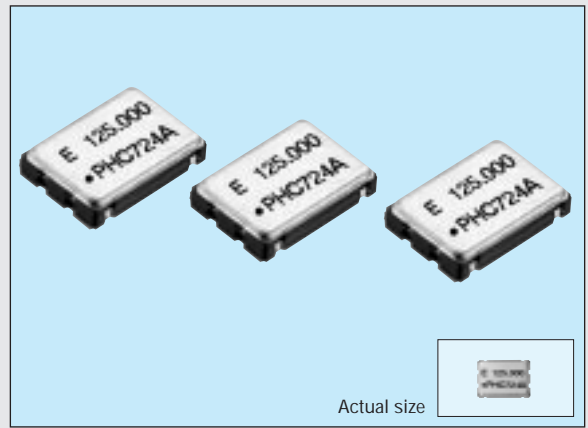


PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

# SG-8002CA series

- Wide frequency output by PLL technology.
- Quick delivery of samples and short lead time by mass production.
- Excellent shock resistance and environmental capability.
- Output enable function (OE) and stand-by function (ST) can be used for low current consumption applications.

8002 PROM Writer available to purchase.(Type:PRW-8000A3-M01)  
Please contact EPSON or local sales representative.



## Specifications (characteristics)

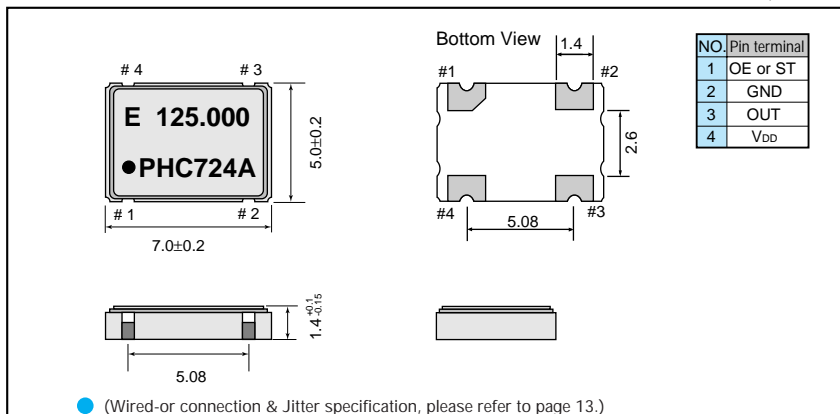
Item	Symbol	PT/ST	PH/SH	PC/SC	Remarks
		Specifications			
Output frequency range	$f_0$	1.0000 MHz to 125.0000 MHz			
Power source voltage	Max. supply voltage	$V_{DD-GND}$	-0.5V to +7.0V		
	Operating voltage	$V_{DD}$	5.0V±0.5V	3.3 ± 0.3V	3.0V ±0.3V: $f_0 \leq 66.7$ MHz(PC/SC)
Temperature range	Storage temperature	$T_{STG}$	-55°C to +125°C		
	Operating temperature	$T_{OPR}$	-20°C to +70°C (-40°C to +85°C)		Refer to page 6."Frequency range"
Soldering condition	$T_{SOL}$	Twice at under 260°C within 10 sec. or under 230°C within 3 min.			
Frequency stability	$\Delta f/f_0$	B: ±50ppm C: ± 100ppm M: ±100ppm(-40°C to +85°C)			-20°C to +70°C
Current consumption	$I_{OP}$	45mA max.		28mA max.	No load condition, Max. frequency range
Output disable current	$I_{OE}$	30mA max.		16mA max.	OE=GND
Standby current	$I_{ST}$	50µA max.			ST=GND
Duty	$t_w/t$	—	40% to 60%		C-MOS load: 1/2 $V_{DD}$ level
		40% to 60%	—		TTL load: 1.4V level
High output voltage	$V_{OH}$	$V_{DD} - 0.4V$ min.			$I_{OH} = -16$ mA(PT/ST,PH/SH), -8mA(PC/SC)
Low output voltage	$V_{OL}$	0.4V max.			$I_{OL} = 16$ mA(PT/ST,PH/SH), 8mA(PC/SC)
Output load condition (fan out)	TTL	N	5TTL max.		Max. frequency and max. operating voltage range
	C-MOS	CL	15pF max.	25pF max.	
Output enable/disable input voltage		$V_{IH}$	2.0V min.		$\overline{ST}$ , OE terminal
		$V_{IL}$	0.8V max.		
Output rise time	C-MOS level	$t_{TLH}$	4ns max.		C-MOS load: 20%→80% $V_{DD}$
	TTL level		4ns max.		TTL load: 0.4V→2.4V
Output fall time	C-MOS level	$t_{THL}$	4ns max.		C-MOS load: 80%→20% $V_{DD}$
	TTL level		4ns max.		TTL load: 2.4V→0.4V
Oscillation start up time	$t_{OSC}$	10ms max.		Time at minimum operating voltage to be 0 sec.	
Aging	$f_a$	±5ppm/year max.		$T_a = 25^\circ C$ , $V_{DD} = 5.0V/3.3V$ (PC/SC)	
Shock resistance	S.R.	±20ppm max.		Three drops on a hard board from 75 cm or excitation test with 3000G x 0.3ms x 1/2sine wave in 3 directions	

Note: • Please contact us for inquiries about operating temperature(-40°C to +85°C), usable frequencies, duty and output load conditions. Checking possible by the Frequency Checking Program.

<http://www.epson.co.jp/CRYSTAL/>

## External dimensions

(Unit: mm)



● (Wired-or connection & Jitter specification, please refer to page 13.)

## Recommended soldering pattern

(Unit: mm)

