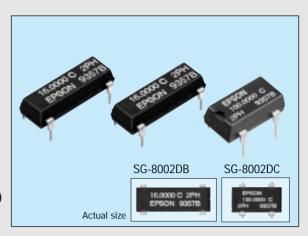
### PROGRAMMABLE HIGH FREQUENCY CRYSTAL OSCILLATOR

- Wide frequency output by PLL technology.
- · Quick delivery of samples and short lead mass production time.
- · Excellent shock resistance and environmental capability.
- Output enable function (OE) and stand-by function (ST) can be used for low current consumption applications.
- Pin compatible with full size and half size.

8002 PROM Writer available to purchase.(Type:PRW-8000A3-M01) Please contact EPSON or local sales representative.

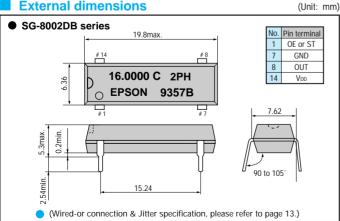


#### **Specifications (characteristics)**

Item		Symbol	PT/ST	PH/SH	PC/SC	Remarks	
		Syllibol	Specifications			T.G.Marite	
Output frequency range		fo		1.0000 MHz to 125.0000 MHz			
Power source voltage	Max. supply voltage	VDD-GND		-0.5V to +7.0V			
	Operating voltage	V <sub>DD</sub>	5.0V±0.5V		3.3 ± 0.3V	$3.0V \pm 0.3V$ : $f_0 \le 66.7MHz(PC/SC)$	
Temperature range	Storage temperature	Tstg		-55°C to +125°C			
	Operating temperature	Topr	-20°C to +70°C (-40	,	-40°C to +85°C	Refer to page 4."Frequency range"	
Soldering condition		TsoL	Twice at under 260°C within 10 sec. or under 230°C within 3 min.				
Frequency stability		∆f/fo	B: ±50ppm C: ± 100ppm M: ±100ppm(-40°C to +85°C)		-20°C to +70°C		
Current consumption		lop	45mA max.		28mA max.	No load condition, Max. frequency range	
Output disable current		loe	30mA max.		16mA max.	OE=GND(PT, PH, PC)	
Standby current		Ist		50μA max.		ST=GND(ST, SH, SC)	
Duty		tw/t	— 40% to 60%		to 60%	C-MOS load: 1/2V <sub>DD</sub> level	
			40% to 60%		_	TTL load: 1.4V level	
High output voltage		Vон		V <sub>DD</sub> -0.4V min.		Ioн=-16mA(PT/ST, PH/SH),-8mA(PC/SC)	
Low output voltage		VoL		0.4V max.		IoL= 16mA(PT/ST, PH/SH), 8mA(PC/SC)	
Output load condition (fan out)	TTL	N	5TTL max.		_	Max. frequency and max. operating voltage range	
	C-MOS	CL	15pF max.	25pF max.	15pF max.		
Output enable/disable input voltage		VIH	2.0V r		$0.7 \times V_{DD}$ min.	ST. OE terminal	
		VIL	0.8V n	nax. 0.2 × V <sub>DD</sub> max.		31, OL terrilliai	
Output rise time	C-MOS level	tтьн	_	4ns max.		C-MOS load: 20%→80% V <sub>DD</sub>	
	TTL level	ULH	4ns max.	<del>-</del>		TTL load: 0.4V→2.4V	
Output fall time	C-MOS level	<b>+</b>	_	4ns max.		C-MOS load: 80%→20% V <sub>DD</sub>	
	TTL level	t <sub>THL</sub>	4ns max.	-	_	TTL load: 2.4V→0.4V	
Oscillation start up time		tosc		10ms max.		Time at minimum operating voltage to be 0 sec.	
Aging		fa		±5ppm/year max.		Ta= 25°C, V <sub>DD</sub> = 5.0V/3.3V(PC/SC)	
Shock resistance		S.R.		±20ppm max.		Three drops on a hard board from 75 cm or excitation test with 3000G x 0.3ms x 1/2sine wave in 3 directions	

• Please contact us for inquiries about operating temperature(-40°C to +85°C), usable frequencies, duty and output load conditions. Note: Checking possible by the Frequency Checking Program. http://www.epson.co.jp/CRYSTAL/

#### **External dimensions**



 SG-8002DC series No. Pin terminal 13.7max OE or ST 4 GND OUT **EPSON**  $V_{DD}$ 100.0000 C 2PH 9357B (Wired-or connection & Jitter specification, please refer to page 13.)

(Unit: mm)

## THE CRYSTALMASTER



# ENERGY SAVING EPSON

EPSON offers effective savings to its customers through a wide range of electronic devices, such as semiconductors, liquid crystal display (LCD) modules, and crystal devices. These savings are achieved through a sophisticated melding of three different efficiency technologies.

Power saving technology provides low power consumption at low voltages.

Space saving technology provides further reductions in product size and weight through super-precise processing and high-density assembly technology.

Time saving technology shortens the time required for design and development on the customer side and shortens delivery times.



Our concept of Energy Saving technology conserves resources by blending the essence of these three efficiency technologies. The essence of these technologies is represented in each of the products that we provide to our customers.

In the industrial sector, leading priorities include measures to counter the greenhouse effect by reducing CO2,

measures to preserve the global environ-

ment, and the development of energyefficient products. Environmental
problems are of global concern, and
although the contribution of energysaving technology developed by
EPSON may appear insignificant,
we seek to contribute to the develop-

ment of energy-saving products by our customers through the utilization of our electronic devices.

EPSON is committed to the conservation of energy, both for the sake of people and of the planet on which we live.





Resource

Saving



SEIKO EPSON CORP. QUARTZ DEVICE DIVISION acquired ISO9001 and ISO14001 certification by B.V.Q.I. (Bureau Veritas Quality International).

ISO9001 in October, 1992. ISO14001 in November,1997.

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