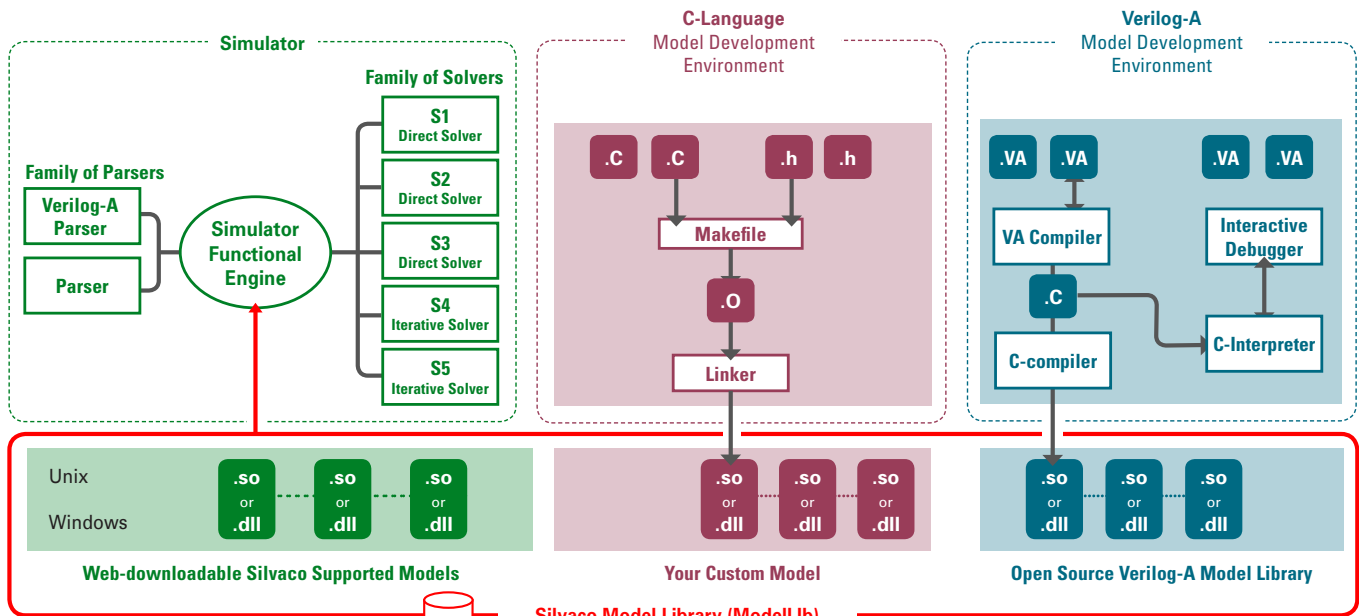


ModelLib

DYNAMICALLY-LINKED SPICE MODELS

The Silvaco SPICE Model Library (ModelLib) is a collection of all of the models delivered with Silvaco circuit simulators as a dynamically linked library. Individual models are distributed online as pre-compiled, pre-linked, pre-tested binary models that simulator users can easily download and install when a required model update is available. ModelLib enables you to enjoy simple, immediate and reliable access to the most up-to-date high performance SPICE models for:

- **SmartSpice** Analog Circuit Simulator
- **SmartSpice-RF** Harmonic Balance Based RF Simulator
- **Harmony** Analog/Mixed Signal Simulator
- **Twister** Full-Chip Hierarchical Analog Circuit Simulator



MOSFET MODELS (NMOS and PMOS)

LEVEL = 1, 2, 3	Original Berkeley MOS model
LEVEL = 4, 13*	BSIM1
LEVEL = 11, 49*, 53	BSIM3
LEVEL = 14, 54*	BSIM4
LEVEL = 52	BSIMMG
LEVEL = 44	EKV v2.6
LEVEL = 88	HV MOS
LEVEL = 43	Philips MOS11
LEVEL = 60, 170	HiSIM
LEVEL = 62, 172	HiSIM_HV
LEVEL = 20	MM20 LDMOS
LEVEL = 56	PSP

TFT MODELS (NMOS AND PMOS)

LEVEL = 35	RPI MOS15 (a-Si TFT)
LEVEL = 36	RPI MOS16 (poly-Si TFT)

OTFT MODELS (NMOS AND PMOS)

LEVEL = 37	UOTFT Universal Organic TFT
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FRAM MODELS

LEVEL = 6	FRMC
SOI MODELS (NMOS AND PMOS)	
LEVEL = 32	CEA / LETI SOI (partially depleted)
LEVEL = 57	BSIM3SOIv3
LEVEL = 70	BSIMSOI4

BJT MODELS

LEVEL = 1	Modified Gummel Poon
LEVEL = 2	Quasi RC (quasi-saturation)
LEVEL = 4*, 5	VBIC
LEVEL = 8	HICUM
LEVEL = 10, 500	MODELLA
LEVEL = 6, 503, 504.8	MEXTRAM

HBT MODELS

LEVEL = 11*, 20	UCSD-HBT
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DIODE

LEVEL = 1	Standard junction diode
LEVEL = 2	Fowler-Nordheim
LEVEL = 3	Junction diode model that accounts for geometry
LEVEL = 9, 10	Philips Juncap
LEVEL = 500	Philips level 500
LEVEL = 4	RPI VCSEL (LAS1) Laser Diode model
LEVEL = 1005	Diode_CMC

MESFET MODELS (NMF and PMF)

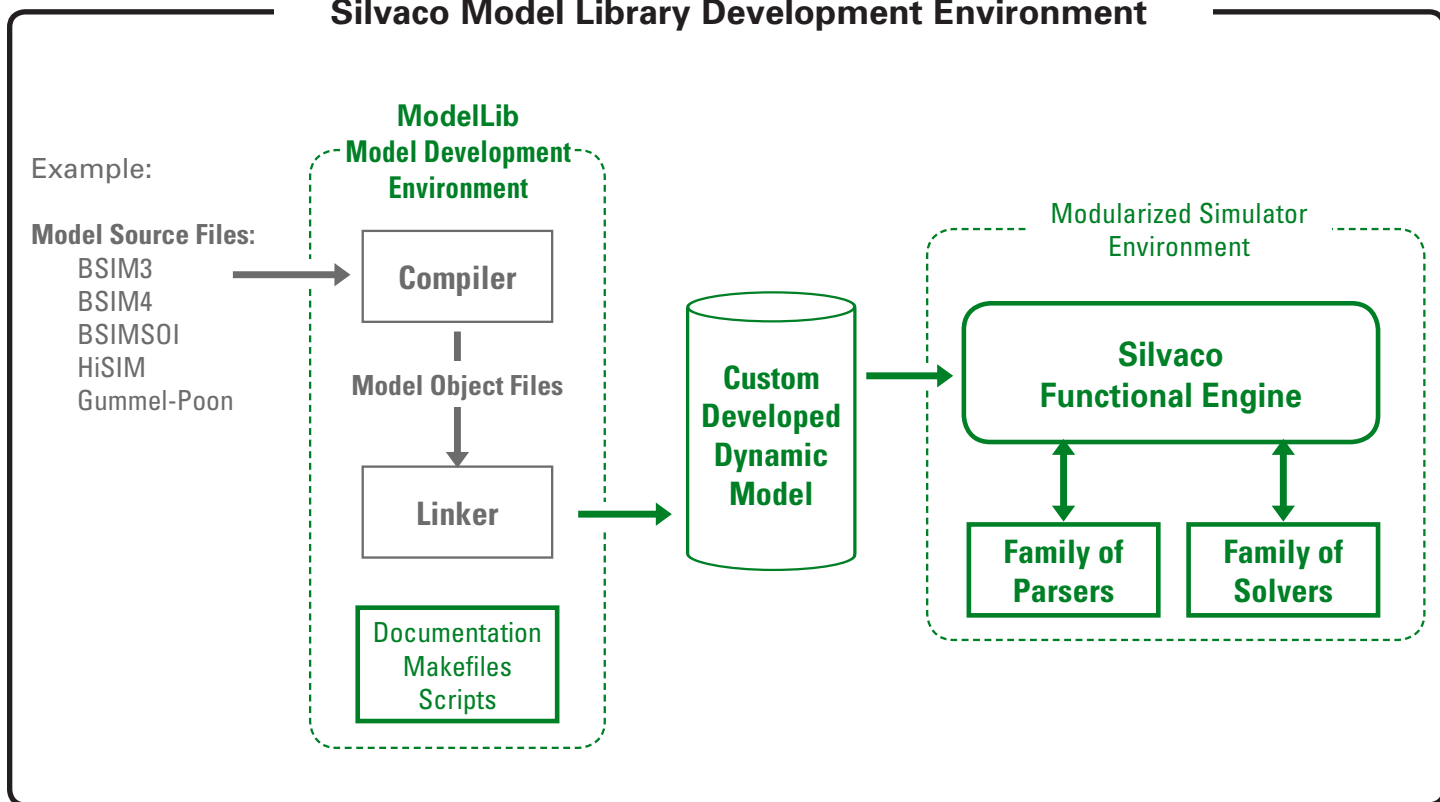
LEVEL = 1	Basic JFET
LEVEL = 2	Statz
LEVEL = 3	Curtice
LEVEL = 4	Curtice-Ettenburg
LEVEL = 5	TriQuint models (versions 1, 2 & 3)
LEVEL = 6	Parker-Skellern

JFET MODELS (NJF and PJF)

LEVEL = 1	Basic Sydney JFET
LEVEL = 2	Modified Sydney JFET

* HSPICE compatibility

Silvaco Model Library Development Environment



The Silvaco Model Library Development Environment Includes Examples of Model Source Files for Popular SPICE Models

Benefits of Silvaco Model Library for Model Developers

- Convenient and fully independent environment for proprietary model development
- Sharable— different model development teams can share model source code and binaries on commercial circuit simulators
- Testable— easy to rapidly generate and run a complete set of regression tests for an independent and isolated model
- Traceable— slconfig utility enables you to easily determine current model configuration that is also included in simulation output files
- **Accuracy is preserved with no performance penalty**

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