

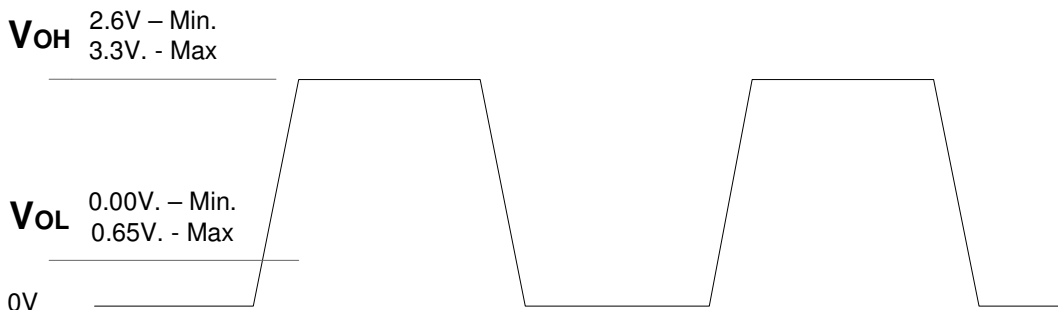


# ATTENTION

## ***SF800E External Reference Source Specifications***

The SF800E is designed to operate using an external 10 MHz *digital* clock source as its reference clock. The external clock should be attached to the BNC connector on the rear panel (labeled 10 MHz Clock). The SF800E will not operate without this external reference clock source. (For applications where an external clock source is not available, use the SF800 signal generator.)

For reliable operation, the 10 MHz external reference clock source must meet the following guidelines:



If you have any questions, please contact Signal Forge Technical Support at: [support@signalforge.com](mailto:support@signalforge.com) or 512.275.3733.

### **Converting an Analog Clock to a Digital Clock**

The Signal Forge 800E requires a digital clock input to operate. Either a direct digital source may be used or you may convert an analog source to digital as described below.

## Description

The following schematic describes a method of converting a non-digital frequency signal to the digital domain (a digital clock signal).

An analog signal (i.e. a sinewave) can be converted into a square wave with no jitter component by using a Schmitt trigger inverter – this guarantees that the SF800E clock input will be as monotonic and free of phase variance as possible.

## Considerations

- A recommended inverter is the SN74AHC1G14DCKR – any equivalent Schmitt Trigger device will also work.
- The voltage divider places the bias of the waveform at  $\sim 1.2V$  – depending on the voltage amplitude of the input.
- The input from the 10Mhz source must be AC coupled.
- The input from the 10Mhz source must be 2Vpp. Minimum and 3Vpp. Maximum.

