



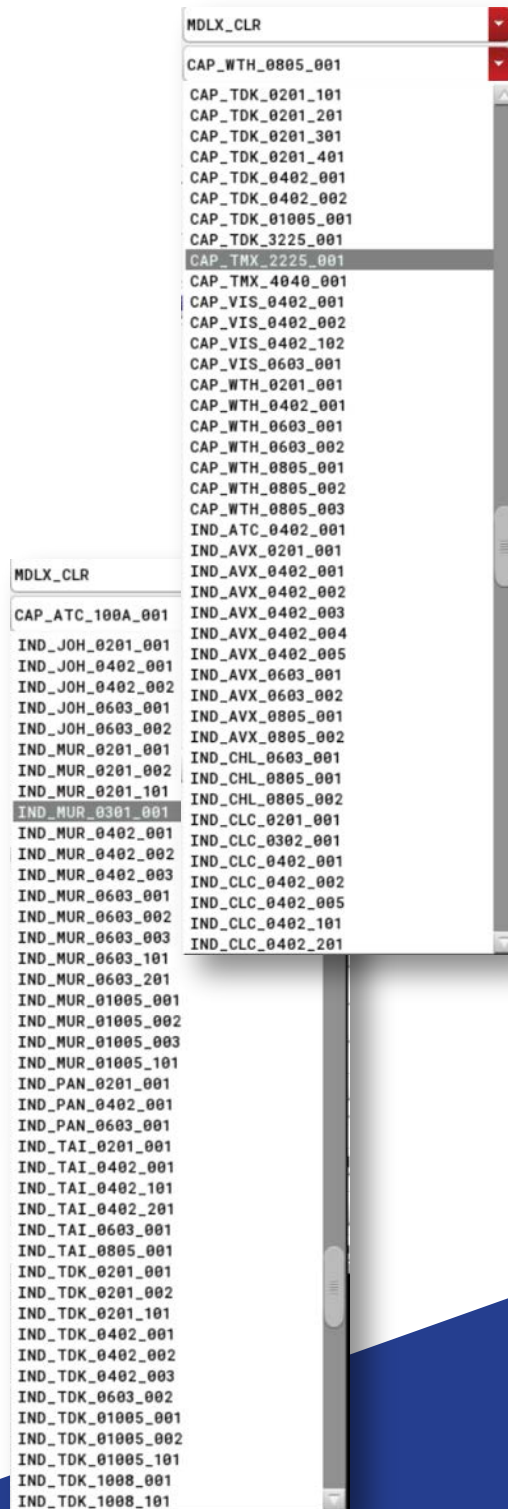
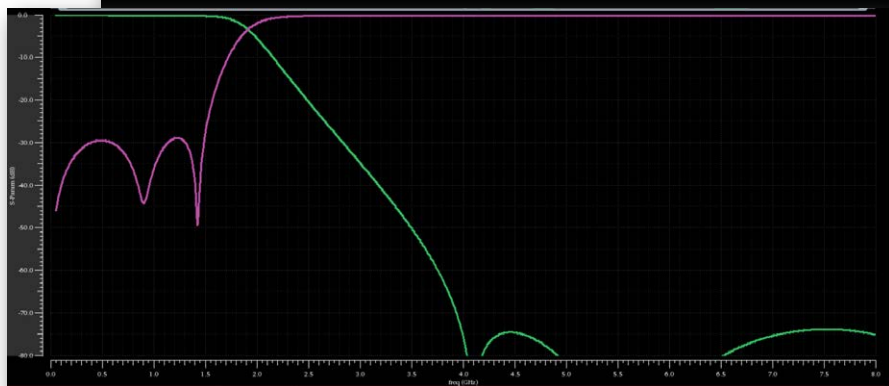
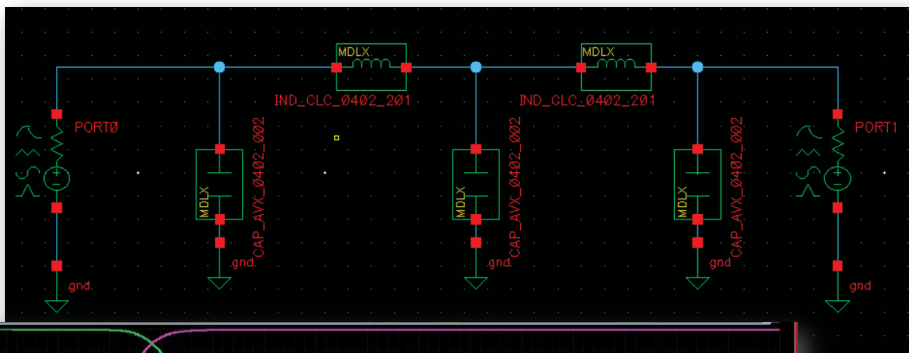
### Overview

The **Modelithics Library** for Cadence Spectre Simulation Platform 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 offers an extensive selection of models, representing thousands of components. The installed models are fully integrated with Cadence Spectre 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.



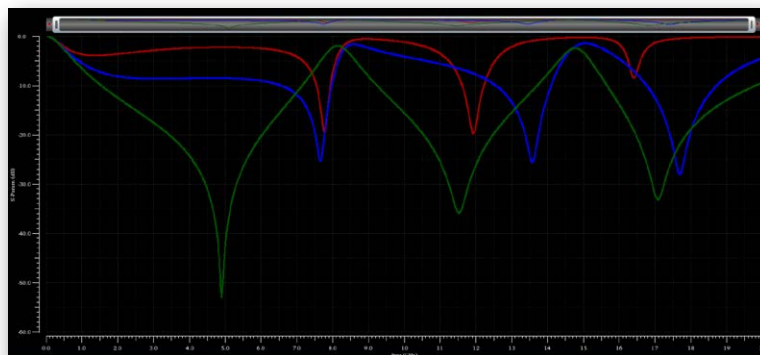
Simulated S11 of a simple low-pass filter on one substrate. Modelithics models account for substrate parasitics.

# List of Components in the Modelithics Library for Cadence Spectre

CLR			
<p><b>AVX (Capacitors)</b> 101YA, 0213A, 0201YC, 0201YD, 0402xU, 0603xA(COG), 0603xC(X7R), 0603xU, 08051A, 0805xU, 100A, 100B, 12101U, Accu-P, AQ12, CU01, DLA09024, DLA09025, DLA11017, DLA11018, DLA11019, HL02, HLC02, HLQ02, MP01, MP02, MP03, ML03, SQCA(NPO), SQCA(P90), SQCA(X7R), SQCB(NP0), SCQB(X7R), SQCF, SQCS(NP0), UQCA(NP0), UQCB, UQCF, UQCL(NP0), UQCR(NP0), UQCS(NP0)</p> <p><b>ATC (Capacitors)</b> 200A, 200B, 400L, 400S, 400Z, 520L, 530L, 600F, 600L, 700A, 700B, 800A, 800B, 800R</p> <p><b>AVX (Inductors)</b> Accu-L(L0201), Accu-L(L0402), Accu-L(0603), Accu-L(L0805), MOL</p> <p><b>Chilisin (Inductors)</b> CL2012, CLH1608, CLH2012</p> <p><b>Coilcraft (Inductors)</b> 0201DS, 0302CS, 0402CS, 0402DC, 0402HP, 0403HQ, 0603CS, 0603HP, 0603LS, 0604HQ, 0805CS, 0805HQ, 0805HP, 0805LS, 0805HT, 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><b>Johanson (Inductors)</b> L-05Cxxx, L07Cxxx, L-07Wxxx, L-14C, L-14W</p> <p><b>KEMET (Capacitors)</b> C0402(COG), C0402(X5R), C0402(X7R), C0603, C0805(BX), C0805(COG), C0805(NP0), C0805(X5R), C0805(X7R), CBR02, CBR04, CBR05, CBR06, CBR08</p>	<p><b>API Inment (Resistors)</b> ANC50-100W, ANC50-50W, NPC20-40S, NPC50-100W, NPC50-50W, PPC100-200AW</p> <p><b>AVX (Resistors)</b> RP42010R0050GTTR, RP42010R0100GTTR, RP43737, RP52010R0050GTTR, RP52010R0100GTTR, RP53725R0050GTTR, RP53725R0100GTTR</p> <p><b>ATC (Resistors)</b> 504L, CS13737T, CS12010T0100GBK, CW12010T0050GBK, CW12010T0100GBK, CW13725T0050GBK, CW13725T0100GBK, CZ13737T0050GBK</p> <p><b>Barry Industries (Resistors)</b> RE0805CT, RE1005CT, REC1206CT, RK0603ZZ, RY0805CT, RY1005CT, RYC1206CT, RZC1206CT(2-port)</p> <p><b>Darfon (Capacitors)</b> C0402NP0, C0603NP0</p> <p><b>Exxelia (Capacitors)</b> CLE, CLX, SHF251xxx</p> <p><b>IMS (Resistors)</b> NDX-1020EZW, RC3-0402PW, RC4-0302PW</p> <p><b>JDI (Capacitors)</b> R14, R15</p> <p><b>Johanson (Capacitors)</b> R05L, R07S, R14S, R15G, R15S, S42E</p> <p><b>KOA (Resistors)</b> HFC1005, RK73B1J(RK73H), RK73B2A, RK73B2B, RK73x1E(RK73H), RK73x1H(RK73B), RK73x2E, RK73x3A, WK73S3A</p>	<p><b>Knowles - DLI (Capacitors)</b> C04BL121X, C04UL, C06BL, C06CF, C06UL, C08BL, C08BL102X, C11UL, Milli-cap, Opti-cap</p> <p><b>Knowles - Syfer (Capacitors)</b> HighQUltraLowESR</p> <p><b>Murata (Inductors)</b> LQG15HS, LQG18, LQP02HQ, LQP02T, LQP02TQ, LQP03HQ, LQP03TN, LQP15M, LQP18M, LQW04A, LQW15AN_00, LQW18AN_00</p> <p><b>Panasonic (Inductors)</b> ELJRE, ELJRF, ELJRG, ERJ2GE0R00X</p> <p><b>Passive Plus (Capacitors)</b> 01005BB104, 0201BB104, 0201N-ultra-low-ESR, 0402N-ultra-low-ESR, 0505C, 060N3-ultra-low-ESR, 0708N, 0805N-ultra-low-ESR, 1111C, 1111N-ultra-low-ESR</p> <p><b>ST Micro (Capacitor)</b> PTIC</p> <p><b>Taiyo Yuden (Inductors)</b> HK0603, HK1005, HK1608, HK2125</p> <p><b>TDK (Capacitors)</b> C0402COG, C0603COG, C1005CH, C1005X5R, C3225</p> <p><b>Toko (Inductors)</b> LL1005-FHL, LL1608-FSL, LL2012-FHL, LLV0603-F</p>	<p><b>Murata (Capacitors)</b> GJM022, GJM03, GJM15, GQM1555C, GQM187, GQM188, GQM219, GQM22M, GRM022, GRM022(X5R,X7R), GRM033, GRM0335, GRM1555C1H, GRM155R71E, GRM155R71H, GRM1885C1H, GRM188R71H, GRM188R72A, GRM2165C2A, GRM19, GRM32ER71J, XBSC_939_118_492_510-xxS</p> <p><b>Presidio (Capacitors)</b> 0402UP, 0505UP, 0603UP, BB0201X7R103M, BB0402X7R104M2, BB0502X7R104M,</p> <p><b>Samsung (Capacitors)</b> CL02CxxxxxA, CL02CxxxxxG</p> <p><b>Taiyo Yuden (Capacitors)</b> EMK042, EMK063, JMK063, LMK042, JMK042, TMK063, TVS042, UMK105</p> <p><b>TDK (Inductors)</b> MHQ0402PSA, MHQ1005P, MLF2012, MLG0402, MLG0603P, MLG0603S, MLG1005S, MLG1608B, MLK1005S, NLV25T</p> <p><b>Vishay (Resistors)</b> CH02016, FC0402, CH0402, MCT0603, CH0603, CRCW1206, MA0204, D10, D11</p> <p><b>Vishay (Capacitors)</b> HPC0402A, VJ0402D, VJ0603D</p> <p><b>Würth Elektronik (Inductors)</b> WE-CAIR, WE-CAIR 5910, WE-KI, WE-KIHC, WE-MK, WE-TCI</p>

\*\* More to come! New models are added continually. Visit our website for an updated complete list, and see our available Pre-Release models ([www.Modelithics.com](http://www.Modelithics.com))

- 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.



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

Contact Modelithics at [Sales@Modelithics.com](mailto:Sales@Modelithics.com) or visit [www.Modelithics.com](http://www.Modelithics.com) to request a **FREE** trial.