

PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

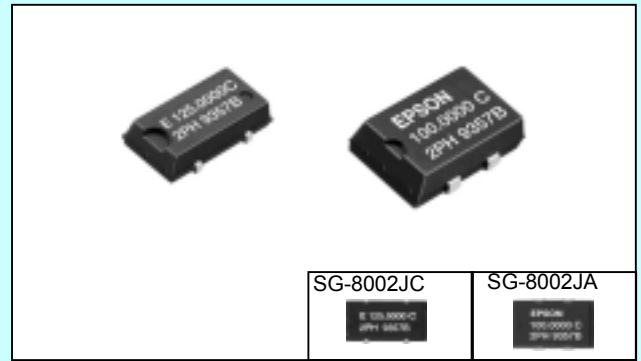
SG - 8002JC / JA series

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 _o	1 MHz to 125 MHz			V _{DD} =4.5 V to 5.5 V V _{DD} =3.0 V to 3.6 V V _{DD} =2.7 V to 3.6 V
Operating voltage	V _{DD}	4.5 V to 5.5 V			
Temperature range	Storage temperature	-55 °C to +125 °C (JC: -55 °C to +100 °C)			Stored as bare product after unpacking
	Operating temperature	-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/f _o	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	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	CL	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	f _a	±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)

