Continuum

Integrand Software's Continuum[™] is a scalable passive component model generator. Continuum uses patent-pending algorithms to generate accurate, broadband, scalable models of passives. For example, given a parameterized cell layout for an inductor and ranges for the design parameters, Continuum can automatically produce a parameterized subcircuit model. The parameters to the model are purely geometric in nature, so the model can be easily used with layout extractors. The world's major foundries are all using Continuum in the development of RF design kits for inductors, capacitors and transformers. Continuum is built on a philosophy of maximal automation, with industry-standard input and output formats, and full scriptability from the command line. The models from Continuum can be linked to Integrand's synthesis tools: the Optimum Inductor Finder (OIF) and the Optimum Capacitor finder (OCF). The models have been extensively verified against silicon and proven to be very accurate.

Scalable parameterized models:

- Inductors (Spiral, Symmetric, Center-tapped)
- MOM capacitors (array and mesh)
- Transformers and Baluns (4, 5 and 6 port)
- Single Point models
- Netlists in Spectre, Eldo, Hspice and ADS

Optimum Synthesis tools:

- Optimum Inductor Finder (OIF)
- Optimum Capacitor Finder (OCF)
- Optimum Transformer Finder (OTF)
- Integration with Cadence Virtuoso
- · GUI driven synthesis for instant design

Automated model generation:

- EMX simulation of 100s of layouts
- · Proprietary optimization code
- Guaranteed passive RLCK models
- · Testing routines to verify accuracy
- Robust optimizer for quick solution
- · 20 model topologies



Scalable models of inductors with shields

Designing an Inductor	Inner Core Diameter (uM)	80
	Turns	1
	Width (uM)	15
	MetalLayer	8LM
	Freq (Hz)	2.46 Hz
	Inductance (H)	161.7821р Н
	Q	12.18521
	Area (um^2)	33484.73
	SRF (Hz)	147.49596 Hz
	Parameters	valid
	Plot	
Choose Inductance	Plot action	append 🖃
	Desired inductance (H)	2n H
	Minimum Q	none
	Max area (um^2)	25000 4
	Delta L (percent)	1
	Bandwidth (Hz)	0 Hž_
	Minimum SRF (Hz)	0 Hz
	Objective	Maximize Q 🖃
	Find optimal inductor	

OIF Cadence Virtuoso GUI

 $\int \frac{Integrand}{Software, \ Inc.}$

Integrand Software, Inc. • 230 Sherman Ave., Suite 11 • Berkeley Heights, NJ 07922 (908) 517-0748 • info@integrandsoftware.com • www.integrandsoftware.com