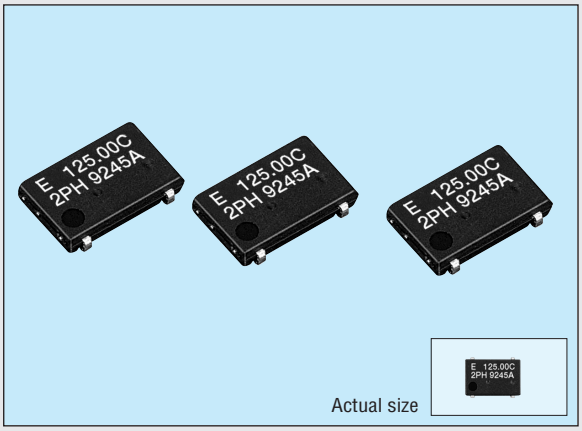
PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

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.



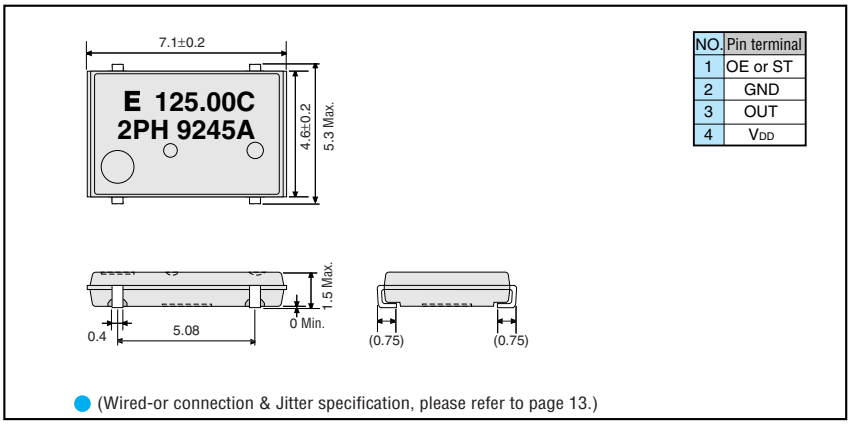
Specifications (characteristics)

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: $f_0 \leq$ 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)		-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		$\Delta f/f_0$	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		Iop	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.	$\overline{ST}$, OE terminal
		V_{IL}	0.8 V Max.		0.2 x V_{DD} Max.	
Output rise time	C-MOS level	t_{TLH}	—	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		fa		±5 x 10^{-6}/year Max.		Ta= +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/s² 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)



NO.	Pin terminal
1	OE or ST
2	GND
3	OUT
4	V_{DD}

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

Recommended soldering pattern

(Unit: mm)