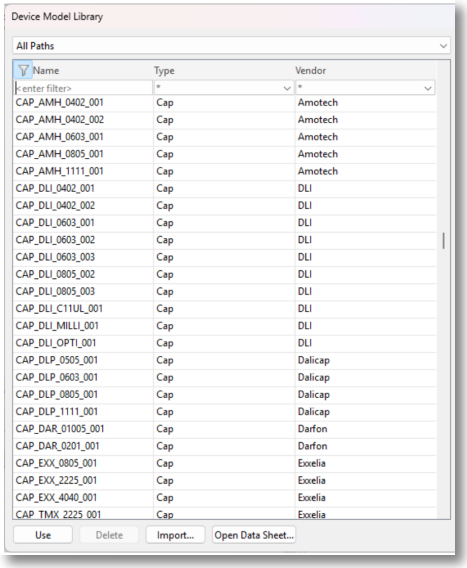
Modelithics®
Accelerating Your Design Success!

Modelithics Library
for SIMULIA® CST Studio Suite®

SIMULIA CST Studio Suite

Overview

The Modelithics Library for SIMULIA CST Studio Suite 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 thousands of popular devices with modeling accuracy to deliver first-pass design success. View the **Overview Video** to learn more about the Modelithics Library.



Library Features

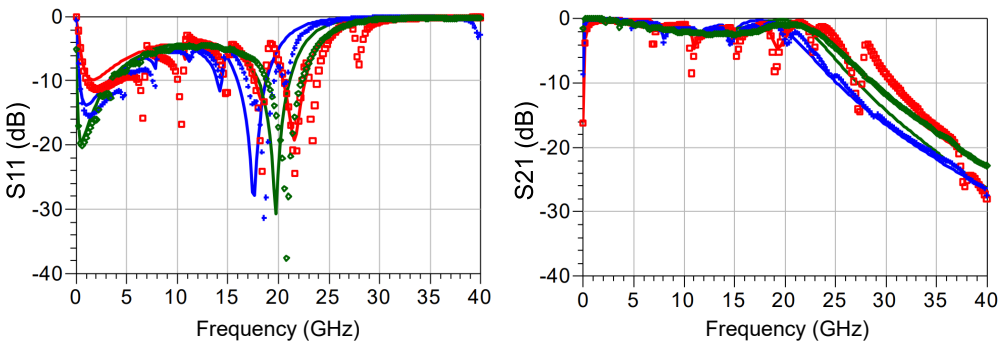
The Modelithics Library for SIMULIA CST Studio Suite offers an extensive selection of **Microwave Global Models™**, representing thousands of components. The installed models are fully integrated with CST Studio Suite electronic design automation (EDA) software. The Modelithics Library also features a substrate library containing measurement-based substrate parameters for many of the most commonly used substrates. See the full list of Modelithics **Advanced Model Features**.

- **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.

Sub-Libraries of the Modelithics Library

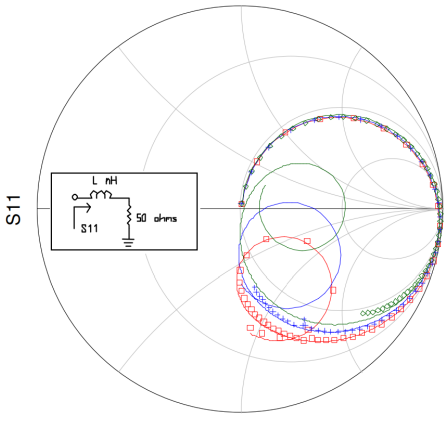
- **mmWave Library** — A collection of models focused on supporting the next generation of cellular communication standards. All models in the mmWave Library are validated to a minimum of 30 GHz, with some validated up to 125 GHz!
- **Single-Vendor Sub-Library** — Includes all models for one selected vendor. Choose from the ~30 vendors within the Modelithics Library for SIMULIA CST Studio Suite.

CAP-DLP-0505-001 for the Dalicap DLP70A capacitor family
Model vs. Measured Series 2-port S-parameter Data: 4 mil Rogers 4350B Substrate (H/Er = 1.0 mil):



□ 5.6 pF, + 14 pF, ◊ 56 p; Solid lines - Model data, Symbols - Measured data

IND-JOH-0201-001 for the Johanson L-05Cxxxx Series Inductor Family
Frequency Sweep



□ 4mil Rogers 4350B, + 14mil FR4, ◊ 59mil FR4
Lines - Model, Symbols - Measured data.
Measured data stops at highest valid frequency for each substrate. S11 for 10nH inductor mounted on various substrates from 0.04 to 20 GHz.

- 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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List of Components in the Modelithics Library for SIMULIA CST Studio Suite

Modelithics Vendor Partners (MVPs)

Aeroflex / Metelics

RESISTORS
PPC100-200AW, NPC20-40S, NPC 50-100W, ANC50-100W, NPC50-50W, ANC50-50W

Amotech

CAPACITORS
ABCUC 161 0XX 103, ABCUC 101 0XX 473, ABCUC0610XX104, A60Z, ABCUC16S01x103, ABCUC 252 01X 103, ABCUC 10S 01X 224, ABCUC 16S 01X 104, A60L, ABCUA50S02x104, A60S, A60F, A80B

Chilisin

INDUCTORS
CLH1680, CLH2012, CL2012

Coilcraft

INDUCTORS
016008C, 0201HL, 0201DS, 0302CS, 0402DC, 0402HP, 0402CS, 0403HQ, 0603LS, 0603CT, 0603HL, 0603HC, 0603DC, 0603CS, 0603HP, 0604HQ, 0805CS, 0805HT, 0805CS, 0805HP, 0805LS, 0805CS, 0806SQ, 0807SQ, 0906, 0908SQ, 1008CS, 1008HQ, 1008CT, 1008CS, 1008HS, 1010HQ, 1111SQ, 1206CS, 1212VS, 1515SQ, 1606, 1812CS, 2222SQ, 2929SQ, 4310LC, XLG6020, BCL, BCR, GA309x, 132-xxSM, 1812SMS-xxN, AxxT, BxxT, 1508-xxx, 2508-xxx

Dalicap

CAPACITORS
DLP70A, DLP75P, DLP75D, DLP70B

Darfon

CAPACITORS
C0402NP0, C0603NP0

Exxelia

CAPACITORS
SHF251xxx, CLX, CLE

IMS

RESISTORS
RC4-0302PW, RC3-0402PW, NDX-0402WA, ND3-0402PA, NDX-0505WA, NDX-1020EZW

JDI

CAPACITORS
R14, R15

Johanson

CAPACITORS
R05L, R07S, QCCF, QCCP, R14S, R15G, QCCT, R15S, S42E

INDUCTORS
L-05Cxxxx, L-07Wxxxx, L-07Cxxxx, L-14C, L-14W

Kemet

CAPACITORS
CBR01, C0201, CBR02, C0402C0G, C0402X7R, C0402X5R, CBR04 Auto, CBR04, CBR05, C0603, CBR06, C0805 NP0, C0805 X7R, C0805 C0G, C0805 X7R, C0805 X5R, C0805 BX, CBR08

Knowles

CAPACITORS
DLI
C04BL121C, C06BLBB, C06CF, C08BL242X, C08BL102X, Milli-Cap, Opti-Cap

Syfer
H Range (0402), High Q Ultra Low ESR, H Range (0805), 4040J

KOA

CAPACITOR
HFC1005

RESISTORS
RK73x1H, RK73x1E, RK73x1J, RK73B2A, RK73B2B, RK73x2E, WK73S3A, RK73X3A

Kyocera-AVX

CAPACITORS
KGM02xCG, 550W103, 560W104, 550W104, CU1005, Accu-P 0201, CU131, MP01, 550Z, 550Z104, 550Z224, 560Z104, 560Z224, KGM03xCG, KGM03xR7, KGM03xR5, Accu-P 0402, DLA09024, KGQ05xCG, MP02, KGM15xCG, KGM15xR7, ML03, DLA09025, U0603, MP03, Accu-P (0603), KGM21xCG, KGQ21xCG, 08051C, 100A, 100B, KGQ31xR7, KGQ32xCG, 200A, 200B, 520L, 530L, 600F, 600L, 600S, 700A, 700B, 800A, 800B, 800R

INDUCTORS
Accu-L (0201), DLA11017, Accu-L (0402), Accu-L (0603), DLA11018, Accu-L (0805), DLA11019

RESISTORS
UBR0402, PB81020T0050, RP42010R0050GTTR, RP42010R0100GTTR, RP52010R0050GTTR, RP52010R0100GTTR, RP92010T0050GTTR, RP53725R0050GTTR, RP53725R0100GTTR, RP93725T0050GTTR, RP93737T0050GTTR, RP43737T

Murata

CAPACITORS
GRM011, GRM022, GRM022, GJM022, GQM033, GRP033, GJM033, GRM033, XBSC 941.000.012.001, XBSC 941.000.012.001, GRM155R71H, GRM155R71E, GJM1555C1H, GCM1555C, GRM155C1H, GRM155R71H, GQM1555, GRM188R71H, GQM188, GQM1885C1H, GRM188R7, GRM1885C1H, GQM187, GRM2165C2A, GRM21BR72A, GQM219, GRM219, GQM22M, GRM32ER71J, GRM32EC7, GRJ32DC7

INDUCTORS
LQP02HV, LQP02HQ, LQP02TQ, LQP02TN, LQP03TN, LQP03TG, LQP03TN, LQP03HQ, LQW04, LQW15A, LQP15M, LQW15AN-10, LQG15H, LQW15AN-80, LQP18M, LQG18M, LQW18AN-80, LQW18AN-10, LQW18A

NIC Components

RESISTOR
NRC06

Panasonic

INDUCTORS
ELJRG, ELJRF, ELJRE

Passive Plus

CAPACITORS
01005BB104, 0201BB, 0201N, 0402N, 0505C, 0603N, 0708N, 0805N, 1111N, 1111C

RESISTORS
R35-1209BB, R35-2010BB

Piconics

INDUCTOR
MK Series

Presidio

CAPACITORS
BB0201X7R103MR0VT820, BB0402X7R104M2xxxx, 0402UP, BB0502X7R104M, 0505, 0603UP

Samsung

CAPACITORS
CL02CxxxxxxA, CL02CxxxxxxG, CL03, CL31A106K, CL32B475K

Taiyo Yuden

CAPACITORS
LMK042, JMK042, EMK042, TVS042, TMK063, JMK063, EMK063, UMK105

INDUCTORS
HK0603, HKQ0603S, HKQ0603U, HKQ0603W, HK1005, HK1608, HK2125

TDK

CAPACITORS
C0402C0G, CGA1A2C0G, CGA1A2X7R, CGB1T3X5R0J104M, C0603C0G, C1005CH,C1005X5R, C3225X7R

INDUCTORS
MHQ0402PSA, MLG0402Q, MLG0603S, MLG0603, MLK1005S, MLG1005S, MHQ1005P, NLV25T, MLF2012

Toko

INDUCTORS
LLV0603-F, LL1005-FHL, LL1608-FSL, LL2012-FHL

Vishay

CAPACITORS
VJ0402D, VJ0603D

RESISTORS
CRCW01005, CH02016, D10, FC0402, CH0402, FCHP0402xxxBGT, FCHP0402xxxBTT, MCS0402, D11, MCT0603, CH0603, CRCW1206, MMA0204

Vishay-Barry

RESISTORS
RK0603ZZ, RE0805CT, RY0805CT, RE1005CT, RY1005CT, RE1206CT, RYC1206CT, RZC1206CT (2-Port), RZC1206CT (1-Port)

Voltronics

CAPACITORS
JR030, JR060, JR100, JR150, JR200, JR300, JR400, JR500

Würth Elektronik

CAPACITORS
WCAP-CSRF (NP0), WCAP-CSRF (NP0), WCAP-CSMH (NP0), WCAP-CSMH (X7R), WCAP-CSMH (NP0), WCAP-CSMH (X7R) 0.8mm, WCAP-CSMH (X7R) 1.25mm

INDUCTORS
WE-MK, WE-KI, WE-TCI, WE-MK (0603), WE-AC-HC, WE-CAIR

Yageo

CAPACITORS
CQ0100, CQ0201, CC0201, CQ0402, AQ0402, CQ0603, AQ0603, CQ0805

RESISTORS
RC0100, RC0201

More to come! New models are added continually. Be sure to check out the models on the Modelithics Pre-Release List:
www.Modelithics.com/Model/PreRelease

Learn More About Modelithics' Library & Licensing Options

Video: Modelithics COMPLETE Library Overview

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**!

Connect with Us!

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

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