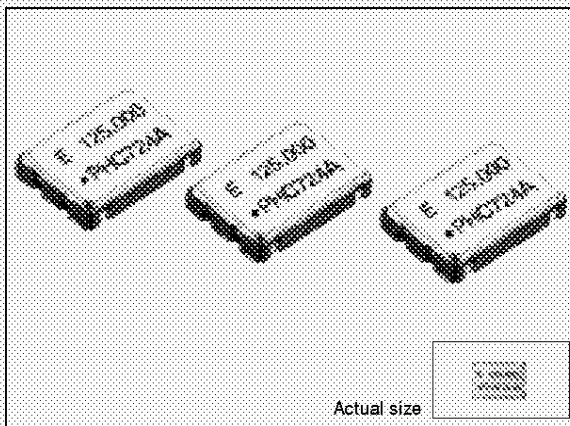


PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

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)

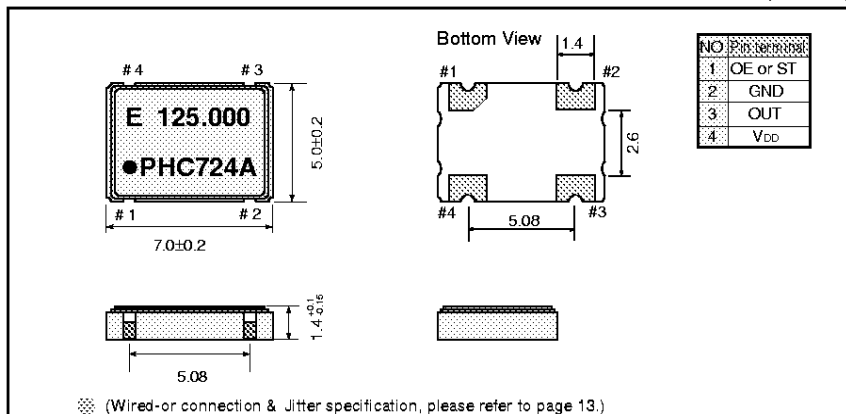
Item		Symbol	PT/ST	PH/SH	PC/SC	Remarks
Specifications						
Output frequency range		f _o	1.0000 MHz to 125.0000 MHz			
Power source voltage	Max. supply voltage	V _{DD} -GND	-0.5V to +7.0V			
	Operating voltage	V _{DD}	5.0V±0.5V		3.3 ± 0.3V	3.0V ±0.3V: f _o ≤ 66.7MHz(PC/SC)
Temperature range	Storage temperature	T _{STG}	-55°C to +125°C			
	Operating temperature	T _{OPR}	-20°C to +70°C (-40°C to +85°C)		-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		Δf/f _o	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: 1/2V _{DD} level
			40% to 60%	—		TTL load: 1.4V level
High output voltage		V _{OH}	V _{DD} -0.4V min.			I _{OH} =-16mA(PT/ST,PH/SH), -8mA(PC/SC)
Low output voltage		V _{OL}	0.4V max.			I _{OL} = 16mA(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.	15pF max.	
Output enable/disable input voltage		V _{IH}	2.0V min.		0.7 × V _{DD} min.	$\overline{ST}$, OE terminal
		V _{IL}	0.8V max.		0.2 × V _{DD} 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°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 ($-40^{\circ}C$ to $+85^{\circ}C$), 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)

