PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

SG-8002JC / JA series

Product number (please contact us)

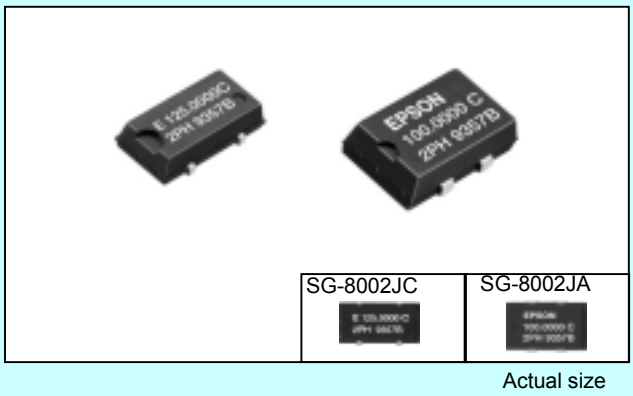
SG-8002JC : Q3307JCx1xxxx00

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)

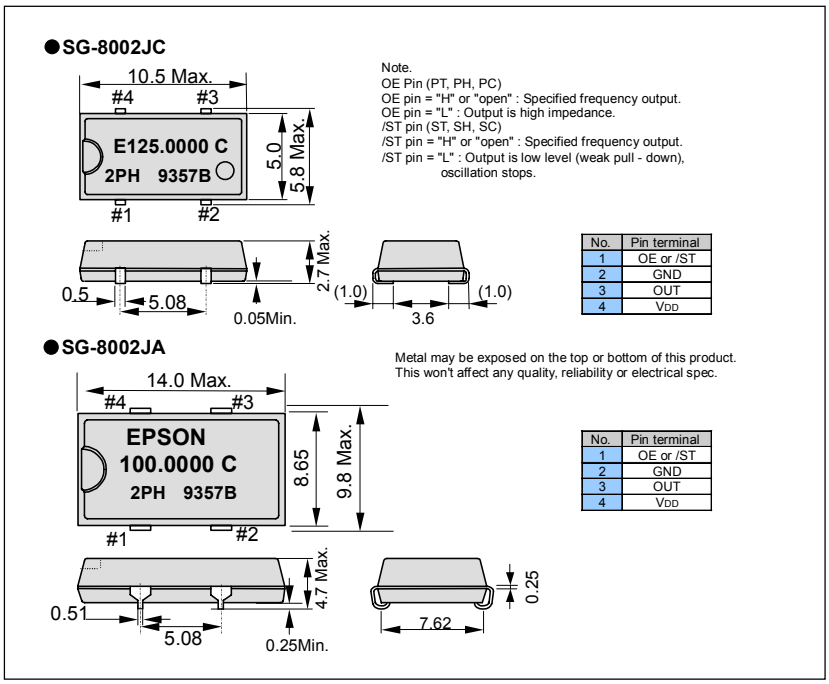
Item		Symbol	Specifications *2			Remarks
			PT / ST	PH / SH	PC / SC	
Output frequency range		f_0	1 MHz to 125 MHz		—	V_{DD}=4.5 V to 5.5 V
			—		1 MHz to 125 MHz	V_{DD}=3.0 V to 3.6 V
			—		1 MHz to 66.7 MHz	V_{DD}=2.7 V to 3.6 V
Operating voltage		V_{DD}	4.5 V to 5.5 V		2.7 V to 3.6 V	
Temperature range	Storage temperature	T_{STG}	-55 °C to +125 °C (JC:-55 °C to +100 °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 Application guide. "Frequency range" SG-8002JC:-20 °C to +70 °C Only
Frequency stability		$\Delta f/f_0$	B: ±50 × 10^{-6} ,C: ±100 × 10^{-6}			B,C:-20 °C to +70 °C
			M: ±100×10^{-6}			M:-40 °C to +85 °C
Current consumption		I_{OP}	45 mA Max.		28 mA Max.	No load condition, Max. frequency
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 *1		tw/t	—	40 % to 60 %		CMOS load:50 % V_{DD}, Max. load condition
			40% to 60%	—		TTL load: 1.4V, Max. load condition
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 loadcondition (TTL) *1		N	5TTL Max.	—		Max. frequency and Max. operating voltage
Output loadcondition (CMOS) *1		C_L	15pF Max.			
Output enable / disable input voltage		V_{IH}	2.0 V Min.		70 % V_{DD} Min.	/ST, OE terminal
		V_{IL}	0.8 V Max.		20 % V_{DD} Max.	/ST, OE terminal
Output rise fall time *1		t_R / t_F	—	3 ns Max.		CMOS load: 20 % V_{DD} to 80 % V_{DD} level
			4 ns Max.	—		TTL load: 0.4 V to 2.4 V level
Oscillation start up time		t_{OSC}	10 ms Max.			Time at minimum operating voltage to be 0 s
Aging		fa	±5 × 10^{-6} / year Max.			T_a=+25 °C,V_{DD}=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)