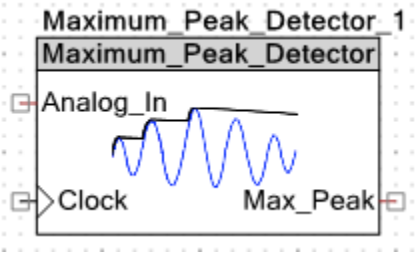
Maximum Peak Detector

1.1

General Description

- The peak detector component detects and holds the maximum peak in an input waveform.
- Details on this peak detection method are provided in AN60321.

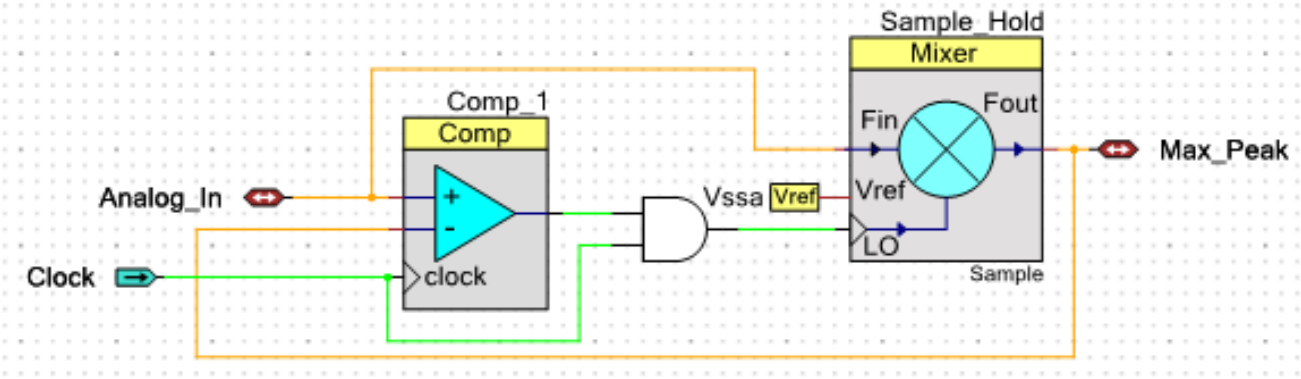


Quick Start

1. To add this component to a project, add a dependency in the project that points to the library project containing the peak detector components. The Maximum_Peak_Detector component will then be available in the Component Catalog under *Concept-> Peak Detection -> Maximum_Peak_Detector.*

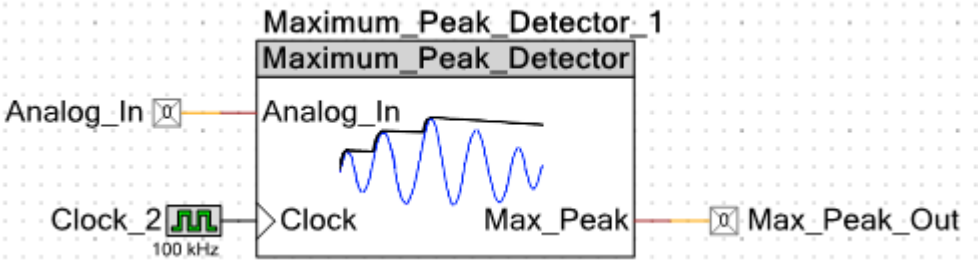
2. Drag a Maximum_Peak_Detector component from the Component Catalog onto the design.

Component Schematic



PRELIMINARY

Component Symbol



Input/Output Connections

Analog_In

Analog input signal that will be sampled for peaks.

Clock

Sample clock for the sample & hold component and comparator. The input signal will be checked for a new maximum at this clock rate.

Max_Peak

Analog output with a magnitude equal to the maximum peak found in the input waveform. Note this output is not held indefinitely.

Parameters and Setup

ClockRange

This is the clock range for the input to the sample & hold component. Set to ‘LO Freq less than 100 kHz’ if your Clock input is less than 100 kHz. Set to ‘LO Freq 100 kHz or greater’ if your Clock input is greater than 100 kHz. This parameter is used to determine the appropriate values for the input and feedback resistance of the sample and hold Op-Amp circuit.

Polarity

This sets the polarity of the peak detector, to enable either maximum peak detection or minimum peak (trough) detection.

Application Programming Interface

Function	Description
void Maximum_Peak_Detector_Start(void)	Starts the maximum peak detector component.
void Maximum_Peak_Detector_Stop(void)	Stops the maximum peak detector component.

Note: *If additional functionality is needed from either the sample & hold component or the comparator, the original API's for each component are available if they are called directly.*

Sample Code

This example will start the Maximum Peak Detector component.

```
void main()
{
    Maximum_Peak_Detector_1_Start();
}
```

Component Changes

This section lists the major changes in the component from the previous version.

Version	Description of Changes	Reason for Change
1.0	Initial release of component	
1.1	Internal Mixer component updated from v1.7 to v1.8	Updated to be compliant with PSoC Creator 2.0