An ngspice Quick Reference

JLRIpsn

May 23, 2017

1 File Layout Summary

*Ngspice title and/or description (firstline)
.include <directory/file>

.param paramVal=10kV
Circuit layout
VName 0 node2 DC voltageForDCanalysis SIN(DCopVoltage amplitudeVoltage freq)

R1 0 node2 10k
C1 0 node1 10uF
L1 node1 node2 5mH

*tests
.control
tran <timeForTransientSim> <simStepSize>
meas tran valName PP v(node1)
PP= peak to peak
echo "words"
plot v(node1)
.endc

.end

2 Basic Circuit Components

DC Vsource	V<name> <node-> <node+> DC <value(V)>
AC Vsource	V<name> <node-> <node+> DC 0V SIN(<DCoffset(V)> <amplitude(V)> <freq(Hz)>
Resistor	R<name> <node1> <node2>
Capacitor	C<name> <node1> <node2> <value(F)>
Inductor	L<name> <node1> <node2> <value(H)>
Diode	D<name> ...
MOSFET	M<name> ...
BJT	...
Op-Amp	...

Table 1: Basic circuit components

3 Test and measurement basics

3.1 DC

3.2 Transient

3.3 AC