

Usage Precautions for SG-8002 Series and HG-8002 Series

Seiko Epson

The SG-8002 series and HG-8002 series products incorporate a PLL circuit and store frequency data in PROM, allowing short delivery times for desired output frequencies. However, when using these oscillators in circuits originally designed for conventional Seiko Epson oscillators, certain points have to be observed. For details, contact the Sales Division, Technical Group.

1. PLL cascade connection

The SG-8002 series and HG-8002 series products already incorporate a PLL circuit. If the oscillator output is connected to a PLL in a subsequent circuit (cascaded connection), jitter may increase and correct operation in the same way as with previous products may not be assured. Perform thorough tests and evaluation before final implementation.

2. PH/PT/PC

When using PH/PT/PC with the OE function, and with the output cut off during power-on (OE = L), the following limitations exist. (This does not apply when OE is H or Open.)

2.1 Single oscillator

After power-on, the output delay after the first OE = H may become the maximum oscillation start time. Subsequently, the output delay will be as specified in the spec sheet.

2.2 Multiple oscillators used in wired OR configuration to select a specific output frequency

When power-on occurs in the OE = L state, the OE function may not operate normally in some cases. When using a wired OR configuration and powering up in the OE = L state, always use the initialization routine listed below. This ensures that the oscillator operates normally.

Before activating the IC to which the oscillator output is supplied, apply a H pulse to the OE terminals of the oscillators in wired OR configuration. The specification of the pulse is shown below.

① Pulse specifications

[$V_{DD}=5.0 \pm 0.5V, GND=0.0V, T_a=-10-70^{\circ}C$]

Item	Symbol	Specification		Unit	Remarks
		Min.	Max.		
OE pulse width	t_{OE}	100	200	μs	
OE pulse interval	t_{int}	200	-	μs	2 or more oscillators connected in wired OR configuration

② Timing chart

