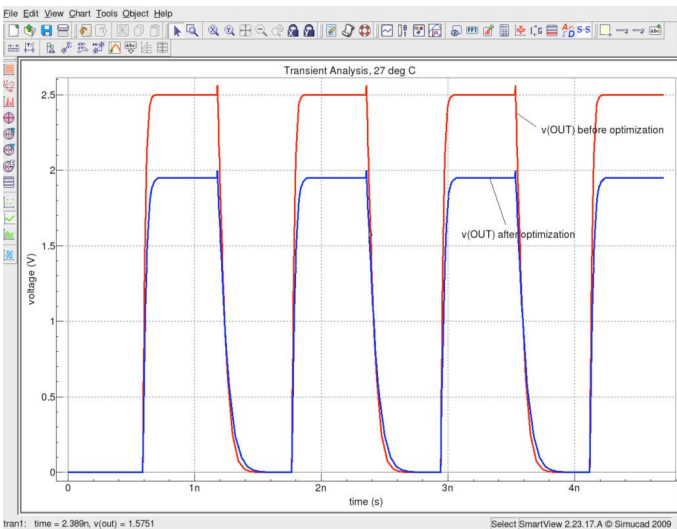
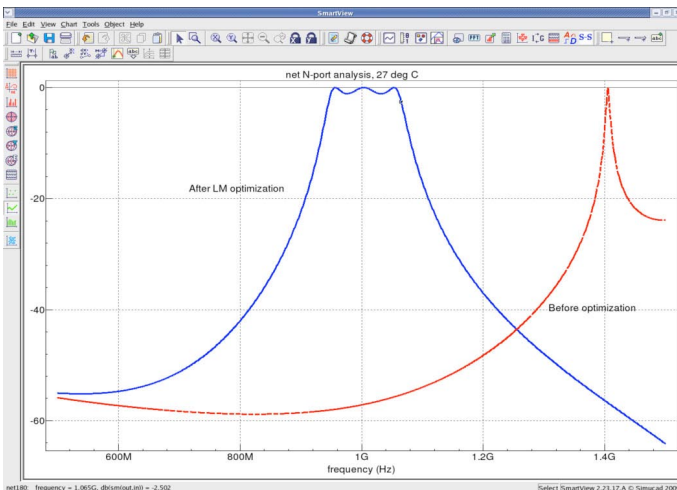


Optimization in SmartSpice

NEW

Circuit Optimization Made Easy

- Local and global optimizers
- Optimize any number of parameters
- Circuit design flexibility
- User friendly and intuitive
- Optimize responses using any of the available analyses, including steady-state, frequency and time-domain
- Optimize delay, trip-point, max/min current, gain, S-parameters, etc



Optimizer Configuration: Differential Evolution

Parameter	Value
Crossover probability	0.3
Change amplitude	0.75
Maximum number of generations	100
Stop condition: Acceptable error (%)	1e-05
Stop condition: Improvement threshold	0.0025
Stop condition: Number of generations	25
Strategy	BEST/1/BIN
Population size	100

Optimizer Configuration: Genetic Algorithm

Parameter	Value
Population size	50
Crossover probability	0.8
Mutation probability	0.05
Selection	Tournament
Use elitism	On
Maximum number of generations	1000
Stop condition: Acceptable error (%)	1
Stop condition: Improvement threshold	0.0025
Stop condition: Number of generations	25

Optimizer Configuration: Hooke Jeeves

Parameter	Value
Stepsize factor	0.85
Maximum number of steps	100
Maximum number of patterns per step	1000
Stop condition: Acceptable error (%)	1

Optimizer Configuration: Simulated Annealing

Parameter	Value
Number of sweeps per stepsize	10
Number of stepsizes per temperature	20
Maximum function evaluations	5000
Stop condition: Acceptable error (%)	0.0001
Stop condition: Improvement threshold	0.0025
Stop condition: Number of temperatures	10
Cooling factor	0.85
Initial temperature factor	5
Minimum temperature	0.01

Optimizer Configuration: Parallel Tempering

Parameter	Value
Number of replicas	30
Number of iterations between replicas	10
Number of sweeps per stepsize	10
Maximum number of cycles	10000
Stop condition: Acceptable error (%)	1
Stop condition: Improvement threshold	0.0025
Stop condition: Number of sweeps	15
Initial temperature factor	0.5
Minimum temperature	0.01

Available Optimizers

- Levenberg-Marquardt
- Hooke-Jeeves method
- Simulated annealing
- Parallel tempering
- Genetic algorithm
- Differential evolution
- Hybrid optimizer

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