



Agilent Technologies

ADS 2008
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analogLib Components

Advanced Design System 2008

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- vdc
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- vpwl
- vsin
- vsource

Introduction to analogLib

Both RFIC Dynamic Link and RF Design Environment come with a modified version of Cadence's analogLib. This manual describes the components in the modified version of analogLib that are supported by RFIC Dynamic Link and RF Design Environment.

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.* /analogLib
```

where 5.1.* is either 5.1.0 (CDBA version) or 5.1.2 (OpenAccess 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

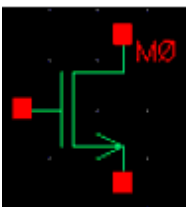
<http://www.agilent.com/find/eesof-docs/>

Active Components

This chapter includes information on the following analogLib components:

- [diode](#)
- [nbsim](#)
- [nbsim4](#)
- [njfet](#)
- [nmes](#)
- [nmos](#)
- [nmos4](#)
- [npn](#)
- [pbsim](#)
- [pbsim4](#)
- [pdiode](#)
- [pjfet](#)
- [pmos](#)
- [pmos4](#)
- [pnp](#)
- [schottky](#)
- [zener](#)

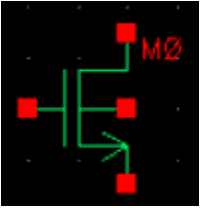
nbsim



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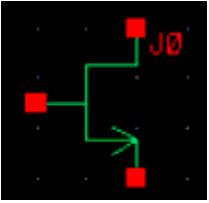
Name	Description	Default Value	Type
model	Model name	string	
l	Length	string	
w	Width	string	
ad	Drain diffusion area	string	
as	Source diffusion area	string	
pd	Drain diffusion periphery	string	
ps	Source diffusion periphery	string	
nrd	Drain diffusion res squares	string	
nrs	Source diffusion res squares	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



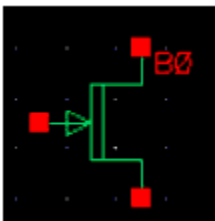
Name	Description	Default Value	Type
model	Model name	string	
l	Length	string	
w	Width	string	
ad	Drain diffusion area	string	
as	Source diffusion area	string	
pd	Drain diffusion periphery	string	
ps	Source diffusion periphery	string	
nrd	Drain diffusion res squares	string	
nrs	Source diffusion res squares	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

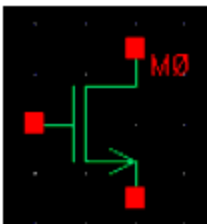


Name	Description	Default Value	Type
model	Model name	string	
area	Device area	string	
dtemp	Temperature difference	string	
m	Multiplier	string	

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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

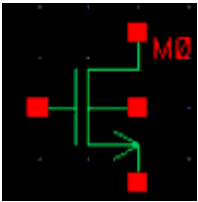


Name	Description	Default Value	Type
model	Model name	string	
l	Length	string	
w	Width	string	
ad	Drain diffusion area	string	
as	Source diffusion area	string	
pd	Drain diffusion periphery	string	
ps	Source diffusion periphery	string	
nrd	Drain diffusion res squares	string	
nrs	Source diffusion res squares	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	

Advanced Design System 2008

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

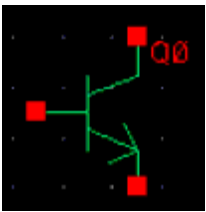


Name	Description	Default Value	Type
model	Model name	string	
l	Length	string	
w	Width	string	
ad	Drain diffusion area	string	
as	Source diffusion area	string	
pd	Drain diffusion periphery	string	
ps	Source diffusion periphery	string	
nrd	Drain diffusion res squares	string	
nrs	Source diffusion res squares	string	
region	Estimated operating region	cyclic	
trise	Temp rise from ambient	string	
m	Multiplier	string	

Advanced Design System 2008

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

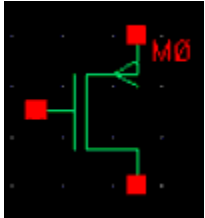


Name	Description	Default Value	Type
model	Model name	string	
area	Device area	string	
region	Estimated operating region	cyclic	
trise	Temp rise from ambient	string	
isnoisy	Generate noise?	cyclic	
m	Multiplier	string	
bn	Bulk node connection	string	
Vbe	Base-emitter voltage	string	
Vce	Collector-emitter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

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areac	Collector area	string
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pbsim

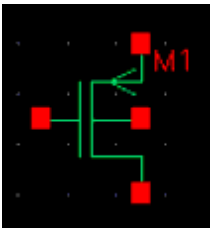


Name	Description	Default Value	Type
model	Model name	string	
l	Length	string	
w	Width	string	
ad	Drain diffusion area	string	
as	Source diffusion area	string	
pd	Drain diffusion periphery	string	
ps	Source diffusion periphery	string	
nrd	Drain diffusion res squares	string	
nrs	Source diffusion res squares	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	string	

Advanced Design System 2008

	resistance	
dtemp	Temperature difference	string
geo	Source/drain selector	string

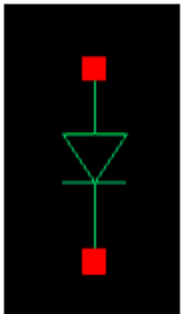
pbsim4



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

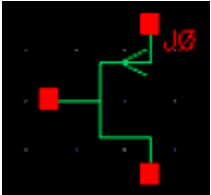


Name	Description	Default Value	Type
model	Model name	string	
area	Device area	string	
pj	Periphery of junction	string	
wp	Width of polysilicon	string	
lp	length of polysilicon	string	
wm	Width of metal capacitor	string	
lm	Length of metal capacitor	string	
l	Length	string	
w	Width	string	
off	Device 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	

Advanced Design System 2008

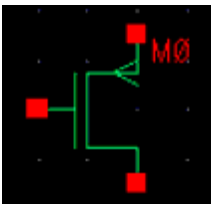
region	Estimated operation region	cyclic - on, off
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pjfet



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

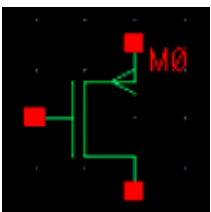


Name	Description	Default Value	Type
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Advanced Design System 2008

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

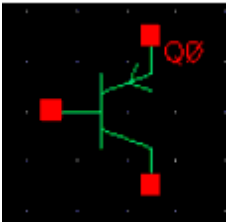
pmos4



Advanced Design System 2008

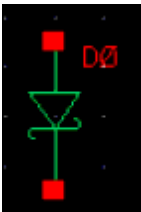
Name	Description	Default Value	Type
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l	Length	string	
w	Width	string	
ad	Drain diffusion area	string	
as	Source diffusion area	string	
pd	Drain diffusion periphery	string	
ps	Source diffusion periphery	string	
nrd	Drain diffusion res squares	string	
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

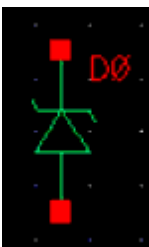


Name	Description	Default Value	Type
model	Model name	string	
area	Device area	string	
region	Estimated operating region	cyclic	

Advanced Design System 2008

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 chapter includes information on the following analogLib component:

- [iprobe](#)

iprobe



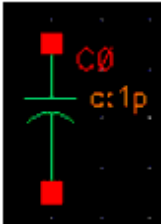
Parasitics

This chapter includes information on the following analogLib components:

- [pcapacitor](#)

- [pdiode](#)
- [pinductor](#)
- [presistor](#)

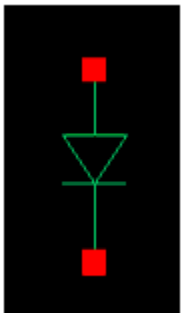
pcapacitor



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

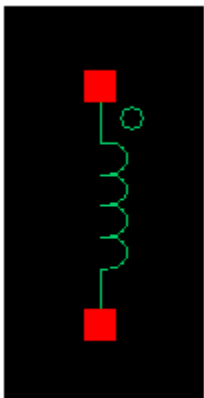
pdiode (Parasitics)



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 coefficient 1	string	
tc2	Temperature coefficient 2	string	

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scale	Scale factor		string
m	Multiplier		string
dtemp	Temperature difference		string
trise	Temp rise from ambient		string
ic	Initial condition		string
polyCoef	Max Coefficient 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	

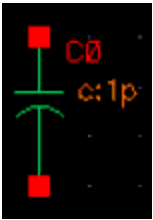
Passive Components

This chapter includes information on the following analogLib components:

- [cap](#)
- [delay](#)

- [ind](#)
- [mind](#)
- [res](#)
- [tline](#)
- [xfmr](#)

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	

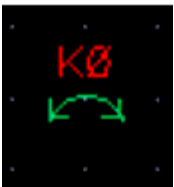
ind



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)

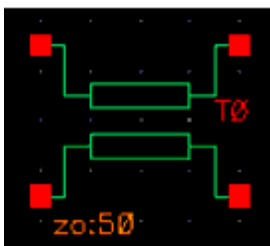


Name	Description	Default Value	Type
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Advanced Design System 2008

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

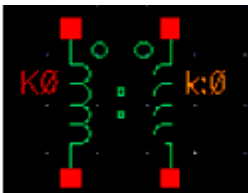


Name	Description	Default Value	Type
zo	Characteristic impedance	50	string
l	Length	string	
vel	Propagation velocity normalized to c	string	
sloss	Series Loss per meter	0	string

Advanced Design System 2008

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)

Advanced Design System 2008

This chapter includes information on the following analogLib components:

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

Source Types

Name of Source	Type of Source		
	Dependent	Independent	Port
cccs	x		
cccs4	x		
ccvs	x		
ccvs4	x		

Advanced Design System 2008

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		
pdv		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](#)
- [n2port](#)
- [n3port](#)
- [n4port](#)

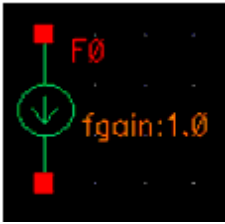
Spectre and ADSsim simulators do not use the same format for S-parameter files. However, there is a single parameter that is used to designate the S-parameter file name for both simulators. While you can use a full path name in the file parameter, it is recommended that you input the file name without 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:/networks`. 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:/networks` in the path for compatibility. If you use a relative path, it is relative to your simulation/`<designName>` /`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.

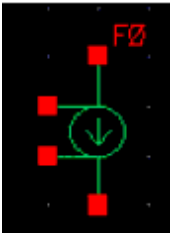
Cadence provides a utility program that can translate Cadence spectre S-parameter files to ADS touchstone S-parameter files. The program is called `sptr` (S-parameter translation). With no options specified, it will convert a spectre format file to an ADS file (e.g., `sptr spar.s2p sparads.s2p`). The 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.



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	

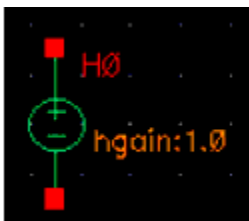
Advanced Design System 2008

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



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	

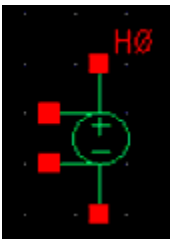
Advanced Design System 2008

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	

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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	

Advanced Design System 2008

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	

Advanced Design System 2008

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	

Advanced Design System 2008

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	

Advanced Design System 2008

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

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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

Advanced Design System 2008

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

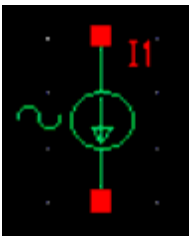
Advanced Design System 2008

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	

Advanced Design System 2008

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	

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phi	Phase delay		string
io	Offset current		string
fmodindex	FM modulation index		string
fmodfreq	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	

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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
twidht	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

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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

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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

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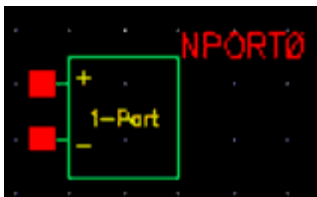
t34	Time 34	string
i34	Current 34	string
t35	Time 35	string
i35	Current 35	string
t36	Time 36	string
i36	Current 36	string
t37	Time 37	string
i37	Current 37	string
t38	Time 38	string
i38	Current 38	string
t39	Time 39	string
i39	Current 39	string
t40	Time 40	string
i40	Current 40	string
t41	Time 41	string
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

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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

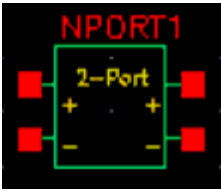


Name	Description	Default Value	Type
dataFile	S-parameter data file	string	
romdatfile	ROM data file	string	
m	Multiplier	string	
scale	Scale factor	string	
relerr	Relative error	string	
abserr	Absolute error	string	
ratorder	Rational order	string	
interp	Interpolation method		cyclic

Notes

1. For information regarding S-parameter file format information, refer to [Using S-parameter File Devices from analogLib](#) at the beginning of this chapter.

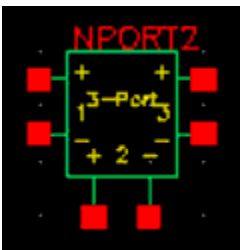
n2port



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](#) at the beginning of this chapter.

n3port

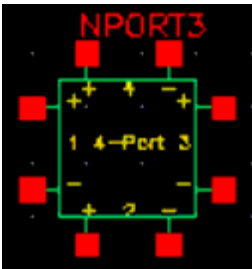


Name	Description	Default Value	Type
dataFile	S-parameter data file	string	
romdatfile	ROM data file	string	
m	Multiplier	string	
scale	Scale factor	string	
relerr	Relative error	string	
abserr	Absolute error	string	

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](#) at the beginning of this chapter.

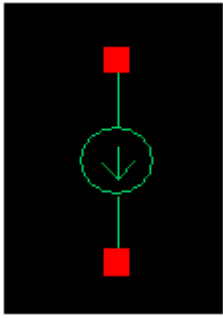
n4port



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](#) at the beginning of this chapter.

pcccs

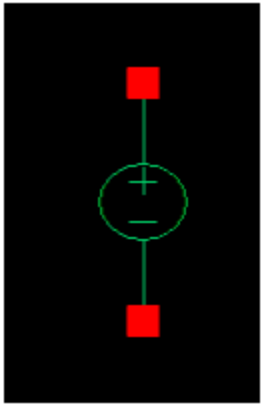


Name	Description	Default Value	Type
gain	Gain	1.0	string
polyCoef	Max Coefficient Number	4	int
c0	Poly Coeff 0	string	
c1	Poly Coeff 1	string	
c2	Poly Coeff 2	string	
c3	Poly Coeff 3	string	
c4	Poly Coeff 4	string	
c5	Poly Coeff 5	string	
c6	Poly Coeff 6	string	
c7	Poly Coeff 7	string	
c8	Poly Coeff 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	

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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 Coefficient 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	

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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	

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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	

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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	

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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
twidh	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

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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

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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

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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

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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

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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
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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

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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

Advanced Design System 2008

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

Advanced Design System 2008

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

Advanced Design System 2008

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

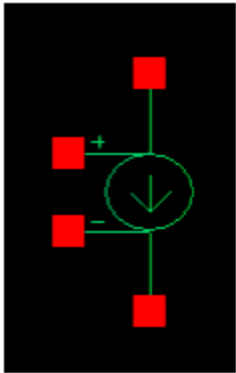
Advanced Design System 2008

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

Advanced Design System 2008

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

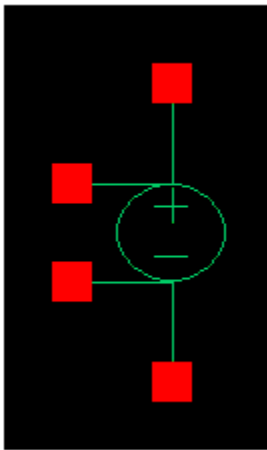


Name	Description	Default Value	Type
gain	Gain	1.0	string
polyCoef	Max Coefficient Number	4	int
c0	Poly Coeff 0	string	
c1	Poly Coeff 1	string	
c2	Poly Coeff 2	string	
c3	Poly Coeff 3	string	
c4	Poly Coeff 4	string	
c5	Poly Coeff 5	string	
c6	Poly Coeff 6	string	
c7	Poly Coeff 7	string	
c8	Poly Coeff 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	

Advanced Design System 2008

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 Coefficient 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

Advanced Design System 2008

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

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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

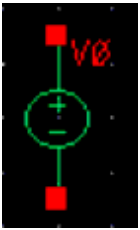


Name	Description	Default Value	Type
egain	Voltage gain	1.0	string
td	Delay time		string
f3db	3dB frequency		string
r1	Input resistance		string
r2	Output resistance		string
ic	Initial condition		string
csType	Type	linear	cyclic
hegain	Voltage gain	1.0	string
maxv	Maximum output voltage		string
minv	Minimum 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

Advanced Design System 2008

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

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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

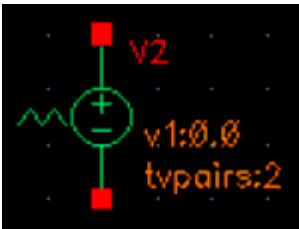


Name	Description	Default Value	Type
srcType	Source type	pulse	string
v1	Voltage 1	0.0	string
v2	Voltage 2	0.0	string
vdc	DC voltage		string
per	Period		string
td	Delay time		string
tr	Rise time		string
tf	Fall time		string
pw	Pulse width		string
acm	AC magnitude		string
acp	AC phase		string
tc1	Temperature 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

Advanced Design System 2008

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	vpwl	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

Advanced Design System 2008

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

Advanced Design System 2008

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

Advanced Design System 2008

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

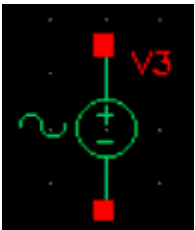
Advanced Design System 2008

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

Advanced Design System 2008

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

Advanced Design System 2008

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

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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

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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

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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

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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

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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

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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

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m	Multiplier		string
allbrkpts	Breakpoints	cyclic	