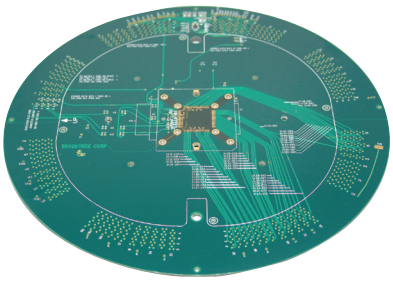
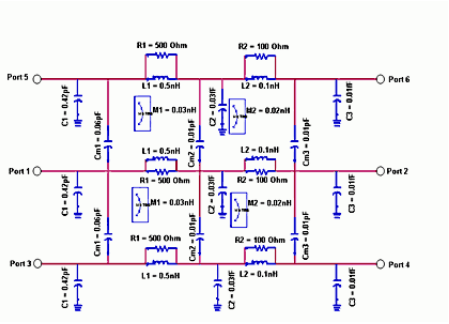
Johnstech Electrical Modeling Services

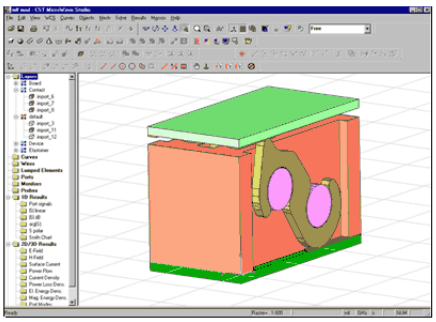
Your Contact for Superior Test Technology

The Challenge: Maximize device-Contactor-PCB electrical performance to minimize product financial and market timing risk

The Solution: Simulate, modify, model and re-simulate – before PCB and Contactor Fabrication







If you're developing RF Applications at >1 GHz, high gain amplifiers >24dB or if your circuit measurements <10mΩ - our electrical modeling expertise is just what you need.

Our system-level approach integrates the components, device, load board and Contactor into a single interrelated and integrated electronic system. Modeling allows you to simulate actual signal performance of the system. A typical application of our services, your S-parameter data files are imported into Advanced Design Systems (ADS) to simulate actual signal performance in the Contactor. To account for potential electrical performance, High Frequency Structure Simulator (HFSS) simulations are conducted to measure variations attributable to PCB trace routing, pad placement or effects of manufacturing tolerance, as well as base material changes. The simulations provide a 3-D analysis of scenarios, exposing potential signal distorting risks or enhancement opportunities. These modeling and simulation techniques, along with our experienced professional RF engineers, allow us to measure anticipated crosstalk, insertion loss, amplifier gain, susceptibility to ground inductance and isolation, and other variables.

Following simulations, and before fabrication, our engineers consult with you on strategies for optimizing performance, including changes in PCB layouts, contactor designs or the package chip interface. Then, we conduct additional re-simulation or modeling to reveal the effects of system modifications. The net benefit; a high degree of confidence in device-Contactor-PCB success and a reduction in financial and market timing risk in ATE designs – all prior to committing fabrication dollars.

Typical modifications resulting from simulation result in:

- Load board materials, thickness and plane locations
- Trace and pad characteristics
- Impedance matching
- Housing modification effects
- Contact design choice
- Ground inductance/plane changes

Your Contact For Higher Performance

Johnstech®

Electrical Modeling Services

P/N	Service	Service Description	Min Hrs
900000	*Non-standard geometry*	*HFSS: Determines electrical effects of making geometry or material alterations to Contactor housing*	2
900001	*Johnstech equivalent circuit model 10 GHz+*	*ADS: Provides an accurate model simulating the entire system at the target device frequency range*	4
900003	*Crosstalk*	*ADS: Measured or modeled between adjacent signal paths*	2
900004	*Pitch, lead length variation analysis*	*HFSS: Simulates the effects of varying pitch or lead length with the same package*	4
900006	*Equivalent circuit to data conversion*	*ADS: Converts actual test data to equivalent circuit model*	4
900007	*Package modeling*	*HFSS: Simulates overall performance characteristic changes based on package configuration*	4
900009	Comparative modeling	*HFSS and ADS: Compares systems and configurations against one another*	2
900011	Load board modeling and optimization	HFSS & ADS: Models load board to maximize performance or trouble shoot existing designs	1
900012	Physical load board evaluation	Evaluation of plating, plating thickness, mounting and tooling hole locations, Contact-to-PCB pad alignment and general design rule compliance	2

All times are estimates. Hours may be increased or decreased based on the significance and number of alterations to the original geometry.

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