

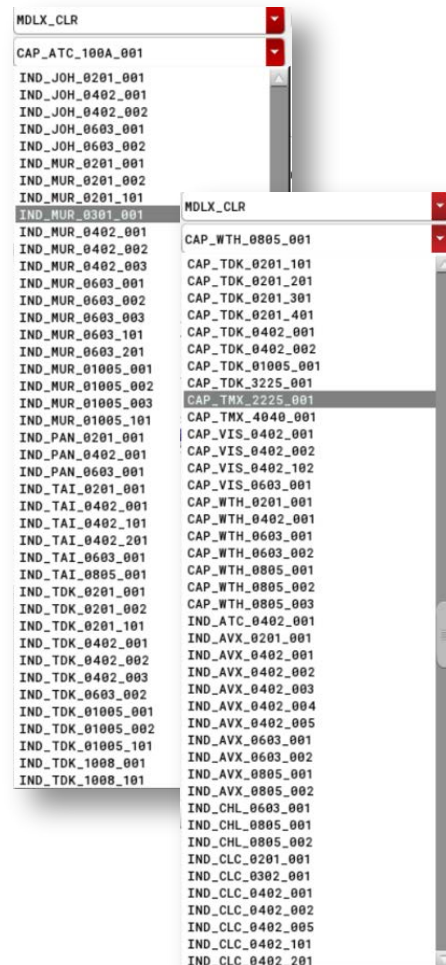
Overview

The **Modelithics Library** for Cadence Spectre RF Option brings incredible flexibility and accuracy to electronic designs. Modelithics models are scalable, allowing design details, such as substrate and pad characteristics, to be specified and simulated. The Modelithics Library includes hundreds of models representing thousands of popular passive devices to assist with achieving first-pass design success.

Library Features

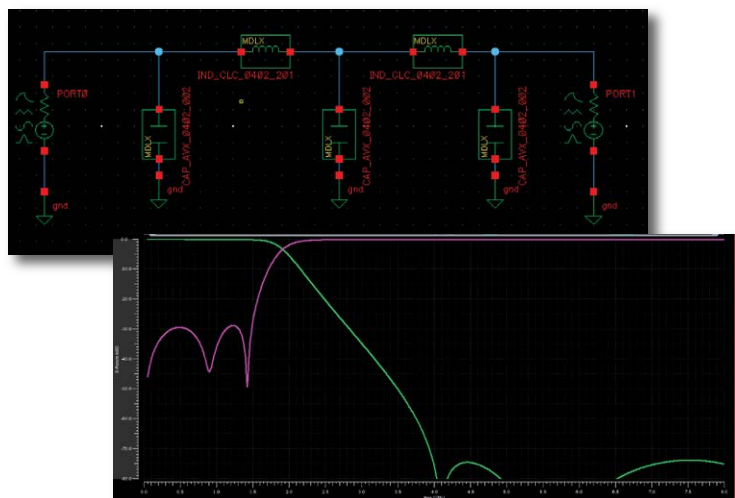
The Modelithics Library for Cadence Spectre RF Option offers an extensive selection of models, representing thousands of components. The installed models are fully integrated with Cadence Spectre RF Option electronic design automation (EDA) software.

- **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.

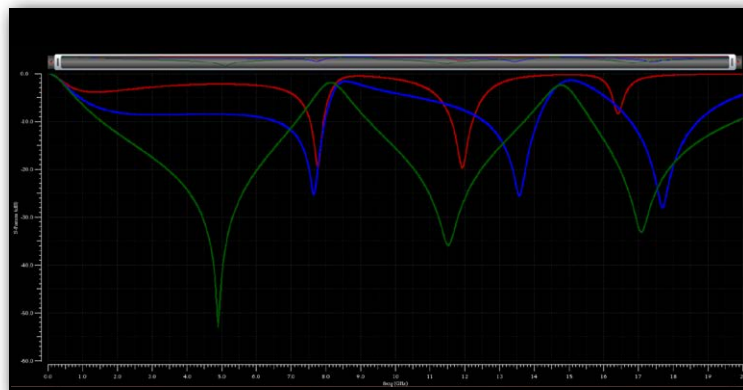


Sub-Libraries of the Modelithics Library

- **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 30 vendors within the Modelithics Library.



Simulated S11 of a simple low-pass filter on one substrate. Modelithics models account for substrate parasitics.



S11 data of a 2.7-pF capacitor on three different substrates.
Red - 6.6 mil Rogers 4350B; Blue - 20 mil Rogers 4003C;
Green - 60 mil Rogers 4003C.

<p>Amotech</p> <p>CAPACITORS A60Z, A60L</p> <p>API-Inmet</p> <p>RESISTORS ANC50-100W, ANC50-50W, NPC20-40S, NPC50-100W, NPC50-50W, PPC100-200AW</p> <p>Barry Industries</p> <p>RESISTORS RE0805CT, RE1005CT, REC1206CT, RK0603ZZ, RY0805CT, RY1005CT, RYC1206CT, RZC1206CT (2-port)</p> <p>Chilisin</p> <p>INDUCTORS CLH1608, CLH2012, CL2012</p> <p>Coilcraft</p> <p>INDUCTORS 0201DS, 0302CS, 0402CS, 0402HP, 0403HQ, 0603CS, 0603CT, 0603HL, 0603HP, 0603LS, 0604HQ, 0805CS, 0805HT, 0805HQ, 0805LS, 0806SQ, 0807SQ, 0906, 0908SQ, 1008CS, 1008CT, 1008HQ, 1008HS, 1111SQ, 1206CS, 132-xxSM, 132-xxSM, 1508, 1515SQ, 1606, 1812CS, 1812SMS, 2222SQ, 2508, 2929SQ, 4310LC, AxxT, BCL, BCR, BxxT, GA309X</p> <p>Darfon</p> <p>CAPACITORS C0402NP0, C0603NP0</p> <p>Exxelia</p> <p>CAPACITORS CLX, CLE, SHF251xxx</p> <p>IMS</p> <p>RESISTORS NDX-1020EZW, RC3-0402PW, RC3-0302PW</p>	<p>JDI</p> <p>CAPACITORS R14, R15</p> <p>Johanson</p> <p>CAPACITORS R05L, R07S, R14S, R15S, R15G, S42E</p> <p>INDUCTORS L-05Cxxx, L-07Wxxx, L-07Cxxx</p> <p>KEMET</p> <p>CAPACITORS C0402(C0G), C0402(X5R), C0402(X7R), C0603, C0805(BX), C0805(C0G), C0805(NP0), C0805(X5R), C0805(X7R), CBR02, CBR04, CBR05, CBR06, CBR08</p> <p>KOA</p> <p>RESISTORS RK73H, RK73B1J(RK73H), RK73B2A, RK73B2B, RK73x1H(RK73B), RK73x1H(RK73B), RK73x1J, RK73x2E, RK73x3A, WK73S3A</p> <p>CAPACITOR HFC1005</p> <p>Knowles</p> <p>CAPACITORS (Syfer) HighQUltraLowESR</p> <p>(Dielectric Labs) C06BL, C06UL, C08BL, C11UL, Milli-cap</p> <p>Kyocera-AVX</p> <p>INDUCTORS Accu-L(L0201), Accu-L(L0402), Accu-L(L0603), Accu-L(L0805), DLA11017, DLA11018, DLA11019, HL02, HLC02, HLQ02, MOL</p>	<p>Kyocera-AVX (Cont'd)</p> <p>CAPACITORS 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) (ATC) 100A, 100B, 200A, 200B, 400L, 400S, 400Z, 520L, 530L, 600F, 600L, 600S, 700A, 800A, 800B</p> <p>RESISTORS RP42010R0050GTTR, RP42010R0100GTTR, RP43737, RP52010R0050GTTR, RP52010R0100GTTR, RP53727R0050GTTR, RP53725R0100GTTR (ATC) 504L, CS12010T0050GBK, CS12010T0100GBK, CS13737T, CW12010T0050GBK, CW12010T0100GBK, CW13725T0050GBK, CW13725T0100GBK, CZ13737T0050GBK</p> <p>Murata</p> <p>INDUCTORS LQG15HS, LQG18, LQP02HQ, LQP02T, LQP02TQ, LQP03TN, LQP15M, LQP18M, LQW04A, LQW15AN_00, LQW18AN_00</p> <p>CAPACITORS GJM022, GJM03, GJM15, GQM187, GQM188, GQM219, GQM22M, GRM022, GRM022 (X5R, X7R), GRM0335, GRM1555C1H, GRM155R71E, GRM1885C1H, GRM188R71H, GRM188R72A, GRM2165C2A, GRM219, GRP033</p> <p>Panasonic</p> <p>INDUCTORS ELJRG, ELJRF, ELJRE, ERJ2GEOR00X</p>	<p>Passive Plus</p> <p>CAPACITORS 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>RESISTORS R35-1209BB, R35-2010BB</p> <p>Presidio</p> <p>CAPACITORS 0402UP, 0505UP, 0603UP, BB0201X7R103M, BB0402X7R104M2, BB0502X8R104M</p> <p>Samsung</p> <p>CAPACITORS CL02CxxxxxA, CL02CxxxxxG, CL03C</p> <p>RESISTOR RC0402</p> <p>ST Micro</p> <p>CAPACITOR PTIC</p> <p>Taiyo Yuden</p> <p>CAPACITORS EMK042, EMK063, JMK063, LMK042_and_JMK042, TMK063, TVS042, UMK105,</p> <p>INDUCTORS HK0603, HK1005, HK1608, HK2125, HKQ0603S, HKQ0603U, HKQ0603W,</p> <p>TDK</p> <p>INDUCTORS MHQ0402PSA, MHQ1005P, MLF2012, MLG0402Q, MLG0603P, MLG0603S, MLG1005S, MLG1608B, MLK1005S, NLV25T</p>	<p>TDK (Cont'd)</p> <p>CAPACITORS C0402C0G, C0603C0G, C1005CH, C1005X5R, C3225, CGA1A2C0G, CGA1A2X7R, CGB1T3X5R0J104M</p> <p>Toko</p> <p>INDUCTORS LL1005-FHL, LL1608-FSL, LL2012-FHL, LLV0603-F</p> <p> Vishay</p> <p>CAPACITORS HPC0402A, VJ0402D, VJ0603D</p> <p>RESISTORS D10, D11, CRCW01005</p> <p>Würth Elektronik</p> <p>INDUCTORS WE-CAIR, WE-KI, WE-KIHC, WE-MK, WE-TCI</p> <p>Yageo</p> <p>CAPACITORS CQ0201, CQ0402</p> <p>RESISTOR RC0100</p>
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- 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.



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