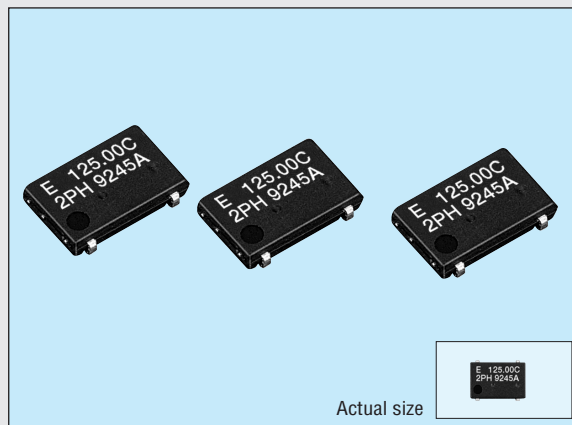


PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

SG-8002JF series

- Wide frequency output by PLL technology.
- Quick delivery of samples and short lead mass production time.
- 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.



Actual size

■ Specifications (characteristics)

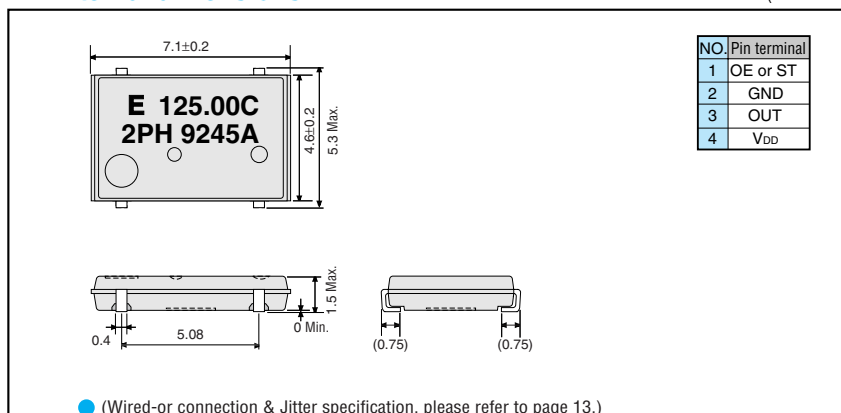
Item		Symbol	PT/ST	PH/SH	PC/SC	Remarks
			Specifications			
Output frequency range		f ₀	1.0000 MHz to 125.0000 MHz			
Power source voltage	Max. supply voltage	V _{DD} -GND	-0.5 V to +7.0 V			
	Operating voltage	V _{DD}	5.0 V±0.5 V		3.3 ± 0.3 V	3.0 V ±0.3 V: f ₀ ≤ 66.7 MHz(PC/SC)
Temperature range	Storage temperature	T _{STG}	-55 °C to +125 °C			
	Operating temperature	T _{OPR}	-20 °C to +70 °C (-40 °C to +85 °C)		-40 °C to +85 °C	Refer to page 4."Frequency range"
Soldering condition		T _{SOL}	Twice at under +260 °C within 10 s or under +230 °C within 3 min.			
Frequency stability		Δf/f ₀	B: ±50 x 10 ⁻⁶ C: ± 100 x 10 ⁻⁶ M: ±100 x 10 ⁻⁶			B,C: -20 °C to +70 °C, M: -40 °C to 85 °C
Current consumption		I _{OP}	45 mA Max.		28 mA Max.	No load condition, Max. frequency range
Output disable current		I _{OE}	30 mA Max.		16 mA Max.	OE=GND(PT,PH,PC)
Standby current		I _{ST}	50 μA Max.			ST=GND(ST,SH,SC)
Duty	t _w /t		—	40 % to 60 %		C-MOS load: 1/2V _{DD} level
			40 % to 60 %	—		TTL load: 1.4 V level
High output voltage		V _{OH}	V _{DD} -0.4 V Min.			I _{OH} =-16 mA(PT/ST,PH/SH), -8 mA(PC/SC)
Low output voltage		V _{OL}	0.4 V Max.			I _{OL} = 16 mA(PT/ST,PH/SH), 8 mA(PC/SC)
Output load condition (fan out)	TTL	N	5 TTL Max.	—		Max. frequency and Max. operating voltage range
	C-MOS	C _L	15 pF Max.			
Output enable/disable input voltage		V _{IH}	2.0 V Min.		0.7 x V _{DD} Min.	ST̄, OE terminal
		V _{IL}	0.8 V Max.		0.2 x V _{DD} Max.	
Output rise time	C-MOS level	t _{RLH}	—	4 ns Max.		C-MOS load: 20 %→80 % V _{DD}
	TTL level		4 ns Max.	—		TTL load: 0.4 V→2.4 V
Output fall time	C-MOS level	t _{THL}	—	4 ns Max.		C-MOS load: 80 %→20 % V _{DD}
	TTL level		4 ns Max.	—		TTL load: 2.4 V→0.4 V
Oscillation start up time		t _{OSC}	10 ms Max.			Time at minimum operating voltage to be 0 s
Aging		f _a	±5 x 10 ⁻⁶ /year Max.			T _a = +25 °C, V _{DD} = 5.0 V/3.3 V(PC/SC)
Shock resistance		S.R.	±20 x 10 ⁻⁶ Max.			Three drops on a hard board from 750 mm or excitation test with 29400 m/s ² x 0.3 ms 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)



■ Recommended soldering pattern

(Unit: mm)

