



## Overview

The **Modelithics COMPLETE Library** for Sonnet Suites 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 models representing thousands of popular passive devices to assist with achieving first-pass design success.

## Library Features

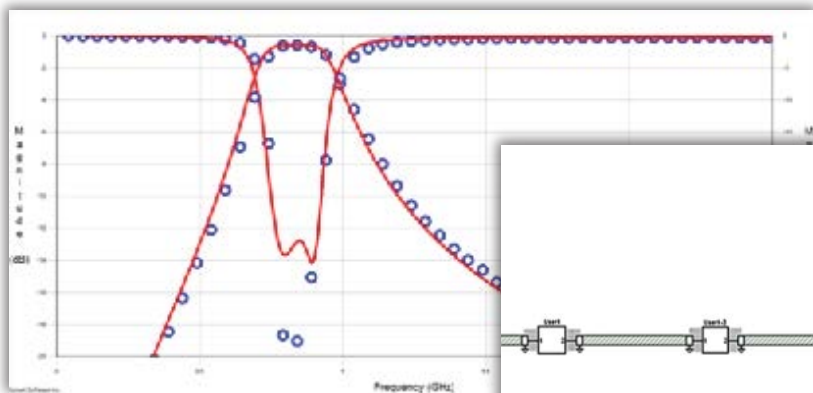
The Modelithics Library for Sonnet Suites offers an extensive selection of models, representing thousands of components. The installed models are fully integrated with Sonnet electronic design automation (EDA) software.

- **Measurement-based** — Each model is developed using specialized measurements under device-specific test conditions.
- **Scalability** — The models offer scalable/selectable parameters for design and device properties such as part-value, substrate, bias, pad-size, temperature, orientation and more.
- **Model Documentation** — Each model includes a datasheet that lists recommended model validity ranges, test fixture details, and model-to-measurement data comparisons.
- **Statistical Analyses** — The tolerance parameter is compatible with EDA optimization, yield and sensitivity analysis tools to tune and perfect designs, evaluate yield, and make efficient part selection.

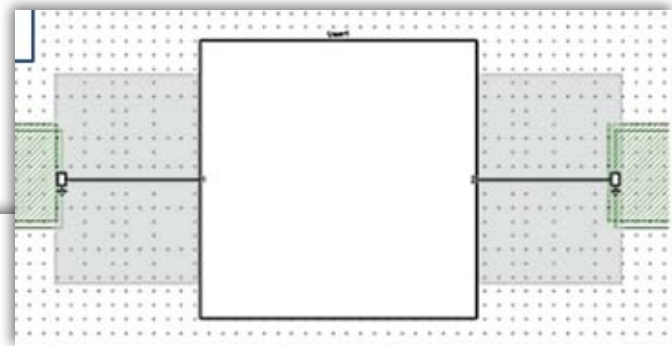
Name	Description
Models	
Modelithics	
Parts by Type	
Parts by Vendor	
Aeroflex/Metelics	
Amotech	
ATC	
AVX	
Barry	
Chilisin	
Coilcraft	
Darfon	
DLI	
Epcos	
Exxelia	
Gowanda	
IMS	
JDI	
Johanson	
Kemet	
KOA	
Mini-Circuits	
Murata	
Panasonic	
Passive Plus	
Presidio	
Samsung	
Smiths Interconnect	
SOTA	
ST Micro	
Syfer	
Taiyo Yuden	
TDK	
Toko	
Vanguard	
Vishay	
Würth Elektronik	
Yageo	

## 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.
- **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.



(Above) Band pass filter layout and Model-to-measurement comparison through 2.5GHz



(Above) Symbol of Modelithics model using Sim\_mode=0 (Full parasitic model including pads)

<p><b>Amotech</b></p> <p><b>CAPACITORS</b> A60Z, A60L</p>	<p><b>JDI</b></p> <p><b>CAPACITORS</b> R14, R15</p>	<p><b>Kyocera-AVX (Cont'd)</b></p> <p><b>CAPACITORS</b> 0101YA, 0213A, 0201YC, 0201YD, 0402xU, 0603xA (C0G), 0603xC (X7R), 0603xU, 08051A, 0805xU, 1206xC, Accu-P, AQ12, CU01, DLA09024, DLA09025, ML03, SQCA (NP0), SQCA (P90), SQCA (X7R), SQCB (NP0), SQCB (P90), SQCB (X7R), SQCF, SQCS (NP0), UQCA (NP0), UQCB, UQCF, UQCL (NP0), UQCR (NP0), UQCS (NP0) <b>(ATC)</b> 100A, 100B, 12101U, 200A, 200B, 400L, 400S, 400Z, 504L, 520L, 530L, 600F, 600L, 600S, 700A, 700B, 800A, 800B, 800R</p>	<p><b>Murata (Cont'd)</b></p> <p><b>CAPACITORS</b> GJM022, GJM03, GJM15, GQM15555C, GQM187, GQM188, GQM219, GQM22M, GRM022, GRM022 (X5R, X7R), GRM0335, GRM15555C1H, GRM155R71E, GRM155R71H, GRM1885C1H, GRM188R71H, GRM188R72A, GRM2165C2A, GRM219, GRM32ER71J, GRP033</p> <p><b>FERRITE BEADS</b> BLM18HG102SN1</p>	<p><b>ST Micro</b></p> <p><b>CAPACITOR</b> PTIC</p>
<p><b>API-Inmet</b></p> <p><b>RESISTORS</b> ANC50-100W, ANC50-50W, NPC20-40S, NPC50-100W, NPC50-50W, PPC100-200AW</p>	<p><b>Johanson</b></p> <p><b>CAPACITORS</b> R05L, R07S, R14S, R15S, R15G, S42E</p>	<p><b>RESISTORS</b> RP42010R0050GTTR, RP42010R0100GTTR, RP43737, RP52010R0050GTTR, RP52010R0100GTTR, RP53725R0050GTTR, RP53725R0100GTTR, RP81020T0050, RP92010T0050GTTR, RP93725T0050GTTR, RP93737T0050GTTR <b>(ATC)</b> CS12010T0050GBK, CS12010T0100GBK, CS13737T, CT11020T0050, CW12010T0050GBK, CW12010T0100GBK, CW13725T0050GBK, CW13725T0100GBK, CZ12010T0050GBK, CZ13725T0050GBK, CZ13737T0050GBK</p>	<p><b>Panasonic</b></p> <p><b>INDUCTORS</b> ELJRE, ELJRF, ELJRG</p>	<p><b>Taiyo Yuden</b></p> <p><b>CAPACITORS</b> EMK042, EMK063, JMK063, LMK042_and_JMK042, TMK063, TVS042, UMK105</p> <p><b>INDUCTORS</b> HKQ0603, HKQ0603S, HKQ0603U, HKQ0603W, HK1005, HK1608, HK2125</p>
<p><b>Barry Industries</b></p> <p><b>RESISTORS</b> RE0805CT, RE1005CT, REC1206CT, RK0603ZZ, RY0805CT, RY1005CT, RYC1206CT, RZC1206CT (1-port), RZC1206CT (2-port)</p>	<p><b>KEMET</b></p> <p><b>CAPACITORS</b> C0402(C0G), C0402(X5R), C0402(X7R), C0603, C0805(BX), C0805(C0G), C0805(NP0), C0805(X5R), C0805(X7R), CBR02, CBR04, CBR05, CBR06, CBR08</p>	<p><b>RESISTORS</b> RP42010R0050GTTR, RP42010R0100GTTR, RP43737, RP52010R0050GTTR, RP52010R0100GTTR, RP53725R0050GTTR, RP53725R0100GTTR, RP81020T0050, RP92010T0050GTTR, RP93725T0050GTTR, RP93737T0050GTTR <b>(ATC)</b> CS12010T0050GBK, CS12010T0100GBK, CS13737T, CT11020T0050, CW12010T0050GBK, CW12010T0100GBK, CW13725T0050GBK, CW13725T0100GBK, CZ12010T0050GBK, CZ13725T0050GBK, CZ13737T0050GBK</p>	<p><b>Passive Plus</b></p> <p><b>CAPACITORS</b> 01005BB104, 0201BB104, 0201N-ultra-low-ESR, 0402N-ultra-low-ESR, 0505C, 0603N-ultra-low-ESR, 0708N, 0805N-ultra-low-ESR, 1111C, 1111N-ultra-low-ESR</p>	<p><b>TDK</b></p> <p><b>CAPACITORS</b> C0402C0G, C0603C0G, C1005CH, C1005X5R, C3225, CGA1A2C0G, CGA1A2X7R, CGB1T3X5R0J104M</p>
<p><b>Chilisin</b></p> <p><b>INDUCTORS</b> CL2012, CLH1608, CLH2012</p>	<p><b>Knowles</b></p> <p><b>CAPACITORS</b> <i>(Syfer)</i> HighQUltraLowESR <i>(Dielectric Labs)</i> C06BL, C06UL, C08BL, C11UL, Milli-cap, Opti-cap</p>	<p><b>COUPLERS</b> PC2025A2100, PC2026A2700</p>	<p><b>RESISTOR</b> ERJ2GE0R00X</p>	<p><b>TDK</b></p> <p><b>INDUCTORS</b> MHQ0402PSA, MHQ1005P, MLF2012, MLG0402Q, MLG0603P, MLG0603S, MLG1005S, MLG1608BB, MLK1005S, NLV25T</p>
<p><b>Coilcraft</b></p> <p><b>INDUCTORS</b> 0201DS, 0302CS, 0402CS, 0402HP, 0403HQ, 0603CS, 0603CT, 0603HL, 0603HP, 0603LS, 0604HQ, 0805CS, 0805HQ, 0805HT, 0806SQ, 0807SQ, 0906, 0908SQ, 1008CT, 1008HQ, 1008HS, 1111SQ, 1206CS, 132-xxSM, 1508, 1515SQ, 1606, 1812CS, 1812SMS, 2222SQ, 2508, 2929SQ, 4310LC, AxxT, BCL, BCR, BxxT, GA309X</p>	<p><b>KOA</b></p> <p><b>RESISTORS</b> RK73H, RK73B1J(RK73H), RK73B2A, RK3B2B, RK73x1E(RK73H), RK73x1H(RK73B), RK73x1J, RK73x2E, RK73x3A, WK73S3A</p>	<p><b>Mini-Circuits</b></p>	<p><b>INDUCTORS</b> ELJRE, ELJRF, ELJRG</p>	<p><b>TDK</b></p> <p><b>INDUCTORS</b> MHQ0402PSA, MHQ1005P, MLF2012, MLG0402Q, MLG0603P, MLG0603S, MLG1005S, MLG1608BB, MLK1005S, NLV25T</p>
<p><b>Darfon</b></p> <p><b>CAPACITORS</b> C0402NP0, C0603NP0</p>	<p><b>Kyocera-AVX</b></p> <p><b>INDUCTORS</b> Accu-L (0201, 0402, 0603, 0805), DLA11017, DLA11018, DLA11019, HL02, HLC02, HLQ02, MOL, <b>(ATC)</b> MOL</p>	<p><b>Murata</b></p> <p><b>INDUCTORS</b> LQG15HS, LQG18, LQP02HQ, LQP02T, LQP02TQ, LQP03TN, LQP15M, LQP18M, LQW04A, LQW15AN_00, LQW18AN_00</p>	<p><b>RESISTORS</b> R35-1209BB, R35-2010BB</p>	<p><b>Toko</b></p> <p><b>INDUCTORS</b> LL1005-FHL, LL1608-FSL, LL2012-FHL, LLV0603-F</p>
<p><b>Exxelia</b></p> <p><b>CAPACITORS</b> CLE, CLX</p>	<p><b>INDUCTORS</b> Accu-L (0201, 0402, 0603, 0805), DLA11017, DLA11018, DLA11019, HL02, HLC02, HLQ02, MOL, <b>(ATC)</b> MOL</p>	<p><b>High-Pass Filters</b> HFCN-3800+</p>	<p><b>Presidio</b></p> <p><b>CAPACITORS</b> 0402UP, 0505UP, 0603UP, BB0201X7R103M, BB0402X7R104M2, BB0502X75104M</p>	<p><b>Vishay</b></p> <p><b>CAPACITORS</b> HPC0402, VJ0402D, VJ0603D</p>
<p><b>IMS</b></p> <p><b>RESISTORS</b> NDX-1020EZW, RC3-0402PW, RC4-0302PW</p>	<p><b>INDUCTORS</b> Accu-L (0201, 0402, 0603, 0805), DLA11017, DLA11018, DLA11019, HL02, HLC02, HLQ02, MOL, <b>(ATC)</b> MOL</p>	<p><b>Murata</b></p> <p><b>INDUCTORS</b> LQG15HS, LQG18, LQP02HQ, LQP02T, LQP02TQ, LQP03TN, LQP15M, LQP18M, LQW04A, LQW15AN_00, LQW18AN_00</p>	<p><b>Samsung</b></p> <p><b>CAPACITORS</b> CL02CxxxxxA, CL02CxxxxxG, CL03C</p>	<p><b>Würth Elektronik</b></p> <p><b>INDUCTORS</b> WE-ACHC, WE-CAIR, WE-KI, WE-KIHC, WE-MK, WE-TCI</p>
			<p><b>Yageo</b></p> <p><b>CAPACITORS</b> CQ0201, CQ0402</p>	

- Highly accurate and versatile Modelithics models reduce design time and costs, increasing productivity.
- Modelithics models are measurement-based equivalent circuit models, and will exhibit physical behavior, even beyond the measurement frequency.
- Concept to product faster and easier.

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!**

Email [sales@Modelithics.com](mailto:sales@Modelithics.com) or visit [www.Modelithics.com](http://www.Modelithics.com) to request a FREE trial!