ESR
Presidio
CAPACITORS 0402UP, 0505UP, 0603UP, BB0201X7R103M, BB0402X7R104M2, BB0502X75104M
Qorvo
AMPLIFIERS AH101, RF2878, RF5110G
GaAsPHEMT TGF2040
RJR
PACKAGE QFN01
Rohm
DIODE RB715F
NPBNTJ EMT1, UMT1NR
NPBNTJ EMK1
Samsung
CAPACITORS CL02CxxxxxA, CL02CxxxxxG, CL03C
RESISTORS RC0402
SEDI
MESFET FLL120M, FSX017X
Semicoa
NPBNTJ 2C2857
Silicon Supplies
NPBNTJ 2SCC3356
Skyworks
SWITCHES AS193-73, AS204-80
DIODES SMP1324-087LF, SMS3927-023, SMS3940-029LF, SMS7621-005, SMS7621-015, SMS7621-079, SMS7630-005LF, SMS7630-006LF, SMV1147, SMV1253-079, SMV1763-040LF, SMV2201-040LF, SMV2202-040LF, SMV2203-040LF, SMV2204-040LF, SMV2205-040LF
Smiths Interconnect
RESISTORS CR0404ALN1WB1, CT0404ALN2WB1, CT0603ALN1SMTF
ATTENUATOR TSX, CA0505D
SOTA
RESISTORS S0202AF50R0FEB, S0303AF50R0FWB, S0505AF50R0FEB

SOTA (Cont'd)
RESISTORS S0505CF50R0FHB, S0505DF50R0FEW, S0505EF50R0FEW, S0603CF50R0FHB
ST Micro
CAPACITOR PTIC
Taiyo Yuden
CAPACITORS EMK042, EMK063, JMK063, LMK042_and_JMK042, TMK063, TVSO42, UMK105
INDUCTORS HK0603, HK1005, HK1608, HK2125, HKQ0603S, HKQ0603U, HKQ0603W
TDK
CAPACITORS C0402XCG, C0603COG, C1005CH, C1005XCR, C3225, CGA1A2COG, CGA1A2X7R, CGB1T3X5R0J04M
INDUCTORS MHQ0402PSA, MHQ1005P, MLF2012, MLG0402Q, MLG0603P, MLG0603S, MLG1005S, MLG1608B, MLK1005S, NLV25T
Toko
INDUCTORS LL1005-FHL, LL1608-FSL, LL2012-FHL, LLV0603-F
Toshiba
DIODES 1SV229, 1SV279, 1SV280, 1SV282, 1SV305, 1SV325, 1SV329, JDV2S07FS, JDV2S09FS, JDV2S14FS
UBE
RESONATORS AO-K016-08, K020-03
Vanguard
TRANSFORMERS 100205, K Series, M Series, R Series, S Series
INDUCTORS Series26000, Series26200, Series27000, Series30000, Series33000, Series34000, Series50000
Virginia Diodes
DIODES W Band Single Anode, W Band ZBD
Vishay
CAPACITORS HPC0402A, VJ0402, VJ0402D, VJ0603D
RESISTORS CH02016, CH0402, CH0603, CRCW1206, D10, D11, FC0402, FCHP 0402, FCHP0402xxxBGT, FCHP0402xxxBTT, FCHP 0402, MCT0603, MMA0204, CRCW01005
Würth Elektronik
INDUCTORS WE-ACHC, WE-CAIR, WE-KI, WE-KIHC, WE-MK, WE-TCI
FERRITE BEADS 7427923560, WE-CBA0603 (Wide Band)
CAPACITORS WCAP-CRSF (NP0)
Yageo
RESISTORS CQ0201, CQ0402, AQ0402, CQ0603, AQ0603, RC0100

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

What's in YOUR DREAM LIBRARY?

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