NL5

Circuit Simulator

ideal simulation for real design

nl5.sidelinesoft.com

Our customers…

ANALOG DEVICES

GENERAL ATOMICS

dialog SEMICONDUCTOR

AE ADVANCED ENERGY

VICOR

[e] enphase ENERGY

INDICE

BAE SYSTEMS

IDT Integrated Device Technology

VANNER

ABB

ampt

SOLARBRIDGE TECHNOLOGIES

INDUCTOTHERM HEATING & WELDING

sencera

Levant power

CES

EMPHYSYS technology solutions

MOOG

MICROLINE

FLCMICRODESIGN

NL5 License

Without a license, NL5 operates in a **Demo** mode. All full-function features are available, with the total number of components in the schematic limited to **20**.

A variety of licenses with different limitations and protection methods are available free of charge or for purchase*:

Students and education	*Free*
1 month trial	*Free*
1 Year Single PC	*$99*
Single PC	*$199*
Network	*$499*
Personal	*$499*

Order license at **nl5.sidelinesoft.com**

* Prices are subject to change without notice.

…and what they say about NL5

It was a matter of hours to discover the powerfulness behind the simplicity of NL5...

...Just tried it and never wanted to return to SPICE again. All convergence problems were gone and speed increased dramatically!

My opinion is that NL5 is the best program for simulation of any types of power stages...

...NL5 allows me to focus more time on product development activities and less time on solving SPICE simulation convergence problems…

A circuit simulator with a plotting tool that doesn't make you want to export the data and use another tool!

...NL5 is a circuit simulator that just works. It is a rare example of a program that is both easy to get started on and does not break down when your model starts to get complicated.

… read more at nl5.sidelinesoft.com

More Sidelinesoft products

iC **idealCircuit**
Simple analog circuit simulator working with true ideal components

iZ **ideal-Z**
Simple impedance calculator with graphical schematic entry.

NL5 is an analog circuit simulator working with **ideal** and piecewise-linear components.

● Ideal components
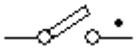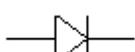
switch	diode	amplifier
closed: R = 0 open: R = ∞	closed: I = 0 open: V = const	gain = ∞
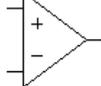
● Instantaneous switching

Step
V = 1
C = 1
IC = 0
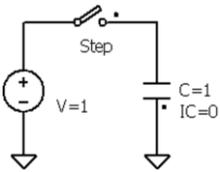
An ideal switch in NL5 has instantaneous switching time. NL5 is able to simulate processes where infinitely short current and voltage pulses with infinite amplitude may occur.

Such a pulse is displayed in NL5 as a triangle pulse which exists only at one calculation step, and its area satisfies charge or magnetic flux conservation law.

I(C)   Q(C)
V(C)
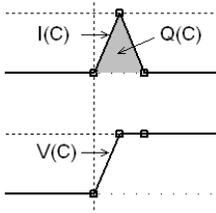
● With ideal components, you can:

- iterate design ideas and prove a concept of a design prior to detailed analysis;
- separate actual schematic issues from inevitable errors of simulation algorithms, methods, and models;
- obtain reliable preliminary results very fast.

p r o d u c t   d e v e l o p m e n t

idea → concept → schematic → prototype

"ideal" simulation

Evaluates new design ideas, proves a concept of a design, performs detailed analysis using very simple ("ideal") components, models, and methods, as well as custom components of desired accuracy and complexity.

Accepts **arbitrary** (even unrealizable) topology, component parameters, and simulation conditions

Simple integration method with practically **no side effects**. Numerical problems can be easily discovered and avoided

Robust instantaneous switching algorithm

"real" simulation

Performs detailed analysis of a design using complex and accurate ("real") components, models, and methods.

Prefers **"reasonable"** (realizable) circuit topology, component parameters, and simulation conditions.

Complex numerical algorithms may easily produce **wrong results**. Users have to have a fair level of expertise to configure it properly.

Convergence problems at switching points

NL5

SPICE