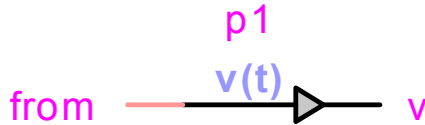


v(t) probe



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1 Description

This device measures the instantaneous voltage to ground of a power signal.

1.1 Pins

This meter has two pins:

<i>pin</i>	<i>type</i>	<i>description</i>	<i>units</i>
from	power pin	probed power signal	
v	output pin	instantaneous value $v(t)$ of probed voltage	V

1.2 Parameters

No parameters are required for this device.

1.3 Input

The power pin may be connected to any power signal of a circuit.

1.4 History

Selection options for the history value of the output signal:

<i>option</i>	<i>value</i>	<i>rules</i>
not defined	history(t) = undefined	
zero	history(t) = zero	
constant value	history(t) = user-defined value	any value
function value	history(t) = user-defined function	constant or f(t)

1.5 Output signal interpolation

During the simulation, the output value of this device is calculated at successive instants t at intervals Δt . Between these simulation instants, the output value can be set to vary in one of two modes, ramped or stepped:

<i>mode</i>	<i>output value between $t - \Delta t$ and t^-</i>	<i>value at t^-</i>	<i>value at t</i>
ramped	interpolated linearly between values $out(t - \Delta t)$ and $out(t^-)$	calculated at t^-	calculated at t
stepped	remains at $out(t - \Delta t)$	remains at $out(t - \Delta t)$	calculated at t

2 Time-domain representation

In the time-domain calculation at $t > 0$, the output value is the value of the measured simulation quantity.

3 Steady-state representation

In the steady-state calculation at $t = 0$, the output value is calculated as follows:

$$\begin{aligned} &\text{if history is defined, } out(0) = \text{history}(0) \\ &\text{else } out(0) = \text{value of the measured simulation quantity} \end{aligned} \quad (1)$$

4 Netlist

Netlist format:

```
_c_prbv;name;2;2;in,out,
history,step/ramp,
history function expression
```

<i>field</i>	<i>description</i>	<i>value</i>
<code>c_prbv</code>	part name	
<code>name</code>	instance name	
<code>2</code>	pin count	
<code>2</code>	pin count	
<code>in</code>	signal name of the input	
<code>out</code>	signal name of the output	
<code>history</code>	history	constant value or "H" for function
<code>step/ramp</code>	calculation mode	"S1" for stepped "S0" for ramped
<code>history function expression</code>	optional, required when history field is "H"	

The comma separated data is saved into the ParamsA attribute of this device. The **history function expression** is saved into the ModelData attribute.