Siemens IBIS group update 2006
Under construction
Introduction

The SIEMENS IBIS GROUP is formed by members of different Siemens divisions. This group has defined a common quality level for ibis models which is required by all SIEMENS divisions.

SIEMENS design flows include the board/system simulation as a main topic to support design to cost and time to market initiatives. The quality of the used models primarily determines the simulation results.

In this light of responsibility we expect from our IC vendors high IBIS model availability and as well as advanced IBIS modeling know how.
Welcome to the home of the Siemens IBIS group

dedicated to IBIS quality

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This site should not only define the desired quality level but also explain in detail what we need, and why we need it. On this web site we will also find hints and examples for this modelling.

As this is the first version of our site, any feedback from readers is highly appreciated mail to Siemens IBIS Group

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**News**
march 2006: SIEMENS IBIS Group homepage launched

**changelog**
nothing changed yet. :-(

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Homepage preview
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Example

IBIS tree

Model keyword

Model Spec

Receiver thresholds

Voltage range

Ramp / ...waveforms

Ramp should be in accordance with the static curves
### Explanation of model requirements

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[Ramp], [Rising Waveform], [Falling Waveform]

Overview

\( u(t) \) - waveforms
- Headline
- Headline
- Headline
- Headline

\( u(t) \) - waveforms

section 6 / [Ramp] / \( \frac{dV_{out}}{dt} \_fr \_FR \_load \)
section 6 / [Rising Waveform], [Falling Waveform],
\( R\_fr, V\_fr, V\_fr\_min, V\_fr\_max, C\_fr, L\_fr, C\_dut, L\_dut, R\_dut \)

REQUIREMENT
The Ramp should be in accordance with the static curves.

Example
There is some information double inside ibis files which contain the keyword ramp: The \( \frac{dV}{dt} \_r \) or \( \frac{dV}{dt} \_f \) information of the ramp is also inside the static curves.

Intersection of Low-curve with \( R\_load\_line \)
\( \frac{dV}{dt} \_r \_fr \_Vcc \_V2 \times 0.6 \)

Corresponding falling \( u(t) \)
\( \frac{dV}{dt} \_f \_fr \_Vcc \_V2 \times 0.6 \)
Ramp – static curves

Intersection of low-curve with R_load-line
\[ \frac{dV_f}{dV} = (V_{cc} - V_2)^{0.6} \]

Corresponding falling u(t)
\[ \frac{dV_f}{dV} = (V_{cc} - V_2)^{0.6} \]

Intersection of high-curve with R_load-line
\[ \frac{dV_r}{dV} = V_1^{0.6} \]

Corresponding rising u(t)
\[ \frac{dV_r}{dV} = V_1^{0.6} \]

Hint
Wrong or missing R_load. If the R_load keyword is missing this is equal with R_load = 50 ohms. In this case you can try to add an R_load different to 50 ohms and see if you can match all 3 dV – values with the static curves.

Links
see also [Pullup, Pulldown]
www.siemens.com/ibis

Start: june 2006 or earlier

Email to: ibis-quality@siemens.com