

## Proposal for receiver “bandwidth” specifications

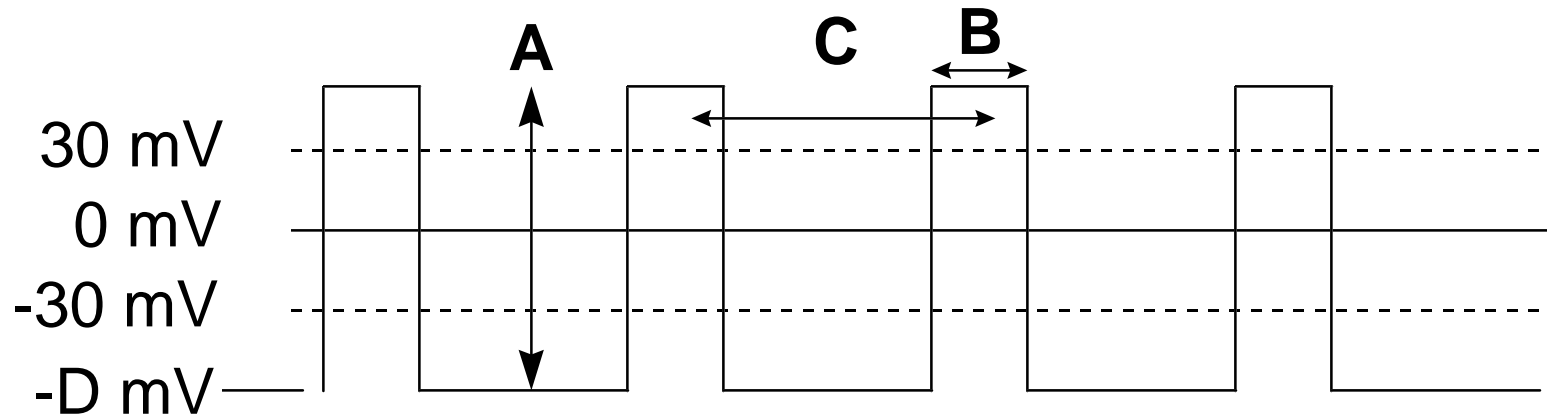
**Specifications are required on the dynamic response of SPI-4 receivers to protect against very “fast” receivers being implemented to meet the very tight timing budgets. SPI-4 receivers need to have a minimum level of protection against detecting small noise spikes.**

**Traditional frequency domain bandwidth specifications are not suitable for use with SCSI receivers because the receivers intrinsically do not operate in a linear region**

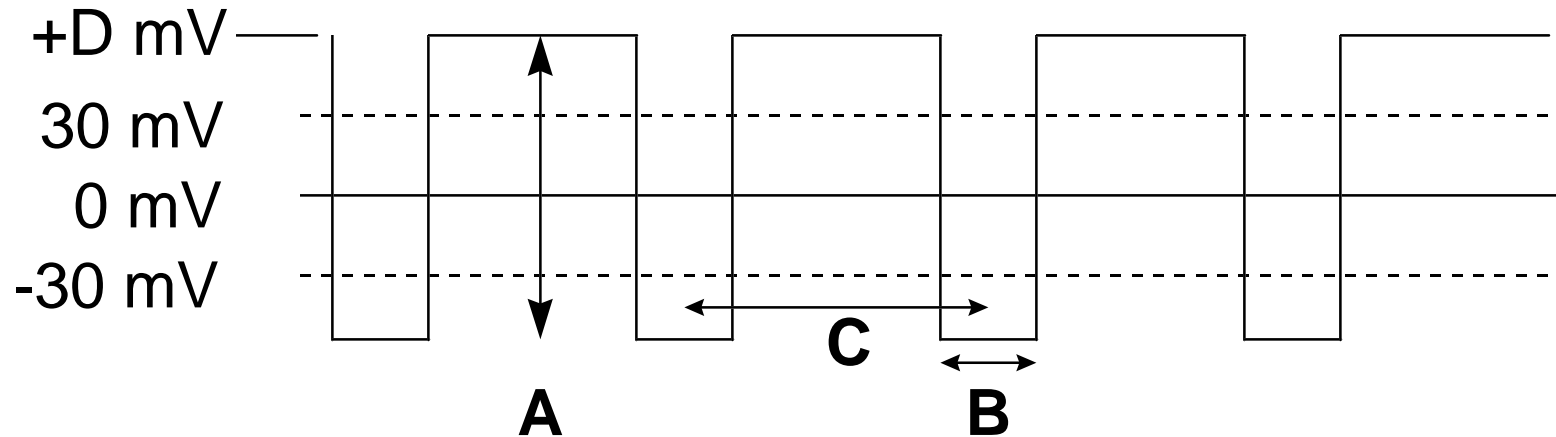
**A time and amplitude scheme is required to verify that the receiver is not too “fast”. Another way to state the requirement is that the receiver shall not detect pulses of certain amplitude and duration.**

**The remainder of this document is aimed at specifying the details of the pulses**

Positive going differential pulse train based at  $-D$  mV



Negative going differential pulse train based at  $+D$  mV



## REQUIREMENTS:

SPI-4 receivers shall not classify the positive going or the negative going test pulse train as a transition when presented with the pulse train at the device connector.

The test pulse trains shall have the following properties:

Pulse amplitude, A,  $< 100$  mV

Pulse width (@50% of transition), B,  $< 2.0$  ns

Repetition time, C,  $> 6.25$  ns

Starting level, D, 60 mV

Rise/fall time (20%-80%)  $< 1$  ns

a.c. common mode = 0

d.c. common mode = 1.25 v