Agilent Technologies

Advanced Design System 2011

October 2011

analogLib Components

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Introduction to analogLib

RFIC Dynamic Link comes with a modified version of Cadence's analogLib. This documentation describes the components in the modified version of analogLib that are supported by RFIC Dynamic Link.

The Agilent Technologies version of analogLib enables you to use an ADS Analog RF Simulator (*ADSsim*) native netlist format instead of the Cadence *Spectre* Simulator netlist format.

To use the ADSsim netlist format instead of the Spectre netlist format, modify your *cds.lib* file to point to the modified analogLib which is located under

$HPEESOF_DIR/cdslibs/5.1.0/analogLib

which only works with Cadence IC 5.1.41 (CDBA version)

If you want to use the analogLib that is provided by Cadence under

$CDSHOME/tools/dfII/etc/cdslibs/artist

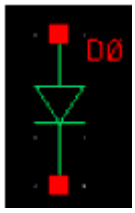
you must be setup to netlist in *Spectre-Compatible* mode. For more information on *Spectre-Compatible* mode, refer to the *Spectre-Compatible Process Design Kits* documentation in the RF Design Environment documentation set. If you do not already have local access to RFDE documentation, you can access this information from the Agilent EEsof EDA Product Documentation Web site at http://www.agilent.com/find/eesof-docs/

Active Components

This section includes information on the following analogLib components:

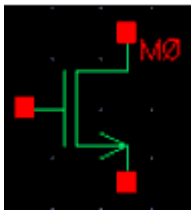
- *diode (analoglib)* (anloglib)
- *nbsim* (anloglib)
- *nbsim4* (anloglib)
- *njfet* (anloglib)
- *nmes* (anloglib)
- *nmos* (anloglib)
- *nmos4* (anloglib)
- *npn* (anloglib)
- *pbsim* (anloglib)
- *pbsim4* (anloglib)
- *pdiode* (anloglib)
- *pjfet* (anloglib)
- *pmos* (anloglib)
- *pmos4* (anloglib)
- *pnp* (anloglib)
- *schottky* (anloglib)
- *zener* (anloglib)

diode (analoglib)



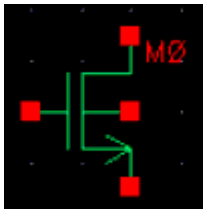
Name	Description	Default Value	Type
model	Model name		string
region	Estimated operating region		cyclic
isnoisy	Generate noise?		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
scale	Scale factor		string
perim	Junction perimeter factor		string
l	Length		string
w	Width		string
off	Device initially off		boolean
Vd	Initial diode voltage		string
pj	Periphery of junction		string
wp	Width of polysilicon		string
lp	Length of polysilicon		string
wm	Width of metal capacitor		string
lm	Length of metal capacitor		string
dtemp	Temperature difference		string

nbsim



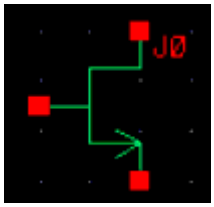
Name	Description	Default Value	Type
model	Model name		string
l	Length		string
w	Width		string
ad	Drain diffusion area		string
as	Source diffusion area		string
pd	Drain diffusion periphery		string
ps	Source diffusion periphery		string
nrd	Drain diffusion res squares		string
nrs	Source diffusion res squares		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
ld	Drain diffusion length		string
ls	Source diffusion length		string
bn	Bulk node connection	S	string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vbs	Bulk source initial voltage		string
rdc	Additional drain resistance		string
rsc	Additional source resistance		string
dtemp	Temperature difference		string
geo	Source/drain selector		string

nbsim4



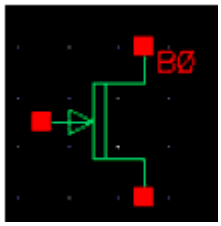
Name	Description	Default Value	Type
model	Model name		string
l	Length		string
w	Width		string
ad	Drain diffusion area		string
as	Source diffusion area		string
pd	Drain diffusion periphery		string
ps	Source diffusion periphery		string
nrd	Drain diffusion res squares		string
nrs	Source diffusion res squares		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
ld	Drain diffusion length		string
ls	Source diffusion length		string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vbs	Bulk source initial voltage		string
rdc	Additional drain resistance		string
rsc	Additional source resistance		string
dtemp	Temperature difference		string
geo	Source/drain selector		string

njfet



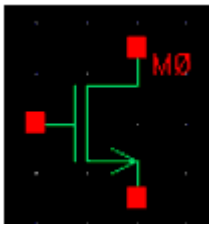
Name	Description	Default Value	Type
model	Model name		string
area	Device area		string
region	Estimated operating region		cyclic
dtemp	Temperature difference		string
m	Multiplier		string
bn	Bulk node connection		string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vgbs	Gate to bulk and src voltage		string
w	Width		string
l	Length		string

nmes



Name	Description	Default Value	Type
model	Model name		string
area	Device area		string
dtemp	Temperature difference		string
m	Multiplier		string
bn	Bulk node connection		string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vbs	Bulk source initial voltage		string
w	Width		string
l	Length		string
region	Estimated operating region		cyclic

nmos

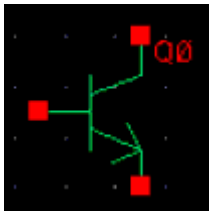


Name	Description	Default Value	Type
model	Model name		string
l	Length		string
w	Width		string
ad	Drain diffusion area		string
as	Source diffusion area		string
pd	Drain diffusion periphery		string
ps	Source diffusion periphery		string
nrd	Drain diffusion res squares		string
nrs	Source diffusion res squares		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
ld	Drain diffusion length		string
ls	Source diffusion length		string
bn	Bulk node connection	S	string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vbs	Bulk source initial voltage		string
rdc	Additional drain resistance		string
rsc	Additional source resistance		string
dtemp	Temperature difference		string
geo	Source/drain selector		string

nmos4

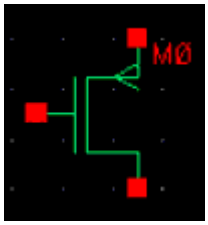
Name	Description	Default Value	Type
model	Model name		string
l	Length		string
w	Width		string
ad	Drain diffusion area		string
as	Source diffusion area		string
pd	Drain diffusion periphery		string
ps	Source diffusion periphery		string
nrd	Drain diffusion res squares		string
nrs	Source diffusion res squares		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
ld	Drain diffusion length		string
ls	Source diffusion length		string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vbs	Bulk source initial voltage		string
rdc	Additional drain resistance		string
rsc	Additional source resistance		string
dtemp	Temperature difference		string
geo	Source/drain selector		string

npn



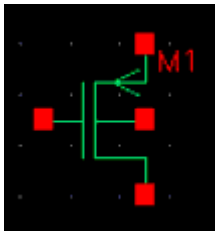
Name	Description	Default Value	Type
model	Model name		string
area	Device area		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
isnoisy	Generate noise?		cyclic
m	Multiplier		string
bn	Bulk node connection		string
Vbe	Base-emitter voltage		string
Vce	Collector-emitter voltage		string
off	Device initially off		boolean
dtemp	Temperature difference		string
areab	Base area		string
areac	Collector area		string

pbsim



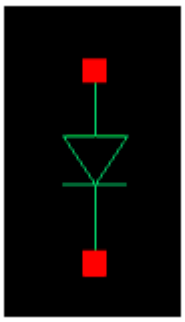
Name	Description	Default Value	Type
model	Model name		string
l	Length		string
w	Width		string
ad	Drain diffusion area		string
as	Source diffusion area		string
pd	Drain diffusion periphery		string
ps	Source diffusion periphery		string
nrd	Drain diffusion res squares		string
nrs	Source diffusion res squares		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
ld	Drain diffusion length		string
ls	Source diffusion length		string
bn	Bulk node connection	S	string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vbs	Bulk source initial voltage		string
rdc	Additional drain resistance		string
rsc	Additional source resistance		string
dtemp	Temperature difference		string
geo	Source/drain selector		string

pbsim4



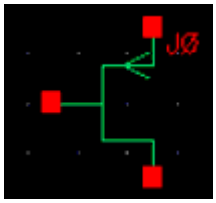
Name	Description	Default Value	Type
model	Model name		string
l	Length		string
w	Width		string
ad	Drain diffusion area		string
as	Source diffusion area		string
pd	Drain diffusion periphery		string
ps	Source diffusion periphery		string
nrd	Drain diffusion res squares		string
nrs	Source diffusion res squares		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
ld	Drain diffusion length		string
ls	Source diffusion length		string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vbs	Bulk source initial voltage		string
rdc	Additional drain resistance		string
rsc	Additional source resistance		string
dtemp	Temperature difference		string
geo	Source/drain selector		string

pdiode



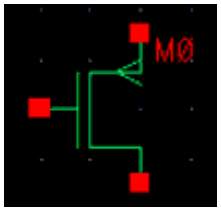
Name	Description	Default Value	Type
model	Model name		string
area	Device area		string
pj	Periphery of junction		string
wp	Width of polysilicon		string
lp	length of polysilicon		string
wm	Width of metal capacitor		string
lm	Length of metal capacitor		string
l	Length		string
w	Width		string
off	Device initially off		boolean
Vd	Initial diode voltage		string
m	Multiplier		string
dtemp	Temperature difference		string
perim	Junction perimeter factor		string
scale	Scale factor		string
trise	Temp rise form ambient		string
region	Estimated operation region		cyclic - on, off

pjfet



Name	Description	Default Value	Type
model	Model name		string
area	Device area		string
region	Estimated operating region		cyclic
dtemp	Temperature difference		string
m	Multiplier		string
bn	Bulk node connection		string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vgbs	Gate to bulk and src voltage		string
w	Width		string
l	Length		string

pmos



Name	Description	Default Value	Type
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pd	Drain diffusion periphery		string
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nrd	Drain diffusion res squares		string
nrs	Source diffusion res squares		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
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ls	Source diffusion length		string
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off	Device initially off		boolean
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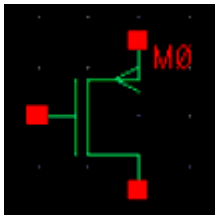
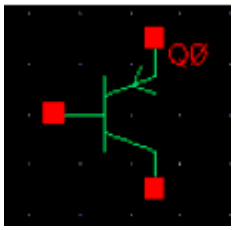
Vgs	Gate source initial voltage		string
Vbs	Bulk source initial voltage		string
rdc	Additional drain resistance		string
rsc	Additional source resistance		string
dtemp	Temperature difference		string
geo	Source/drain selector		string

pmos4



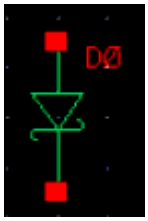
Name	Description	Default Value	Type
model	Model name		string
l	Length		string
w	Width		string
ad	Drain diffusion area		string
as	Source diffusion area		string
pd	Drain diffusion periphery		string
ps	Source diffusion periphery		string
nrd	Drain diffusion res squares		string
nrs	Source diffusion res squares		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
ld	Drain diffusion length		string
ls	Source diffusion length		string
off	Device initially off		boolean
Vds	Drain source initial voltage		string
Vgs	Gate source initial voltage		string
Vbs	Bulk source initial voltage		string
rdc	Additional drain resistance		string
rsc	Additional source resistance		string
dtemp	Temperature difference		string
geo	Source/drain selector		string

pnp



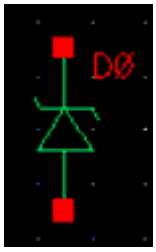
Name	Description	Default Value	Type
model	Model name		string
area	Device area		string
region	Estimated operating region		cyclic
trise	Temp rise from ambient		string
isnoisy	Generate noise?		cyclic
m	Multiplier		string
bn	Bulk node connection		string
Vbe	Base-emitter voltage		string
Vce	Collector-emitter voltage		string
off	Device initially off		boolean
dtemp	Temperature difference		string
areab	Base area		string
areac	Collector area		string

schottky



Name	Description	Default Value	Type
model	Model name		string
area	Device area		string
region	Estimated operating region		cyclic
isnoisy	Generate noise?		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
scale	Scale factor		string
perim	Junction perimeter factor		string
l	Length		string
w	Width		string
off	Device initially off		boolean
Vd	Initial diode voltage		string
pj	Periphery of junction		string
wp	Width of polysilicon		string
lp	Length of polysilicon		string
wm	Width of metal capacitor		string
lm	Length of metal capacitor		string
dtemp	Temperature difference		string

zener



Name	Description	Default Value	Type
model	Model name		string
area	Device area		string
region	Estimated operating region		cyclic
isnoisy	Generate noise?		cyclic
trise	Temp rise from ambient		string
m	Multiplier		string
scale	Scale factor		string
perim	Junction perimeter factor		string
l	Length		string
w	Width		string
off	Device initially off		boolean
Vd	Initial diode voltage		string
pj	Periphery of junction		string
wp	Width of polysilicon		string
lp	Length of polysilicon		string
wm	Width of metal capacitor		string
lm	Length of metal capacitor		string
dtemp	Temperature difference		string

Analysis Components

This section includes information on the following analogLib component:

- *iprobe* (anloglib)

iprobe

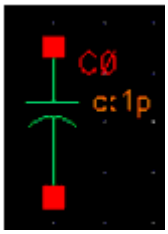
Note
This component does not have parameters.

Parasitics

This section includes information on the following analogLib components:

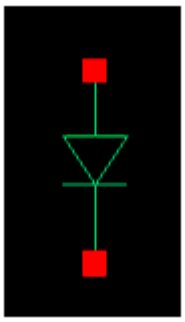
- *pcapacitor* (anloglib)
- *pdiode (Parasitics)* (anloglib)
- *pinductor* (anloglib)
- *presistor* (anloglib)

pcapacitor



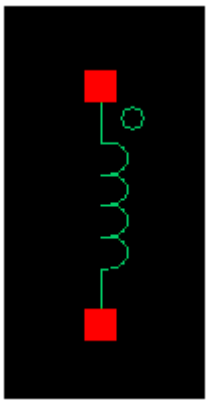
Name	Description	Default Value	Type
wBV	Breakdown Voltage (V)		string
c	Capacitance	1p	string
trise	Temp rise from ambient		string
tnom	Nominal temperature		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
ic	Initial condition		string
m	Multiplier		string
model	Model name		string
w	Width		string
l	Length		string
scale	Scale factor		string
dtemp	Temperature difference		string
polyCoef	Number of Polynomial Coeffs	0	int
c1	Poly Coeff 1		string
c2	Poly Coeff 2		string
c3	Poly Coeff 3		string
c4	Poly Coeff 4		string
c5	Poly Coeff 5		string
c6	Poly Coeff 6		string
c7	Poly Coeff 7		string
c8	Poly Coeff 8		string
c9	Poly Coeff 9		string
c10	Poly Coeff 10		string
c11	Poly Coeff 11		string
c12	Poly Coeff 12		string
c13	Poly Coeff 13		string
c14	Poly Coeff 14		string
c15	Poly Coeff 15		string
c16	Poly Coeff 16		string
c17	Poly Coeff 17		string
c18	Poly Coeff 18		string
c19	Poly Coeff 19		string
c20	Poly Coeff 20		string

pdiode (Parasitics)



Name	Description	Default Value	Type
model	Model name		string
area	Device area		string
pj	Periphery of junction		string
wp	Width of polysilicon		string
lp	length of polysilicon		string
wm	Width of metal capacitor		string
lm	Length of metal capacitor		string
l	Length		string
w	Width		string
off	Device initially off		boolean
Vd	Initial diode voltage		string
m	Multiplier		string
dtemp	Temperature difference		string
perim	Junction perimeter factor		string
scale	Scale factor		string
trise	Temp rise form ambient		string
region	Estimated operation region		cyclic - on, off

pinductor



Name	Description	Default Value	Type
model	Model name		
I	Inductance	1n	string
r	Resistance	1k	string
tc1	Temperature coefficent 1		string
tc2	Temperature coefficent 2		string
scale	Scale factor		string
m	Multiplier		string
dtemp	Temperature difference		string
trise	Temp rise from ambient		string
ic	Initial condition		string
polyCoef	Max Coefficent Number	4	int
c1	Poly Coeff 1		string
c2	Poly Coeff 2		string
c3	Poly Coeff 3		string
c4	Poly Coeff 4		string
c5	Poly Coeff 5		string
c6	Poly Coeff 6		string
c7	Poly Coeff 7		string
c8	Poly Coeff 8		string
c9	Poly Coeff 9		string
c10	Poly Coeff 10		string
c11	Poly Coeff 11		string
c12	Poly Coeff 12		string
c13	Poly Coeff 13		string
c14	Poly Coeff 14		string
c15	Poly Coeff 15		string
c16	Poly Coeff 16		string
c17	Poly Coeff 17		string
c18	Poly Coeff 18		string
c19	Poly Coeff 19		string
c20	Poly Coeff 20		string

presistor

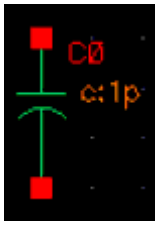
Name	Description	Default Value	Type
wPmax	Max Power dissipation (W)		string
wImax	Max Current (A/m)		string
model	Model name		string
r	Resistance	1K	string
trise	Temp rise from ambient		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
w	Width		string
l	Length		string
isnoisy	Generate noise?		cyclic
m	Multiplier		string
scale	Scale factor		string
c	Capacitance	0	string
ac	AC resistance		string
dtemp	Temperature difference		string
hrc	Capacitance connected		string
resform	Resistance Form		string

Passive Components

This section includes information on the following analogLib components:

- *cap* (anloglib)
- *delay (analoglib)* (anloglib)
- *ind* (anloglib)
- *mind* (anloglib)
- *res (analoglib)* (anloglib)
- *tline* (anloglib)
- *xfmr* (anloglib)

cap

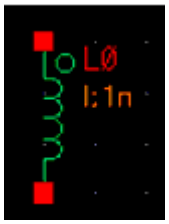


Name	Description	Default Value	Type
wBV	Breakdown Voltage (V)		string
c	Capacitance	1p	string
trise	Temp rise from ambient		string
tnom	Nominal temperature		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
ic	Initial condition		string
m	Multiplier		string
model	Model name		string
w	Width		string
l	Length		string
scale	Scale factor		string
dtemp	Temperature difference		string
polyCoef	Number of Polynomial Coeffs	0	int
c1	Poly Coeff 1		string
c2	Poly Coeff 2		string
c3	Poly Coeff 3		string
c4	Poly Coeff 4		string
c5	Poly Coeff 5		string
c6	Poly Coeff 6		string
c7	Poly Coeff 7		string
c8	Poly Coeff 8		string
c9	Poly Coeff 9		string
c10	Poly Coeff 10		string
c11	Poly Coeff 11		string
c12	Poly Coeff 12		string
c13	Poly Coeff 13		string
c14	Poly Coeff 14		string
c15	Poly Coeff 15		string
c16	Poly Coeff 16		string
c17	Poly Coeff 17		string
c18	Poly Coeff 18		string
c19	Poly Coeff 19		string
c20	Poly Coeff 20		string

delay (analoglib)

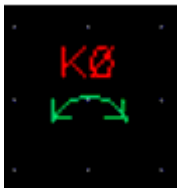
Name	Description	Default Value	Type
gain	Gain	1.0	string
td	Delay time		string
m	Multiplier		string

ind



Name	Description	Default Value	Type
l	Inductance	1n	string
r	Resistance		string
trise	Temp rise from ambient		string
tnom	Nominal temperature		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
ic	Initial condition		string
isnoisy	Generate noise?		cyclic
m	Multiplier		string
model	Model name		string
scale	Scale factor		string
dtemp	Temperature difference		string
polyCoef	Number of Polynomial Coeffs	0	int
c1	Poly Coeff 1		string
c2	Poly Coeff 2		string
c3	Poly Coeff 3		string
c4	Poly Coeff 4		string
c5	Poly Coeff 5		string
c6	Poly Coeff 6		string
c7	Poly Coeff 7		string
c8	Poly Coeff 8		string
c9	Poly Coeff 9		string
c10	Poly Coeff 10		string
c11	Poly Coeff 11		string
c12	Poly Coeff 12		string
c13	Poly Coeff 13		string
c14	Poly Coeff 14		string
c15	Poly Coeff 15		string
c16	Poly Coeff 16		string
c17	Poly Coeff 17		string
c18	Poly Coeff 18		string
c19	Poly Coeff 19		string
c20	Poly Coeff 20		string

mind

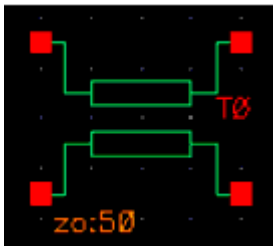


Name	Description	Default Value	Type
k	Coupling coefficient	0	string
ind1	First coupled inductor		string
ind2	Second coupled inductor		string

res (analoglib)

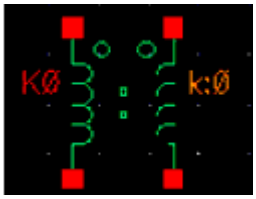
Name	Description	Default Value	Type
wPmax	Max Power dissipation (W)		string
wImax	Max Current (A/m)		string
model	Model name		string
r	Resistance	1K	string
trise	Temp rise from ambient		string
tnom	Nominal temperature		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
w	Width		string
l	Length		string
isnoisy	Generate noise?		cyclic
m	Multiplier		string
scale	Scale factor		string
ac	AC resistance		string
dtemp	Temperature difference		string
hrc	Capacitance connected		string
resform	Resistance Form		string

tline



Name	Description	Default Value	Type
zo	Characteristic impedance	50	string
l	Length		string
vel	Propagation velocity normalized to c		string
sloss	Series Loss per meter	0	string
freq	Frequency		string
ploss	Shunt Loss per meter	0	string
model	Model name		string
td	Delay time		string
nl	Normalized length	0.25	string
len	Physical length		string
m	Multiplier		string
v1	Voltage 1	0.0	string
i1	Current 1	0.0	string
v2	Voltage 2	0.0	string
i2	Current 2	0.0	string

xfmr



Name	Description	Default Value	Type
n1	Number of turns on primary		string
n2	Num of turns on secondary		string
_dummy000	Turn ratio (ADS t)	iPar(\n1\\)/iPar(\n2)	string
k	Coupling coefficient	0	string
pi	Primary inductor		string
si	Secondary inductor		string

Sources (analoglib)

This section includes information on the following analogLib components:

- *cccs* (anloglib)
- *cccs4* (anloglib)
- *ccvs* (anloglib)
- *ccvs4* (anloglib)
- *idc* (anloglib)
- *iexp* (anloglib)
- *ipulse* (anloglib)
- *ipwl* (anloglib)
- *isin* (anloglib)
- *isource* (anloglib)
- *n1port* (anloglib)
- *n2port* (anloglib)
- *n3port* (anloglib)
- *n4port* (anloglib)
- *pcccs* (anloglib)
- *pccvs* (anloglib)
- *pdc* (anloglib)
- *pexp* (anloglib)
- *port* (anloglib)
- *ppulse* (anloglib)
- *ppwl* (anloglib)
- *psin* (anloglib)
- *pvccs* (anloglib)
- *pvcvs* (anloglib)
- *vccs* (anloglib)
- *vcvs* (anloglib)
- *vdc* (anloglib)
- *vexp* (anloglib)
- *vpulse* (anloglib)
- *vpwl* (anloglib)
- *vsin* (anloglib)
- *vsource* (anloglib)

Source Types

Name of Source	Type of Source		
	Dependent	Independent	Port
cccs	x		
cccs4	x		
ccvs	x		
ccvs4	x		
idc		x	
iexp		x	
ipulse		x	
ipwl		x	
isin		x	
isource		x	
n1port			x
n2port			x
n3port			x
n4port			x
oscport			x
pcccs	x		
pccvs	x		
pdc		x	x
pexp		x	x
port		x	x
ppulse		x	x
ppwl		x	x
psin		x	x
pvccs	x		
pvcvs	x		
vccs	x		
vcvs	x		
vdc		x	
vexp		x	
vpulse		x	
vpwl		x	
vsin		x	
vsource		x	

Using S-parameter File Devices from analogLib

Cadence provides four S-parameter file components in the analogLib library:

- *n1port* (anloglib)
- *n2port* (anloglib)
- *n3port* (anloglib)
- *n4port* (anloglib)

Spectre and *ADSsim* simulators do not use the same format for S-parameter files. However, there is a single parameter that is used to designate the S-parameter file name for both simulators. While you can use a full path name in the file parameter, it is recommended that you input the file name without a path, and then set up paths for Spectre and ADSsim that will point to different directories where the files with the proper format can be found.

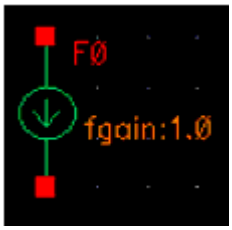
With Spectre and with ADSsim, the search path for the S-parameter files is the same as the search path for the model files. It is set up from the Analog Circuit Design Environment window by using the **Setup > Simulation Files** menu. Set the *Include Path* to either an absolute or relative path. If the path is set to be relative, it is relative to the directory that Cadence is started from. You may enter multiple paths in the *Include Path* and they should be separated by a space character.

If you have a design kit that contains the S-parameter files, it might be convenient to add a search path that does not need to be set by the user. To do this, you can add the configuration variable USER_SIM_FILE_PATH to your hpeesofsim.cfg file (this can be in $HPEESOF_DIR/config, $HPEESOF_DIR/custom/config, or $HOME/hpeesof/config). By default (the $HPEESOF_DIR/config/hpeesofsim.cfg file), the data file search path is .:..:./data:./cell. Each of the above directories is searched and if the USER_SIM_FILE_PATH variable is found, it takes precedence over the previous value. Each path must be delimited with a colon character. It is recommended that you keep .:..:./data:./cell in the path for compatibility. If you use a relative path, it is relative to your simulation/ *<cellName>* /ADSsim/schematic/netlist directory which is different than in the *Include Path* above. These paths are added to the simulator search path after the *Include Path* described above.

If you are using RFIC Dynamic Link, you can only use the USER_SIM_FILE_PATH method to control the search path.

Cadence provides a utility program that can translate Cadence spectre S-parameter files to ADS touchstone S-parameter files. The program is called sptr (S-parameter translation). With no options specified, it will convert a spectre format file to an ADS file (e.g., sptr spar.s2p sparads.s2p). The program can also convert ADS format files to Cadence format. The program is in the same directory as the spectre executable, and should install with the spectre package.

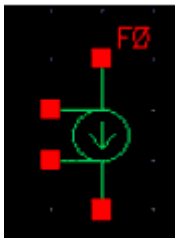
CCCS



Name	Description	Default Value	Type
fgain	Current gain	1.0	string
m	Multiplier		string
ic	Initial condition		string
csType	Type	linear	cyclic
hfgain	Current gain	1.0	string
maxi	Maximum output current		string
mini	Minimum output current		string
scale	Scale factor		string
hm	Multiplier	1	string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
habs	Absolute value		string
hic	Initial condition		string
delta	Delta		string
htd	Delay time		string
xypairs	Number of controlling pairs	2	int
x1	Controlling Volt 1		string
x2	Controlling Volt 2		string
x3	Controlling Volt 3		string
x4	Controlling Volt 4		string
x5	Controlling Volt 5		string
x6	Controlling Volt 6		string
x7	Controlling Volt 7		string
x8	Controlling Volt 8		string
x9	Controlling Volt 9		string
x10	Controlling Volt 10		string
x11	Controlling Volt 11		string
x12	Controlling Volt 12		string
x13	Controlling Volt 13		string
x14	Controlling Volt 14		string
x15	Controlling Volt 15		string
x16	Controlling Volt 16		string
x17	Controlling Volt 17		string
x18	Controlling Volt 18		string

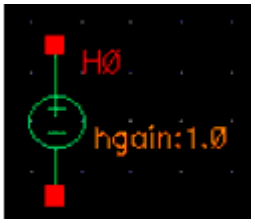
x20	Controlling Volt 20		string
y1	Corresp Element 1		string
y2	Corresp Element 2		string
y3	Corresp Element 3		string
y4	Corresp Element 4		string
y5	Corresp Element 5		string
y6	Corresp Element 6		string
y7	Corresp Element 7		string
y8	Corresp Element 8		string
y9	Corresp Element 9		string
y10	Corresp Element 10		string
y11	Corresp Element 11		string
y12	Corresp Element 12		string
y13	Corresp Element 13		string
y14	Corresp Element 14		string
y15	Corresp Element 15		string
y16	Corresp Element 16		string
y17	Corresp Element 17		string
y18	Corresp Element 18		string
y20	Corresp Element 20		string

cccs4



Name	Description	Default Value	Type
fgain	Current gain	1.0	string
td	Delay time		string
r1	Input resistance		string
r2	Output resistance		string
f3db	3dB frequency		string

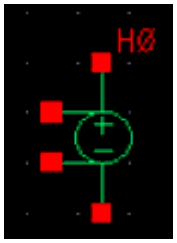
CCVS



Name	Description	Default Value	Type
hgain	Transresistance	1.0	string
vref	Name of voltage source		string
ic	Initial condition		string
csType	Type	linear	cyclic
hhgain	Transresistance	1.0	string
maxv	Maximum output voltage		string
minv	Minimum output voltage		string
scale	Scale factor		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
habs	Absolute value		string
hic	Initial condition		string
delta	Delta		string
htd	Delay time		string
xypairs	Number of controlling pairs	2	int
x1	Controlling Volt 1		string
x2	Controlling Volt 2		string
x3	Controlling Volt 3		string
x4	Controlling Volt 4		string
x5	Controlling Volt 5		string
x6	Controlling Volt 6		string
x7	Controlling Volt 7		string
x8	Controlling Volt 8		string
x9	Controlling Volt 9		string
x10	Controlling Volt 10		string
x11	Controlling Volt 11		string
x12	Controlling Volt 12		string
x13	Controlling Volt 13		string
x14	Controlling Volt 14		string
x15	Controlling Volt 15		string
x16	Controlling Volt 16		string
x17	Controlling Volt 17		string
x18	Controlling Volt 18		string
x20	Controlling Volt 20		string

y1	Corresp Element 1		string
y2	Corresp Element 2		string
y3	Corresp Element 3		string
y4	Corresp Element 4		string
y5	Corresp Element 5		string
y6	Corresp Element 6		string
y7	Corresp Element 7		string
y8	Corresp Element 8		string
y9	Corresp Element 9		string
y10	Corresp Element 10		string
y11	Corresp Element 11		string
y12	Corresp Element 12		string
y13	Corresp Element 13		string
y14	Corresp Element 14		string
y15	Corresp Element 15		string
y16	Corresp Element 16		string
y17	Corresp Element 17		string
y18	Corresp Element 18		string
y20	Corresp Element 20		string

ccvs4



Name	Description	Default Value	Type
hgain	Transresistance	1.0	string
td	Delay time		string
r1	Input resistance		string
r2	Output resistance		string
f3db	3dB frequency		string

idc

Name	Description	Default Value	Type
srcType	Source type	dc	string
idc	DC current		string
acm	AC magnitude		string
acp	AC phase		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
m	Multiplier		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string

iexp

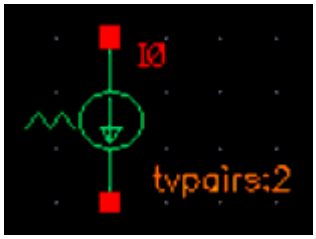
Name	Description	Default Value	Type
srcType	Source type	exp	string
i1	Current 1	0.0	string
i2	Current 2	0.0	string
idc	DC current		string
td1	Delay time 1		string
td2	Delay time 2		string
tau1	Damping factor 1		string
tau2	Damping factor 2		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
acm	AC magnitude		string
acp	AC phase		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string
m	Multiplier		string
td	Delay time		string
dc	DC source		string

ipulse

Name	Description	Default Value	Type
srcType	Source type	pulse	string
i1	Current 1	0.0	string
i2	Current 2	0.0	string
idc	DC current		string
per	Period		string
td	Delay time		string
tr	Rise time		string
tf	Fall time		string
pw	Pulse width		string
acm	AC magnitude		string
acp	AC phase		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
fundname	Frequency name for 1/period		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string

N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string
m	Multiplier		string
dc	DC source		string

ipwl



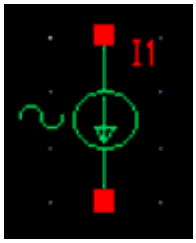
Name	Description	Default Value	Type
srcType	Source type	pwl	string
idc	DC current		string
acm	AC magnitude		string
acp	AC phase		string
tvpairs	Number of pairs of points	2	int
td	Delay time		string
io	Offset current		string
scale	Scale factor		string
stretch	Time scale factor		string
pwlperiod	Period of the PWL		string
twidth	Transition width		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
sinephase	Initial phase for Sinusoid		string
sinephase2	Initial phase for Sinusoid 2		string
t1	Time 1		string
i1	Current 1	0.0	string
t2	Time 2		string
i2	Current 2	0.0	string
t3	Time 3		string
i3	Current 3	0.0	string
t4	Time 4		string
i4	Current 4	0.0	string
t5	Time 5		string
i5	Current 5	0.0	string
t6	Time 6		string
i6	Current 6	0.0	string
t7	Time 7		string
i7	Current 7	0.0	string
t8	Time 8		string
i8	Current 8	0.0	string
t9	Time 9		string
i9	Current 9	0.0	string

t10	Time 10		string
i10	Current 10	0.0	string
t11	Time 11		string
i11	Current 11	0.0	string
t12	Time 12		string
i12	Current 12	0.0	string
t13	Time 13		string
i13	Current 13	0.0	string
t14	Time 14		string
i14	Current 14	0.0	string
t15	Time 15		string
i15	Current 15	0.0	string
t16	Time 16		string
i16	Current 16	0.0	string
t17	Time 17		string
i17	Current 17	0.0	string
t18	Time 18		string
i18	Current 18	0.0	string
t19	Time 19		string
i19	Current 19	0.0	string
t20	Time 20		string
i20	Current 20	0.0	string
t21	Time 21		string
i21	Current 21	0.0	string
t22	Time 22		string
i22	Current 22	0.0	string
t23	Time 23		string
i23	Current 23	0.0	string
t24	Time 24		string
i24	Current 24	0.0	string
t25	Time 25		string
i25	Current 25	0.0	string
t26	Time 26		string
i26	Current 26	0.0	string
t27	Time 27		string
i27	Current 27	0.0	string
t28	Time 28		string
i28	Current 28	0.0	string
t29	Time 29		string
i29	Current 29	0.0	string
t30	Time 30		string
i30	Current 30	0.0	string
t31	Time 31		string

i31	Current 31	0.0	string
t32	Time 32		string
i32	Current 32	0.0	string
t33	Time 33		string
i33	Current 33	0.0	string
t34	Time 34		string
i34	Current 34	0.0	string
t35	Time 35		string
i35	Current 35	0.0	string
t36	Time 36		string
i36	Current 36	0.0	string
t37	Time 37		string
i37	Current 37	0.0	string
t38	Time 38		string
i38	Current 38	0.0	string
t39	Time 39		string
i39	Current 39	0.0	string
t40	Time 40		string
i40	Current 40	0.0	string
t41	Time 41		string
i41	Current 41	0.0	string
t42	Time 42		string
i42	Current 42	0.0	string
t43	Time 43		string
i43	Current 43	0.0	string
t44	Time 44		string
i44	Current 44	0.0	string
t45	Time 45		string
i45	Current 45	0.0	string
t46	Time 46		string
i46	Current 46	0.0	string
t47	Time 47		string
i47	Current 47	0.0	string
t48	Time 48		string
i48	Current 48	0.0	string
t49	Time 49		string
i49	Current 49	0.0	string
t50	Time 50		string
i50	Current 50	0.0	string
fundname	Frequency name for 1/period		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string

N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string
m	Multiplier		string
dc	DC source		string
rpt	Repeated function		string

isin



Name	Description	Default Value	Type
srcType	Source type	sine	string
acm	AC magnitude		string
acp	AC phase		string
idc	DC current		string
ia	Amplitude		string
ia2	Amplitude 2		string
freq	Frequency		string
freq2	Frequency 2		string
td	Delay time		string
theta	Damping factor		string
phi	Phase delay		string
io	Offset current		string
fmmodindex	FM modulation index		string
fmmodfreq	FM modulation frequency		string
ammodindex	AM modulation index		string
ammodfreq	AM modulation frequency		string
ammodphase	AM modulation phase		string
sinephase	Initial phase for Sinusoid		string
sinephase2	Initial phase for Sinusoid 2		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
fundname	First frequency name		string
fundname2	Second frequency name		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string

N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string
m	Multiplier		string
noisetemp	Noise temperature		string
dc	DC source		string

isource

Name	Description	Default Value	Type
pwlEntryMethod	Waveform Entry Method	File	radio
numofsines	Display second sinusoid		boolean
modulation	Display modulation params		boolean
srcType	Source type	sine	cyclic
ia	Amplitude 1 (Ipk)		string
ia2	Amplitude 2 (Ipk)		string
freq	Frequency 1		string
freq2	Frequency 2		string
theta	Damping factor 1		string
phi	Phase delay		string
fmmodindex	FM modulation index 1		string
fmmodfreq	FM modulation freq 1		string
ammodindex	AM modulation index 1		string
ammodfreq	AM modulation freq 1		string
ammodphase	AM modulation phase 1		string
i1	Current 1		string
i2	Current 2		string
td1	Rise time start		string
td2	Fall time start		string
tau1	Rise time constant		string
tau2	Fall time constant		string
per	Period of waveform		string
td	Delay time		string
tr	Rise time		string
tf	Fall time		string
pw	Pulse width		string
idc	DC current		string
acm	AC Magnitude		string
acp	AC phase		string
tvpairs	Number of PWL/Time pairs	0	int
io	DC offset current		string
offset	DC offset		string
scale	Amplitude scale factor		string
stretch	Time scale factor		string

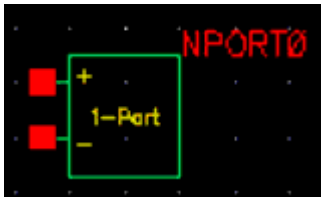
pwlperiod	Period		string
twidth	Transition width		string
tc1	Linear temp. coefficient		string
tc2	Quadratic temp. coeff.		string
tnom	Nominal temperature		string
sinephase	Phase for Sinusoid 1		string
sinephase2	Phase for Sinusoid 2		string
sinedc	Sine DC level		string
val0	Zero value		string
val1	One value		string
t1	Time 1		string
t2	Time 2		string
t3	Time 3		string
i3	Current 3		string
t4	Time 4		string
i4	Current 4		string
t5	Time 5		string
i5	Current 5		string
t6	Time 6		string
i6	Current 6		string
t7	Time 7		string
i7	Current 7		string
t8	Time 8		string
i8	Current 8		string
t9	Time 9		string
i9	Current 9		string
t10	Time 10		string
i10	Current 10		string
t11	Time 11		string
i11	Current 11		string
t12	Time 12		string
i12	Current 12		string
t13	Time 13		string
i13	Current 13		string
t14	Time 14		string
i14	Current 14		string
t15	Time 15		string
i15	Current 15		string
t16	Time 16		string
i16	Current 16		string
t17	Time 17		string
i17	Current 17		string
t18	Time 18		string

i18	Current 18		string
t19	Time 19		string
i19	Current 19		string
t20	Time 20		string
i20	Current 20		string
t21	Time 21		string
i21	Current 21		string
t22	Time 22		string
i22	Current 22		string
t23	Time 23		string
i23	Current 23		string
t24	Time 24		string
i24	Current 24		string
t25	Time 25		string
i25	Current 25		string
t26	Time 26		string
i26	Current 26		string
t27	Time 27		string
i27	Current 27		string
t28	Time 28		string
i28	Current 28		string
t29	Time 29		string
i29	Current 29		string
t30	Time 30		string
i30	Current 30		string
t31	Time 31		string
i31	Current 31		string
t32	Time 32		string
i32	Current 32		string
t33	Time 33		string
i33	Current 33		string
t34	Time 34		string
i34	Current 34		string
t35	Time 35		string
i35	Current 35		string
t36	Time 36		string
i36	Current 36		string
t37	Time 37		string
i37	Current 37		string
t38	Time 38		string
i38	Current 38		string
t39	Time 39		string
i39	Current 39		string

t40	Time 40		string
i40	Current 40		string
t41	Time 41		string
i41	Current 41		string
t42	Time 42		string
i42	Current 42		string
t43	Time 43		string
i43	Current 43		string
t44	Time 44		string
i44	Current 44		string
t45	Time 45		string
i45	Current 45		string
t46	Time 46		string
i46	Current 46		string
t47	Time 47		string
i47	Current 47		string
t48	Time 48		string
i48	Current 48		string
t49	Time 49		string
i49	Current 49		string
t50	Time 50		string
i50	Current 50		string
m	Multiplier		string
fundname	Frequency name 1		string
fundname2	Frequency name 2		string
noisefile	Noise file name		string
fileName	File name		string
tempParam	Display temperature params		boolean
smallSig	Display small signal params		boolean
noiseParam	Display noise parameters		boolean
FNpairs	Num. of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string

F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
noiseEntryMethod	Noise Entry Method	File	radio
pacm	PAC Magnitude		string
pacp	PAC phase		string
xfm	XF Magnitude		string
noisetemp	Noise temperature		string
allbrkpts	Breakpoints		cyclic

n1port

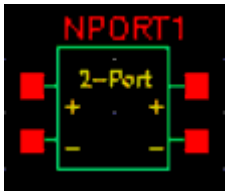


Name	Description	Default Value	Type
dataFile	S-parameter data file		string
romdatfile	ROM data file		string
m	Multiplier		string
scale	Scale factor		string
relerr	Relative error		string
abserr	Absolute error		string
ratorder	Rational order		string
interp	Interpolation method		cyclic

Notes

1. For information regarding S-parameter file format information, refer to *Using S-parameter File Devices from analogLib* (anloglib) at the beginning of this section.

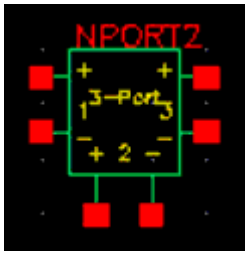
n2port



Name	Description	Default Value	Type
dataFile	S-parameter data file		string
romdatfile	ROM data file		string
m	Multiplier		string
scale	Scale factor		string
relerr	Relative error		string
abserr	Absolute error		string
ratorder	Rational order		string
interp	Interpolation method		cyclic

1. For information regarding S-parameter file format information, refer to *Using S-parameter File Devices from analogLib* (anloglib) at the beginning of this section.

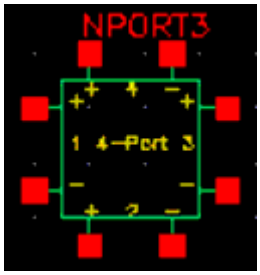
n3port



Name	Description	Default Value	Type
dataFile	S-parameter data file		string
romdatfile	ROM data file		string
m	Multiplier		string
scale	Scale factor		string
relerr	Relative error		string
abserr	Absolute error		string
ratorder	Rational order		string
interp	Interpolation method		cyclic

1. For information regarding S-parameter file format information, refer to *Using S-parameter File Devices from analogLib* (anloglib) at the beginning of this section.

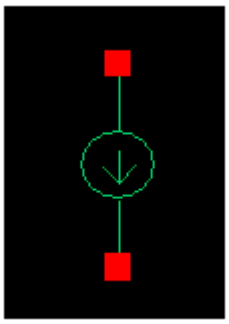
n4port



Name	Description	Default Value	Type
dataFile	S-parameter data file		string
romdatfile	ROM data file		string
m	Multiplier		string
scale	Scale factor		string
relerr	Relative error		string
abserr	Absolute error		string
ratorder	Rational order		string
interp	Interpolation method		cyclic

1. For information regarding S-parameter file format information, refer to *Using S-parameter File Devices from analogLib* (anloglib) at the beginning of this section.

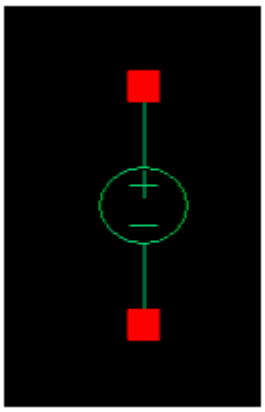
pcccs



Name	Description	Default Value	Type
gain	Gain	1.0	string
polyCoef	Max Coefficent Number	4	int
c0	Poly Coeff 0		string
c1	Poly Coeff 1		string
c2	Poly Coeff 2		string
c3	Poly Coeff 3		string
c4	Poly Coeff 4		string
c5	Poly Coeff 5		string
c6	Poly Coeff 6		string
c7	Poly Coeff 7		string
c8	Poly Coeff 8		string
c9	Poly Coeff 9		string
c10	Poly Coeff 10		string
c11	Poly Coeff 11		string
c12	Poly Coeff 12		string
c13	Poly Coeff 13		string
c14	Poly Coeff 14		string
c15	Poly Coeff 15		string
c16	Poly Coeff 16		string
c17	Poly Coeff 17		string
c18	Poly Coeff 18		string
c19	Poly Coeff 19		string
c20	Poly Coeff 20		string
probeCnt	Number of Probes	4	int
p1	Probe 1		string
p2	Probe 2		string
p3	Probe 3		string
p4	Probe 4		string
p5	Probe 5		string
p6	Probe 6		string
p7	Probe 7		string

p8	Probe 8		string
p9	Probe 9		string
p10	Probe 10		string
p11	Probe 11		string
p12	Probe 12		string
p13	Probe 13		string
p14	Probe 14		string
p15	Probe 15		string
p16	Probe 16		string
p17	Probe 17		string
p18	Probe 18		string
p19	Probe 19		string
p20	Probe 20		string
m	Multiplier		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string

pccvs



Name	Description	Default Value	Type
gain	Gain	1.0	string
polyCoef	Max Coefficent Number	4	int
c0	Poly Coeff 0		string
c1	Poly Coeff 1		string
c2	Poly Coeff 2		string
c3	Poly Coeff 3		string
c4	Poly Coeff 4		string
c5	Poly Coeff 5		string
c6	Poly Coeff 6		string
c7	Poly Coeff 7		string
c8	Poly Coeff 8		string
c9	Poly Coeff 9		string
c10	Poly Coeff 10		string
c11	Poly Coeff 11		string
c12	Poly Coeff 12		string
c13	Poly Coeff 13		string
c14	Poly Coeff 14		string
c15	Poly Coeff 15		string
c16	Poly Coeff 16		string
c17	Poly Coeff 17		string
c18	Poly Coeff 18		string
c19	Poly Coeff 19		string
c20	Poly Coeff 20		string
probeCnt	Number of Probes	4	int
p1	Probe 1		string
p2	Probe 2		string
p3	Probe 3		string
p4	Probe 4		string
p5	Probe 5		string

p6	Probe 6		string
p7	Probe 7		string
p8	Probe 8		string
p9	Probe 9		string
p10	Probe 10		string
p11	Probe 11		string
p12	Probe 12		string
p13	Probe 13		string
p14	Probe 14		string
p15	Probe 15		string
p16	Probe 16		string
p17	Probe 17		string
p18	Probe 18		string
p19	Probe 19		string
p20	Probe 20		string
m	Multiplier		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string

pdc

Name	Description	Default Value	Type
srcType	Source type	dc	string
r	Resistance	50	string
num	Port number		string
vdc	DC voltage		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
acm	AC magnitude		string
acp	AC phase		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
m	Multiplier		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string

pexp

Name	Description	Default Value	Type
srcType	Source type	exp	string
r	Resistance	50	string
num	Port number		string
vdc	DC voltage		string
td1	Delay time 1		string
tau1	Damping factor 1		string
td2	Delay time 2		string
tau2	Damping factor 2		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
td	Delay time		string
m	Multiplier		string
acm	AC magnitude		string
acp	AC phase		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string

port

Name	Description	Default Value	Type
pwlEntryMethod	Waveform Entry Method	File	radio
numofsines	Display second sinusoid		boolean
modulation	Display modulation params		boolean
srcType	Source type	sine	cyclic
r	Resistance	50	string
num	Port number		string
vdc	DC voltage		string
td	Delay time		string
val0	Zero value		string
val1	One value		string
per	Period of waveform		string
tr	Rise time		string
tf	Fall time		string
pw	Pulse width		string
td1	Rise time start		string
tau1	Rise time constant		string
td2	Fall time start		string
tau2	Fall time constant		string
freq	Frequency 1		string
va	Amplitude 1 (Vpk)		string
vaDBm	Amplitude 1 (dBm)		string
sinephase	Phase for Sinusoid 1		string
sinedc	Sine DC level		string
freq2	Frequency 2		string
va2	Amplitude 2 (Vpk)		string
vaDBm2	Amplitude 2 (dBm)		string
sinephase2	Phase for Sinusoid 2		string
fmmodindex	FM modulation index 1		string
fmmodfreq	FM modulation freq 1		string
ammodindex	AM modulation index 1		string
ammodfreq	AM modulation freq 1		string
ammodphase	AM modulation phase 1		string

theta	Damping factor 1		string
tc1	Linear temp. coefficient		string
tc2	Quadratic temp. coeff.		string
tnom	Nominal temperature		string
acm	AC Magnitude		string
acp	AC phase		string
offset	DC offset		string
scale	Amplitude scale factor		string
stretch	Time scale factor		string
pwlperiod	Period		string
twidth	Transition width		string
sourceType	Source type	port	radio
tvpairs	Number of PWL/Time pairs	0	int
t1	Time 1		string
v1	Voltage 1		string
t2	Time 2		string
v2	Voltage 2		string
t3	Time 3		string
v3	Voltage 3		string
t4	Time 4		string
v4	Voltage 4		string
t5	Time 5		string
v5	Voltage 5		string
t6	Time 6		string
v6	Voltage 6		string
t7	Time 7		string
v7	Voltage 7		string
t8	Time 8		string
v8	Voltage 8		string
t9	Time 9		string
v9	Voltage 9		string
t10	Time 10		string
v10	Voltage 10		string
t11	Time 11		string
v11	Voltage 11		string
t12	Time 12		string
v12	Voltage 12		string
t13	Time 13		string
v13	Voltage 13		string
t14	Time 14		string
v14	Voltage 14		string
t15	Time 15		string
v15	Voltage 15		string

t16	Time 16		string
v16	Voltage 16		string
t17	Time 17		string
v17	Voltage 17		string
t18	Time 18		string
v18	Voltage 18		string
t19	Time 19		string
v19	Voltage 19		string
t20	Time 20		string
v20	Voltage 20		string
t21	Time 21		string
v21	Voltage 21		string
t22	Time 22		string
v22	Voltage 22		string
t23	Time 23		string
v23	Voltage 23		string
t24	Time 24		string
v24	Voltage 24		string
t25	Time 25		string
v25	Voltage 25		string
t26	Time 26		string
v26	Voltage 26		string
t27	Time 27		string
v27	Voltage 27		string
t28	Time 28		string
v28	Voltage 28		string
t29	Time 29		string
v29	Voltage 29		string
t30	Time 30		string
v30	Voltage 30		string
t31	Time 31		string
v31	Voltage 31		string
t32	Time 32		string
v32	Voltage 32		string
t33	Time 33		string
v33	Voltage 33		string
t34	Time 34		string
v34	Voltage 34		string
t35	Time 35		string
v35	Voltage 35		string
t36	Time 36		string
v36	Voltage 36		string
t37	Time 37		string

v37	Voltage 37		string
t38	Time 38		string
v38	Voltage 38		string
t39	Time 39		string
v39	Voltage 39		string
t40	Time 40		string
v40	Voltage 40		string
t41	Time 41		string
v41	Voltage 41		string
t42	Time 42		string
v42	Voltage 42		string
t43	Time 43		string
v43	Voltage 43		string
t44	Time 44		string
v44	Voltage 44		string
t45	Time 45		string
v45	Voltage 45		string
t46	Time 46		string
v46	Voltage 46		string
t47	Time 47		string
v47	Voltage 47		string
t48	Time 48		string
v48	Voltage 48		string
t49	Time 49		string
v49	Voltage 49		string
t50	Time 50		string
v50	Voltage 50		string
fundname	Frequency name 1		string
fundname2	Frequency name 2		string
noisefile	Noise file name		string
fileName	File name		string
tempParam	Display temperature params		boolean
smallSig	Display small signal params		boolean
noiseParam	Display noise parameters		boolean
FNpairs	Num. of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string

F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
noiseEntryMethod	Noise Entry Method	File	radio
pacm	PAC Magnitude		string
pacDBm	PAC Magnitude (dBm)		string
pacp	PAC phase		string
xfm	XF Magnitude		string
noisetemp	Noise temperature		string
m	Multiplier		string
allbrkpts	Breakpoints		cyclic

ppulse

Name	Description	Default Value	Type
srcType	Source type	pulse	string
r	Resistance	50	string
num	Port number		string
vdc	DC voltage		string
td	Delay time		string
v1	Voltage 1	0.0	string
v2	Voltage 2	0.0	string
per	Period		string
tr	Rise time		string
tf	Fall time		string
pw	Pulse width		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
fundname	Frequency name for 1/period		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string

N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
m	Multiplier		string
acm	AC magnitude		string
acp	AC phase		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string

ppwl

Name	Description	Default Value	Type
srcType	Source type	pwl	string
r	Resistance	50	string
num	Port number		string
vdc	DC voltage		string
td	Delay time		string
twidth	Transition width		string
pwlperiod	Period of the PWL		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
scale	Scale factor		string
stretch	Time scale factor		string
offset	Offset voltage		string
tvpairs	Number of pairs of points	2	Type int
t1	Time 1		string
v1	Voltage 1	0.0	string
t2	Time 2		string
v2	Voltage 2	0.0	string
t3	Time 3		string
v3	Voltage 3	0.0	string
t4	Time 4		string
v4	Voltage 4	0.0	string
t5	Time 5		string
v5	Voltage 5	0.0	string
t6	Time 6		string
v6	DescriptionVoltage 6	0.0	string
t7	DescriptionTime 7		string
v7	DescriptionVoltage 7	0.0	string
t8	Time 8		string
v8	Voltage 8	0.0	string
t9	Time 9		string
v9	Voltage 9	0.0	string
t10	Time 10		string

v10	Voltage 10	0.0	string
t11	Time 11		string
v11	Voltage 11	0.0	string
t12	Time 12		string
v12	Voltage 12	0.0	string
t13	Time 13		string
v13	Voltage 13	0.0	string
t14	Time 14		string
v14	Voltage 14	0.0	string
t15	Time 15		string
v15	Voltage 15	0.0	string
t16	Time 16		string
v16	Voltage 16	0.0	string
t17	Time 17		string
v17	Voltage 17	0.0	string
t18	Time 18		string
v18	Voltage 18	0.0	string
t19	Time 19		string
v19	Voltage 19	0.0	string
t20	Time 20		string
v20	Voltage 20	0.0	string
t21	Time 21		string
v21	Voltage 21	0.0	string
t22	Time 22		string
v22	Voltage 22	0.0	string
t23	Time 23		string
v23	Voltage 23	0.0	string
t24	Time 24		string
v24	Voltage 24	0.0	string
t25	Time 25		string
v25	Voltage 25	0.0	string
t26	Time 26		string
v26	Voltage 26	0.0	string
t27	Time 27		string
v27	Voltage 27	0.0	string
t28	Time 28		string
v28	Voltage 28	0.0	string
t29	Time 29		string
v29	Voltage 29	0.0	string
t30	Time 30		string
v30	Voltage 30	0.0	string
t31	Time 31		string
v31	Voltage 31	0.0	string

t32	Time 32		string
v32	Voltage 32	0.0	string
t33	Time 33		string
v33	Voltage 33	0.0	string
t34	Time 34		string
v34	Voltage 34	0.0	string
t35	Time 35		string
v35	Voltage 35	0.0	string
t36	Time 36		string
v36	Voltage 36	0.0	string
t37	Time 37		string
v37	Voltage 37	0.0	string
t38	Time 38		string
v38	Voltage 38	0.0	string
t39	Time 39		string
v39	Voltage 39	0.0	string
t40	Time 40		string
v40	Voltage 40	0.0	string
t41	Time 41		string
v41	Voltage 41	0.0	string
t42	Time 42		string
v42	Voltage 42	0.0	string
t43	Time 43		string
v43	Voltage 43	0.0	string
t44	Time 44		string
v44	Voltage 44	0.0	string
t45	Time 45		string
v45	Voltage 45	0.0	string
t46	Time 46		string
v46	Voltage 46	0.0	string
t47	Time 47		string
v47	Voltage 47	0.0	string
t48	Time 48		string
v48	Voltage 48	0.0	string
t49	Time 49		string
v49	Voltage 49	0.0	string
t50	Time 50		string
v50	Voltage 50	0.0	string
fundname	Frequency name for 1/period		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string

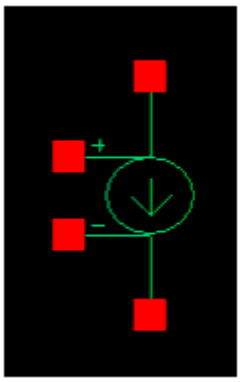
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
vo	Offset voltage		string
m	Multiplier		string
acm	AC magnitude		string
acp	AC phase		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string
allbrkpts	All are breakpoints "D		string

psin

Name	Description	Default Value	Type
srcType	Source type	sine	string
r	Resistance	50	string
jx	Reactance	0	string
num	Port number		string
vdc	DC voltage		string
td	Delay time		string
freq	Frequency		string
va	Amplitude		string
vaDBm	Amplitude (dBm)		string
sinephase	Initial phase for Sinusoid		string
sinedc	Sine DC level		string
freq2	Frequency 2		string
va2	Amplitude 2		string
vaDBm2	Amplitude 2 (dBm)		string
sinephase2	Initial phase for Sinusoid 2		string
theta	Damping factor		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
acm	AC magnitude		string
acp	AC phase		string
fmmodindex	FM modulation index		string
fmmodfreq	FM modulation frequency		string
ammodindex	AM modulation index		string
ammodfreq	AM modulation frequency		string
ammodphase	AM modulation phase		string
fundname	Frequency name		string
fundname2	Second frequency name		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string

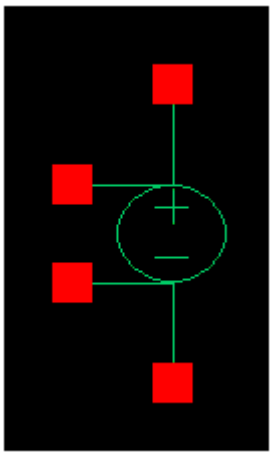
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
m	Multiplier		string
noisetemp	Noise temperature		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacDBm	PAC magnitude (dBm)		string
pacp	PAC phase		string

pvccs



Name	Description	Default Value	Type
gain	Gain	1.0	string
polyCoef	Max Coefficent Number	4	int
c0	Poly Coeff 0		string
c1	Poly Coeff 1		string
c2	Poly Coeff 2		string
c3	Poly Coeff 3		string
c4	Poly Coeff 4		string
c5	Poly Coeff 5		string
c6	Poly Coeff 6		string
c7	Poly Coeff 7		string
c8	Poly Coeff 8		string
c9	Poly Coeff 9		string
c10	Poly Coeff 10		string
c11	Poly Coeff 11		string
c12	Poly Coeff 12		string
c13	Poly Coeff 13		string
c14	Poly Coeff 14		string
c15	Poly Coeff 15		string
c16	Poly Coeff 16		string
c17	Poly Coeff 17		string
c18	Poly Coeff 18		string
c19	Poly Coeff 19		string
c20	Poly Coeff 20		string
m	Multiplier		string
scale	Scale factor		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
abs	Absolute value		string
ic	Initial condition		string

pvcvs



Name	Description	Default Value	Type
gain	Gain	1.0	string
polyCoef	Max Coefficent Number	4	int
c0	Poly Coeff	0	string
c1	Poly Coeff	1	string
c2	Poly Coeff	2	string
c3	Poly Coeff	3	string
c4	Poly Coeff	4	string
c5	Poly Coeff	5	string
c6	Poly Coeff	6	string
c7	Poly Coeff	7	string
c8	Poly Coeff	8	string
c9	Poly Coeff	9	string
c10	Poly Coeff	10	string
c11	Poly Coeff	11	string
c12	Poly Coeff	12	string
c13	Poly Coeff	13	string
c14	Poly Coeff	14	string
c15	Poly Coeff	15	string
c16	Poly Coeff	16	string
c17	Poly Coeff	17	string
c18	Poly Coeff	18	string
c19	Poly Coeff	19	string
c20	Poly Coeff	20	string
m	Multiplier		string
scale	Scale factor		string
tc1	Temperature coefficient	1	string
tc2	Temperature coefficient	2	string
abs	Absolute value		string
ic	Initial condition		string

vccs

Name	Description	Default Value	Type
ggain	Transconductance	1.0	string
td	Delay time		string
r1	Input resistance		string
r2	Output resistance		string
f3db	3dB frequency		string
m	Multiplier		string
ic	Initial condition		string
csType	Type	linear	cyclic
hggain	Transconductance	1.0	string
maxi	Maximum output current		string
mini	Minimum output current		string
scale	Scale factor		string
hm	Multiplier	1	string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
habs	Absolute value		string
hic	Initial condition		string
pwlType	Pwl type	pwl	cyclic
delta	Delta		string
htd	Delay time		string
xypairs	Number of controlling pairs	2	int
x1	Controlling Volt 1		string
x2	Controlling Volt 2		string
x3	Controlling Volt 3		string
x4	Controlling Volt 4		string
x5	Controlling Volt 5		string
x6	Controlling Volt 6		string
x7	Controlling Volt 7		string
x8	Controlling Volt 8		string
x9	Controlling Volt 9		string
x10	Controlling Volt 10		string
x11	Controlling Volt 11		string
x12	Controlling Volt 12		string

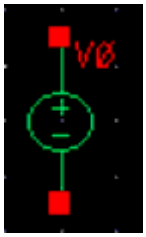
x13	Controlling Volt 13		string
x14	Controlling Volt 14		string
x15	Controlling Volt 15		string
x16	Controlling Volt 16		string
x17	Controlling Volt 17		string
x18	Controlling Volt 18		string
x20	Controlling Volt 20		string
y1	Corresp Element 1		string
y2	Corresp Element 2		string
y3	Corresp Element 3		string
y4	Corresp Element 4		string
y5	Corresp Element 5		string
y6	Corresp Element 6		string
y7	Corresp Element 7		string
y8	Corresp Element 8		string
y9	Corresp Element 9		string
y10	Corresp Element 10		string
y11	Corresp Element 11		string
y12	Corresp Element 12		string
y13	Corresp Element 13		string
y14	Corresp Element 14		string
y15	Corresp Element 15		string
y16	Corresp Element 16		string
y17	Corresp Element 17		string
y18	Corresp Element 18		string
y20	Corresp Element 20		string

vcvs

Name	Description	Default Value	Type
egain	Voltage gain	1.0	string
td	Delay time		string
f3db	3dB frequency		string
r1	Input resistance		string
r2	Output resistance		string
ic	Initial condition		string
csType	Type	linear	cyclic
hegain	Voltage gain	1.0	string
maxv	Maximum output voltage		string
minv	Minimum output voltage		string
scale	Scale factor		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
habs	Absolute value		string
hic	Initial condition		string
delta	Delta		string
htd	Delay time		string
xypairs	Number of controlling pairs	2	int
x1	Controlling Volt 1		string
x2	Controlling Volt 2		string
x3	Controlling Volt 3		string
x4	Controlling Volt 4		string
x5	Controlling Volt 5		string
x6	Controlling Volt 6		string
x7	Controlling Volt 7		string
x8	Controlling Volt 8		string
x9	Controlling Volt 9		string
x10	Controlling Volt 10		string
x11	Controlling Volt 11		string
x12	Controlling Volt 12		string
x13	Controlling Volt 13		string
x14	Controlling Volt 14		string
x15	Controlling Volt 15		string

x16	Controlling Volt 16		string
x17	Controlling Volt 17		string
x18	Controlling Volt 18		string
x20	Controlling Volt 20		string
y1	Corresp Element 1		string
y2	Corresp Element 2		string
y3	Corresp Element 3		string
y4	Corresp Element 4		string
y5	Corresp Element 5		string
y6	Corresp Element 6		string
y7	Corresp Element 7		string
y8	Corresp Element 8		string
y9	Corresp Element 9		string
y10	Corresp Element 10		string
y11	Corresp Element 11		string
y12	Corresp Element 12		string
y13	Corresp Element 13		string
y14	Corresp Element 14		string
y15	Corresp Element 15		string
y16	Corresp Element 16		string
y17	Corresp Element 17		string
y18	Corresp Element 18		string
y20	Corresp Element 20		string

vdc



Name	Description	Default Value	Type
srcType	Source type	dc	string
vdc	DC voltage		string
acm	AC magnitude		string
acp	AC phase		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string

vexp

Name	Description	Default Value	Type
srcType	Source type	exp	string
vdc	DC voltage		string
v1	Voltage 1	0.0	string
v2	Voltage 2	0.0	string
td1	Delay time 1		string
td2	Delay time 2		string
tau1	Damping factor 1		string
tau2	Damping factor 2		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
acm	AC magnitude		string
acp	AC phase		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string
td	Delay time		string
dc	DC source		string

vpulse

Name	Description	Default Value	Type
srcType	Source type	pulse	string
v1	Voltage 1	0.0	string
v2	Voltage 2	0.0	string
vdc	DC voltage		string
per	Period		string
td	Delay time		string
tr	Rise time		string
tf	Fall time		string
pw	Pulse width		string
acm	AC magnitude		string
acp	AC phase		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
fundname	Frequency name for 1/period		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string
dc	DC source		string

vpwl

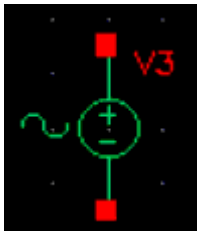
Name	Description	Default Value	Type
srcType	Source type	pwl	string
vdc	DC voltage		string
acm	AC magnitude		string
acp	AC phase		string
tvpairs	Number of pairs of points	2	int
td	Delay time		string
vo	Offset voltage		string
scale	Scale factor		string
stretch	Time scale factor		string
pwlperiod	Period of the PWL		string
twidth	Transition width		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
t1	Time 1		string
v1	Voltage 1	0.0	string
t2	Time 2		string
v2	Voltage 2	0.0	string
t3	Time 3		string
v3	Voltage 3	0.0	string
t4	Time 4		string
v4	Voltage 4	0.0	string
t5	Time 5		string
v5	Voltage 5	0.0	string
t6	Time 6		string
v6	Voltage 6	0.0	string
t7	Time 7		string
v7	Voltage 7	0.0	string
t8	Time 8		string
v8	Voltage 8	0.0	string
t9	Time 9		string
v9	Voltage 9	0.0	string
t10	Time 10		string
v10	Voltage 10	0.0	string

t11	Time 11		string
v11	Voltage 11	0.0	string
t12	Time 12		string
v12	Voltage 12	0.0	string
t13	Time 13		string
v13	Voltage 13	0.0	string
t14	Time 14		string
v14	Voltage 14	0.0	string
t15	Time 15		string
v15	Voltage 15	0.0	string
t16	Time 16		string
v16	Voltage 16	0.0	string
t17	Time 17		string
v17	Voltage 17	0.0	string
t18	Time 18		string
v18	Voltage 18	0.0	string
t19	Time 19		string
v19	Voltage 19	0.0	string
t20	Time 20		string
v20	Voltage 20	0.0	string
t21	Time 21		string
v21	Voltage 21	0.0	string
t22	Time 22		string
v22	Voltage 22	0.0	string
t23	Time 23		string
v23	Voltage 23	0.0	string
t24	Time 24		string
v24	Voltage 24	0.0	string
t25	Time 25		string
v25	Voltage 25	0.0	string
t26	Time 26		string
v26	Voltage 26	0.0	string
t27	Time 27		string
v27	Voltage 27	0.0	string
t28	Time 28		string
v28	Voltage 28	0.0	string
t29	Time 29		string
v29	Voltage 29	0.0	string
t30	Time 30		string
v30	Voltage 30	0.0	string
t31	Time 31		string
v31	Voltage 31	0.0	string
t32	Time 32		string

v32	Voltage 32	0.0	string
t33	Time 33		string
v33	Voltage 33	0.0	string
t34	Time 34		string
v34	Voltage 34	0.0	string
t35	Time 35		string
v35	Voltage 35	0.0	string
t36	Time 36		string
v36	Voltage 36	0.0	string
t37	Time 37		string
v37	Voltage 37	0.0	string
t38	Time 38		string
v38	Voltage 38	0.0	string
t39	Time 39		string
v39	Voltage 39	0.0	string
t40	Time 40		string
v40	Voltage 40	0.0	string
t41	Time 41		string
v41	Voltage 41	0.0	string
t42	Time 42		string
v42	Voltage 42	0.0	string
t43	Time 43		string
v43	Voltage 43	0.0	string
t44	Time 44		string
v44	Voltage 44	0.0	string
t45	Time 45		string
v45	Voltage 45	0.0	string
t46	Time 46		string
v46	Voltage 46	0.0	string
t47	Time 47		string
v47	Voltage 47	0.0	string
t48	Time 48		string
v48	Voltage 48	0.0	string
t49	Time 49		string
v49	Voltage 49	0.0	string
t50	Time 50		string
v50	Voltage 50	0.0	string
fundname	Frequency name for 1/period		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string

N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string
dc	DC source		string
rpt	Repeated function		string

vsin



Name	Description	Default Value	Type
srcType	Source type	sine	string
acm	AC magnitude		string
acp	AC phase		string
vdc	DC voltage		string
va	Amplitude		string
va2	Amplitude 2		string
freq	Frequency		string
freq2	Frequency 2		string
td	Delay time		string
theta	Damping factor		string
phi	Phase delay		string
vo	Offset voltage		string
fmmodindex	FM modulation index		string
fmmodfreq	FM modulation frequency		string
ammodindex	AM modulation index		string
ammodfreq	AM modulation frequency		string
ammodphase	AM modulation phase		string
sinephase	Initial phase for Sinusoid		string
sinephase2	Initial phase for Sinusoid 2		string
tc1	Temperature coefficient 1		string
tc2	Temperature coefficient 2		string
tnom	Nominal temperature		string
fundname	First frequency name		string
fundname2	Second frequency name		string
noisefile	Noise file name		string
FNpairs	Number of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string

F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string
N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
xfm	XF magnitude		string
pacm	PAC magnitude		string
pacp	PAC phase		string
noisetemp	Noise temperature		string
dc	DC source		string

vsource

Name	Description	Default Value	Type
pwlEntryMethod	Waveform Entry Method	File	radio
numofsines	Display second sinusoid		boolean
modulation	Display modulation params		boolean
srcType	Source type	sine	cyclic
va	Amplitude 1 (Vpk)		string
va2	Amplitude 2 (Vpk)		string
freq	Frequency 1		string
freq2	Frequency 2		string
theta	Damping factor 1		string
phi	Phase delay		string
fmmodindex	FM modulation index 1		string
fmmodfreq	FM modulation freq 1		string
ammodindex	AM modulation index 1		string
ammodfreq	AM modulation freq 1		string
ammodphase	AM modulation phase 1		string
v1	Voltage 1		string
v2	Voltage 2		string
td1	Rise time start		string
td2	Fall time start		string
tau1	Rise time constant		string
tau2	Fall time constant		string
per	Period of waveform		string
td	Delay time		string
tr	Rise time		string
tf	Fall time		string
pw	Pulse width		string
vdc	DC voltage		string
acm	AC Magnitude		string
acp	AC phase		string
tvpairs	Number of PWL/Time pairs	0	int
vo	Offset voltage		string
offset	DC offset		string
scale	Amplitude scale factor		string
stretch	Time scale factor		string

pwlperiod	Period		string
twidth	Transition width		string
tc1	Linear temp. coefficient		string
tc2	Quadratic temp. coeff.		string
tnom	Nominal temperature		string
sinephase	Phase for Sinusoid 1		string
sinephase2	Phase for Sinusoid 2		string
sinedc	Sine DC level		string
val0	Zero value		string
val1	One value		string
t1	Time 1		string
t2	Time 2		string
t3	Time 3		string
v3	Voltage 3		string
t4	Time 4		string
v4	Voltage 4		string
t5	Time 5		string
v5	Voltage 5		string
t6	Time 6		string
v6	Voltage 6		string
t7	Time 7		string
v7	Voltage 7		string
t8	Time 8		string
v8	Voltage 8		string
t9	Time 9		string
v9	Voltage 9		string
t10	Time 10		string
v10	Voltage 10		string
t11	Time 11		string
v11	Voltage 11		string
t12	Time 12		string
v12	Voltage 12		string
t13	Time 13		string
v13	Voltage 13		string
t14	Time 14		string
v14	Voltage 14		string
t15	Time 15		string
v15	Voltage 15		string
t16	Time 16		string
v16	Voltage 16		string
t17	Time 17		string
v17	Voltage 17		string
t18	Time 18		string

v18	Voltage 18		string
t19	Time 19		string
v19	Voltage 19		string
t20	Time 20		string
v20	Voltage 20		string
t21	Time 21		string
v21	Voltage 21		string
t22	Time 22		string
v22	Voltage 22		string
t23	Time 23		string
v23	Voltage 23		string
t24	Time 24		string
v24	Voltage 24		string
t25	Time 25		string
v25	Voltage 25		string
t26	Time 26		string
v26	Voltage 26		string
t27	Time 27		string
v27	Voltage 27		string
t28	Time 28		string
v28	Voltage 28		string
t29	Time 29		string
v29	Voltage 29		string
t30	Time 30		string
v30	Voltage 30		string
t31	Time 31		string
v31	Voltage 31		string
t32	Time 32		string
v32	Voltage 32		string
t33	Time 33		string
v33	Voltage 33		string
t34	Time 34		string
v34	Voltage 34		string
t35	Time 35		string
v35	Voltage 35		string
t36	Time 36		string
v36	Voltage 36		string
t37	Time 37		string
v37	Voltage 37		string
t38	Time 38		string
v38	Voltage 38		string
t39	Time 39		string
v39	Voltage 39		string

t40	Time 40		string
v40	Voltage 40		string
t41	Time 41		string
v41	Voltage 41		string
t42	Time 42		string
v42	Voltage 42		string
t43	Time 43		string
v43	Voltage 43		string
t44	Time 44		string
v44	Voltage 44		string
t45	Time 45		string
v45	Voltage 45		string
t46	Time 46		string
v46	Voltage 46		string
t47	Time 47		string
v47	Voltage 47		string
t48	Time 48		string
v48	Voltage 48		string
t49	Time 49		string
v49	Voltage 49		string
t50	Time 50		string
v50	Voltage 50		string
fundname	Frequency name 1		string
fundname2	Frequency name 2		string
noisefile	Noise file name		string
fileName	File name		string
tempParam	Display temperature params		boolean
smallSig	Display small signal params		boolean
noiseParam	Display noise parameters		boolean
FNpairs	Num. of noise/freq pairs	0	int
F1	Freq 1		string
N1	Noise 1		string
F2	Freq 2		string
N2	Noise 2		string
F3	Freq 3		string
N3	Noise 3		string
F4	Freq 4		string
N4	Noise 4		string
F5	Freq 5		string
N5	Noise 5		string
F6	Freq 6		string
N6	Noise 6		string
F7	Freq 7		string

N7	Noise 7		string
F8	Freq 8		string
N8	Noise 8		string
F9	Freq 9		string
N9	Noise 9		string
F10	Freq 10		string
N10	Noise 10		string
noiseEntryMethod	Noise Entry Method	File	radio
pacm	PAC Magnitude		string
pacp	PAC phase		string
xfm	XF Magnitude		string
noisetemp	Noise temperature		string
m	Multiplier		string
allbrkpts	Breakpoints		cyclic