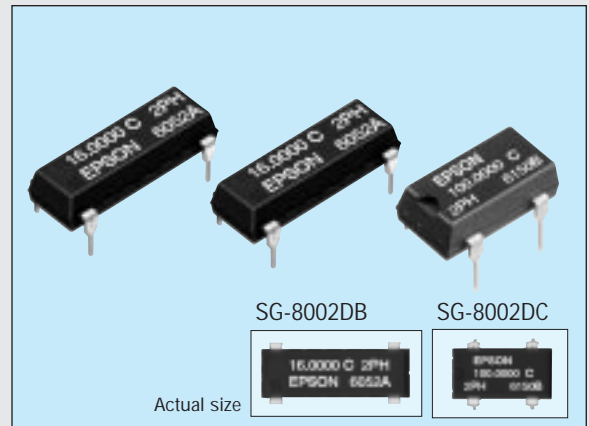


PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

SG-8002DB/ DC series

- Wide frequency output by PLL technology.
- Quick delivery of samples and short lead time by mass production.
- 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.



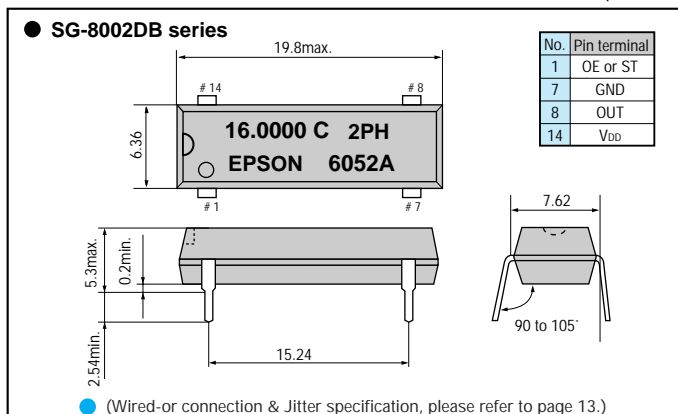
Specifications (characteristics)

Item	Symbol	PT/ST	PH/SH	PC/SC	Remarks
		Specifications			
Output frequency range	f_0		1.0000 MHz to 125.0000 MHz		
Power source voltage	Max. supply voltage	V_{DD-GND}	-0.5V to +7.0V		
	Operating voltage	V_{DD}	5.0V±0.5V	3.3 ± 0.3V	3.0V ±0.3V: $f_0 \leq 66.7$ MHz(PC/SC)
Temperature range	Storage temperature	T_{STG}	-55°C to +125°C		
	Operating temperature	T_{OPR}	-20°C to +70°C (-40°C to +85°C)	-40°C to +85°C	Refer to page 6. "Frequency range"
Soldering condition	T_{SOL}	Twice at under 260°C within 10 sec. or under 230°C within 3 min.			
Frequency stability	$\Delta f/f_0$	B: ±50ppm C: ±100ppm M: ±100ppm (-40°C to +85°C)			-20°C to +70°C
Current consumption	I_{OP}	45mA max.		28mA max.	No load condition, Max. frequency range
Output disable current	I_{OE}	30mA max.		16mA max.	OE=GND(PT, PH, PC)
Standby current	I_{ST}	50µA max.			ST=GND(ST, SH, SC)
Duty	$t_{w/t}$	—		40% to 60%	C-MOS load: 1/2 V_{DD} level
		40% to 60%		—	TTL load: 1.4V level
High output voltage	V_{OH}	—		$V_{DD} - 0.4V$ min.	$I_{OH} = -16mA$ (PT/ST, PH/SH), $-8mA$ (PC/SC)
Low output voltage	V_{OL}	—		0.4V max.	$I_{OL} = 16mA$ (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	C_L	15pF max.	25pF max.	
Output enable/disable input voltage		V_{IH}	2.0V min.		\overline{ST} , OE terminal
		V_{IL}	0.8V max.		
Output rise time	C-MOS level	t_{TLH}	—		C-MOS load: 20%→80% V_{DD}
	TTL level		4ns max.		
Output fall time	C-MOS level	t_{THL}	—		C-MOS load: 80%→20% V_{DD}
	TTL level		4ns max.		
Oscillation start up time	t_{OSC}	—		10ms max.	Time at minimum operating voltage to be 0 sec.
Aging	f_a	—		±5ppm/Year max.	$T_a = 25^\circ C$, $V_{DD} = 5.0V/3.3V$ (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

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

External dimensions

(Unit: mm)



(Unit: mm)

