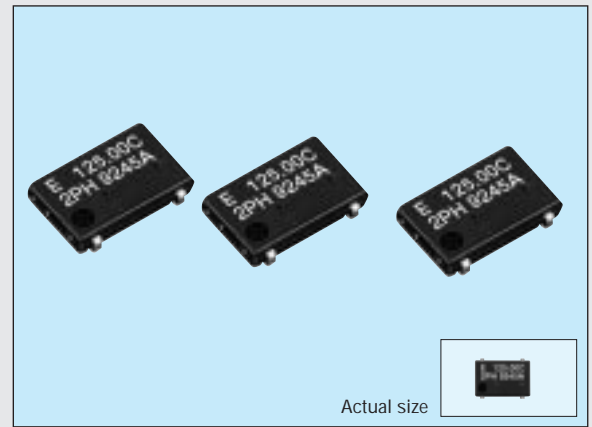


PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

SG-8002JF series

Product number (please refer to page 1)
Q3308JFxxxxxx00

- Wide frequency output by PLL technology.
- Quick delivery of samples and short lead mass production time.
- Excellent environmental capability.
- Output enable function (OE) and stand-by function (ST) can be used for low current consumption applications.
- Pin compatible with ceramic package crystal oscillator (7 x 5)
 8002 PROM Writer available to purchase.(Type:PRW-8000A3-M01)
 Please contact EPSON or local sales representative.



Specifications (characteristics)

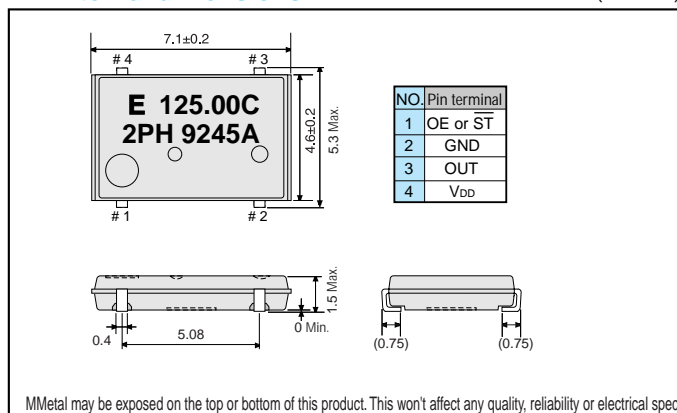
Item	Symbol	PT/ST	PH/SH	PC/SC	Remarks
		Specifications *			
Output frequency range	f _o		1.0000 MHz to 125.0000 MHz		Refer to page 28. "Frequency range".
Power source voltage	Max. supply voltage	V _{DD-GND}	-0.5 V to +7.0 V		Stored as bare product after unpacking
	Operating voltage	V _{DD}	5.0 V ± 0.5 V	3.3 ± 0.3 V	
Temperature range	Storage temperature	T _{STG}	-55 °C to +125 °C		Stored as bare product after unpacking
	Operating temperature	T _{OPR}	-20 °C to +70 °C (-40 °C to +85 °C)	-40 °C to +85 °C	Refer to page 28. "Frequency range"
Frequency stability	Δf/f _o		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 %		CMOS load: 1/2V _{DD} level TTL load: 1.4 V level
		40 % to 60 %	—		
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
	CMOS	CL	15 pF Max.		
Output enable/disable input voltage	V _{IH}		2.0 V Min.	0.7 x V _{DD} Min.	ST, OE terminal
	V _{IL}		0.8 V Max.	0.2 x V _{DD} Max.	
Output rise time	CMOS level	t _{TLH}	—	4 ns Max.	CMOS load: 20 % → 80 % V _{DD}
	TTL level		4 ns Max.	—	TTL load: 0.4 V → 2.4 V
Output fall time	CMOS level	t _{THL}	—	4 ns Max.	CMOS 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), the available frequency, duty and output load conditions.
 Checking possible by the Frequency Checking Program. <http://www.epsondevice.com>

*PLL - PLL connection & Jitter specification, please refer to page 46.

External dimensions

(Unit: mm)



Recommended soldering pattern

(Unit: mm)

