

Single Frequency FM current source

isffm

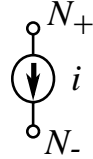


Figure 1: Independent Current Source Element.

Form: isffm:<instance name> n_1 n_2 <parameter list>

n_1 is the positive element node,

n_2 is the negative element node.

Parameters:

Parameter	Type	Default value	Required?
io: Offset current(A)	DOUBLE	0	no
ia: RMS current amplitude (A)	DOUBLE	0	no
fcarrier: AC frequency (Hz)	DOUBLE	0	no
mdi: modulation index (Dimensionless)	DOUBLE	0	no
fsignal: Signal frequency (Hz)	DOUBLE	0	no

Example:

isffm:isignal 8 0 io=0.2 ia=0.7 fcarrier=4 mdi=0.9 fsignal=1

Description:

The waveform shape for this source is

$$i = i_o + i_a[\sin(2.\pi.f_{carrier}.t) + mdi \sin(2.\pi.f_{signal}.t)] \quad (1)$$

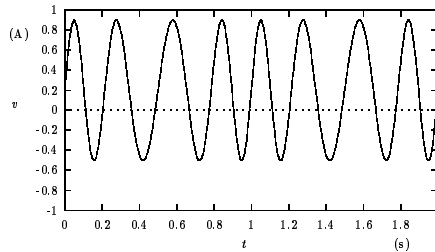


Figure 2: Current source single frequency frequency modulation waveform for isffm:isignal 8 0 io=0.2 ia=0.7 fcarrier=4 mdi=0.9 fsignal=1


Notes:

This is the I element in the SPICE compatible netlist.

Version:

2002.05.15

Credits:

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