TI Amplifier

April 9, 2017

This block has one input signal and one output signal both corresponding to electrical signals. The output signal corresponds to the amplification of the input signal with added noise.

Input Parameters

- amplification{1e6}
- noiseamp{ 1e-4 }

Methods

TIAmplifier()

TIAmplifier(vector<Signal *> &InputSig, vector<Signal *> &OutputSig) :Block(InputSig, OutputSig)

void initialize(void)

bool runBlock(void)

void setAmpplification(`t_real` Amplification)

void setNoiseAmpplitude(`t_real` NoiseAmplitude)

Functional description

The output signal is the product of the input signal with the parameter *amplification* plus a component that corresponds to the noise introduced by the amplification of the signal.

Input Signals

Number: 1

Type: Electrical (TimeContinuousAmplitudeContinuousReal)

Output Signals

Number: 1

Type: Electrical (TimeContinuousAmplitudeContinuousReal)

Examples

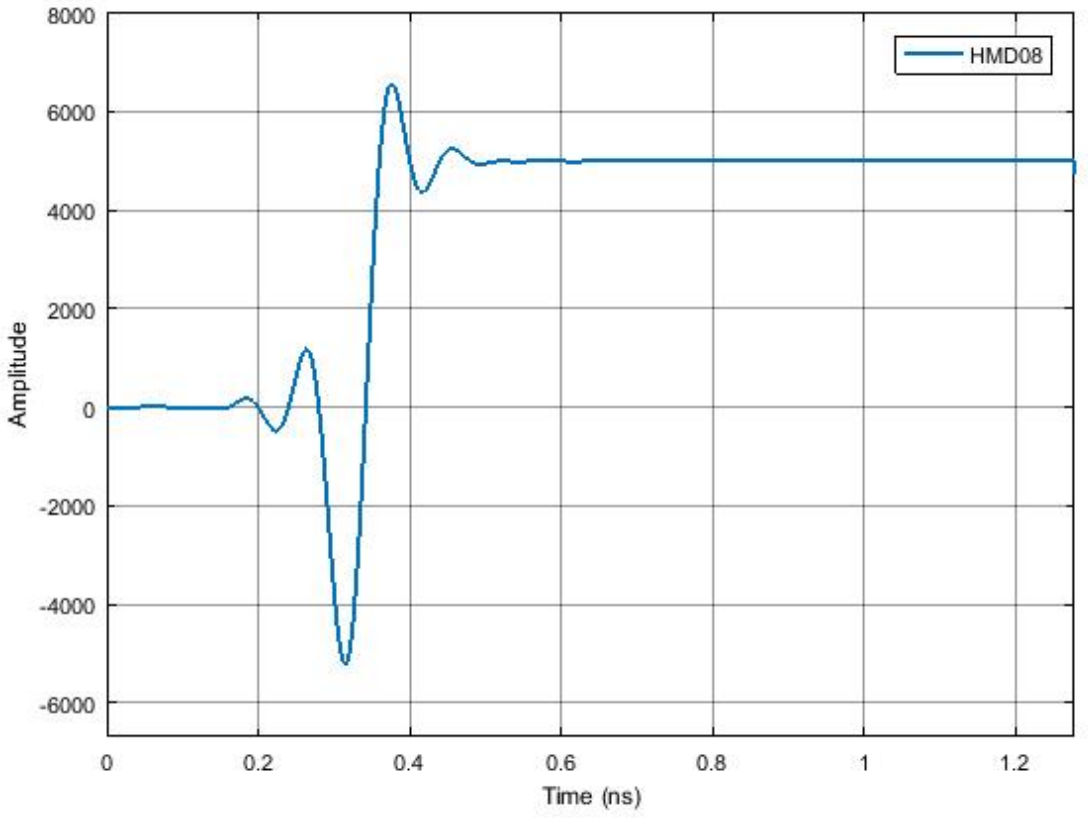

Figure 1: Example of the output signal of the amplifier block for a binary sequence 01. Note the scale of the y axis in comparison to the one in the output signal of the photodiode. The shape of the signal is the same as expected

Sugestions for future improvement