Transim2 Analysis Catalog

AC Analysis

Authors: Carlos E. Christoffersen

Usage:

    .ac

Parameter	Type	Default value	Required?
start: Start frequency (Hz)	DOUBLE	n/a	yes
stop: Stop frequency (Hz)	DOUBLE	n/a	yes
n_freqs: Number of frequencies	INTEGER	n/a	yes

State Variable DC Analysis

Authors: Carlos E. Christoffersen

Usage:

    .dc

State Variable Transient Analysis

Authors: Carlos E. Christoffersen, Mete Ozkar

Usage:

    .svtr

Parameter	Type	Default value	Required?
verbosity: Output verbosity	INTEGER	1	no
tstop: Stop time (s)	DOUBLE	n/a	yes
tstep: Time step size (s)	DOUBLE	n/a	yes
n_freqs: Number of frequencies considered	INTEGER	1024	no
rcomp: Compensation resistor (Ohms)	DOUBLE	200	no
tolerance: Tolerance used to evaluate errors	DOUBLE	1e-08	no
filter_freq: Corner frequency for artificial filtering (Hz)	DOUBLE	0	no
n_samples: Number of time samples for impulse response	INTEGER	0	no
ntest: Number of points used to test the impulse response	INTEGER	0	no
imp_tol: Contribution percentage of last ntest samples of the impulse response	DOUBLE	1	no
check_imp: Flag to signal if impulse checking is desired	BOOLEAN	1	no
out_steps: Number of steps between output during computation	INTEGER	100	no
opt: Start transient assuming a biased circuit	BOOLEAN	0	no
adjust: Adjust the impulse response to produce a correct DC level	BOOLEAN	0	no

State Variable-Based Harmonic Balance Analysis

Authors: Carlos E. Christoffersen

Usage:

   .svhb

Parameter	Type	Default value	Required?
n_freqs: Maximum index for first tone (DC not included)	INTEGER	n/a	yes
fundamental: Fundamental frequency (Hz)	DOUBLE	n/a	yes
oversample: Use oversample in the FFT	INTEGER	1	no
steps: source stepping	INTEGER	0	no
deriv: Approximate derivatives or use automatic diff.	INTEGER	0	no
verbosity: Amount of output to print	INTEGER	1	no
fundamental2: Frequency of the second tone.	DOUBLE	0	no
n_freqs2: Maximum index for second tone (DC not included)	INTEGER	0	no