

PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

SG - 8002JC / JA series

Product number (please contact us)

SG-8002JC : Q3307JCx1xxxx00

SG-8002JA : Q3306JAx1xxxx00

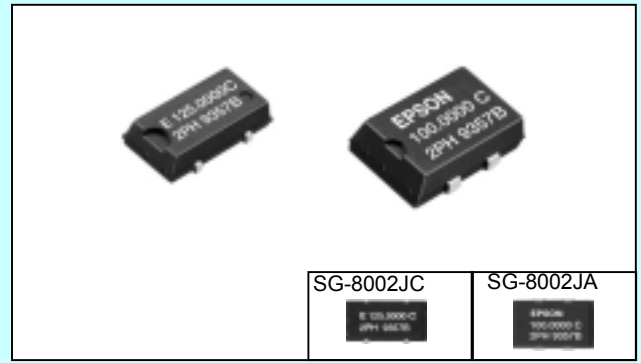
- Frequency range : 1 MHz to 125 MHz
- Operating voltage : 3.3 V or 5.0 V
- Function : Output enable(OE) or Standby(/ST)
- Thickness : 2.7 mm Max.(SG-8002JC)

4.7 mm Max.(SG-8002JA)

Package and pin compatible with SG-636 (SG-8002JC)

Package and pin compatible with SG-615 (SG-8002JA)

- Lead(Pb)-free : Complies with EU RoHS directive
- Short lead mass production time by PLL technology.



Actual size

■ Specifications (characteristics)

Item	Symbol	Specifications *2			Remarks
		PT / ST	PH / SH	PC / SC	
Output frequency range	fo	1 MHz to 125 MHz			VDD=4.5 V to 5.5 V
		—			VDD=3.0 V to 3.6 V
		—			VDD=2.7 V to 3.6 V
Operating voltage	VDD	4.5 V to 5.5 V			2.7 V to 3.6 V
Temperature range	Storage temperature	-55 °C to +125 °C (JC: -55 °C to +100 °C)			Stored as bare product after unpacking
	Operating temperature	TOPR	-20 °C to +70 °C (-40 °C to +85 °C)	-40 °C to +85 °C	Refer to Application guide. "Frequency range" SG-8002JC: -20 °C to +70 °C Only
Frequency stability	Δf/fo	B: ±50 × 10 ⁻⁶ , C: ±100 × 10 ⁻⁶ M: ±100 × 10 ⁻⁶			B, C: -20 °C to +70 °C M: -40 °C to +85 °C
Current consumption	IOP	45 mA Max.			No load condition, Max. frequency
Output disable current	IOE	30 mA Max.			OE=GND(PT,PH,PC)
Standby current	IST	50 μA Max.			/ST=GND(ST,SH,SC)
Duty *1	tw/τ	40% to 60%			CMOS load: 50 % VDD, Max. load condition
		—			TTL load: 1.4V, Max. load condition
High output voltage	VOH	VDD-0.4 V Min.			IOH=-16 mA(PT,ST,PH,SH), -8 mA(PC,SC)
Low output voltage	VOL	0.4 V Max.			IOL=16 mA(PT,ST,PH,SH), 8 mA(PC,SC)
Output loadcondition (TTL) *1	N	5TTL Max.			Max. frequency and
Output loadcondition (CMOS) *1	CL	15pF Max.			Max. operating voltage
Output enable / disable input voltage	VIH	2.0 V Min.			/ST, OE terminal
	VIL	0.8 V Max.			/ST, OE terminal
Output rise fall time *1	tr / τf	3 ns Max.			CMOS load: 20 % VDD to 80 % VDD level
		4 ns Max.			TTL load: 0.4 V to 2.4 V level
Oscillation start up time	tosc	10 ms Max.			Time at minimum operating voltage to be 0 s
Aging	fa	±5 × 10 ⁻⁶ / year Max.			Ta=+25 °C, VDD=5.0 V / 3.3 V (PC,SC) First year

*1 Operating temperature (-40 °C to +85 °C), the available frequency, duty and output load conditions, please refer to Page 40.

*2 PLL-PLL connection & Jitter specification, please refer to Page 41.
Checking possible by the Frequency Checking Program.<http://www.epsondevice.com/domcfg.nsf>

■ External dimensions

(Unit:mm)

■ Recommended soldering pattern (Unit:mm)

