

# Single Frequency FM voltage source

vsffm

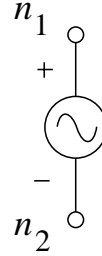


Figure 1: Independent Voltage Source Element.

*Form:* `sffm:<instance name> n1 n2 <parameter list>`  
 $n_1$  is the positive element node,

$n_2$  is the negative element node.

*Parameters:*

Parameter	Type	Default value	Required?
vo: Offset voltage(V)	DOUBLE	0	no
va: RMS voltage amplitude (V)	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:*

`vsffm:vsignal 8 0 io=0.2 va=0.7 fcarrier=4 mdi=0.9 fsignal=1`

*Description:*

The waveform shape for this source is

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

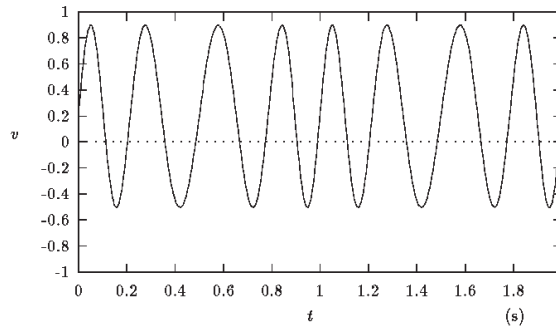


Figure 2: Voltage source single frequency frequency modulation waveform for `vsffm:vsignal 8 0 vo=0.2 va=0.7 fcarrier=4 mdi=0.9 fsignal=1`

*Notes:*

This is the V element in the SPICE compatible netlist.


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*Version:*

2002.05.15

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*Credits:*

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