

PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

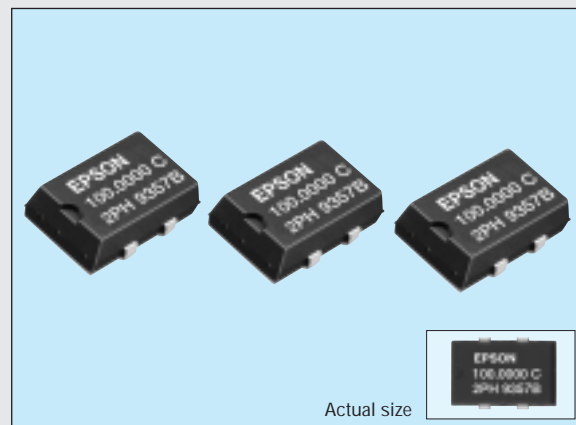
SG-8002JA series

Product number (please refer to page 1)

Q3306JAx xxx xx x00

- 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.
- Package and pin compatible with SG-615.

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		Refer to page 28. "Frequency range"
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		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 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 %		CMOS load: 1/2 V _{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
	CMOS	C _L	15 pF Max.	25 pF Max. 15 pF Max.	
Output enable/disable input voltage	V _{IH}		2.0 V Min.		ST, OE terminal
	V _{IL}		0.8 V Max. 0.7 x V _{DD} Min. 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

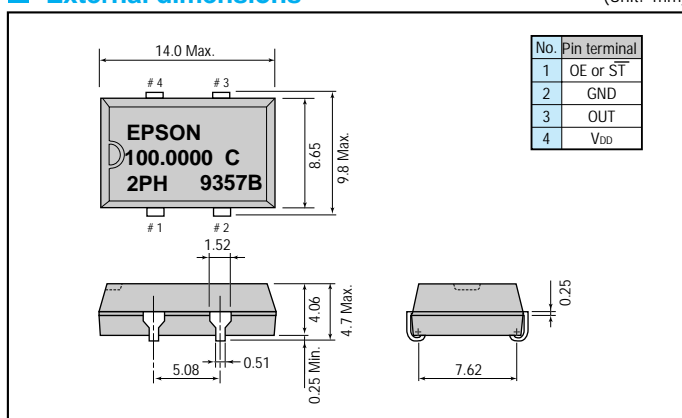
Note: • Please contact us for inquiries about operating temperature(-40 °C to +85 °C), the available frequency, duty and output load conditions.
Checking possible by the Frequency Checking Program.

<http://www.epsondevice.com>

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

External dimensions

(Unit: mm)



Recommended soldering pattern

(Unit: mm)

