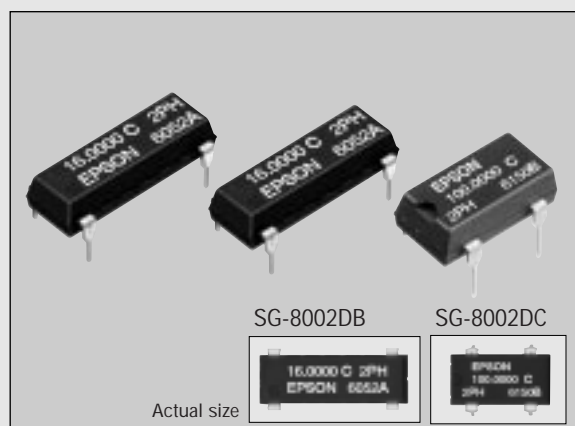


PROGRAMMABLE HIGH-FREQUENCY CRYSTAL OSCILLATOR

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.

Programming tool available.(Type:PRW-8000A3-M01)



Specifications (characteristics)

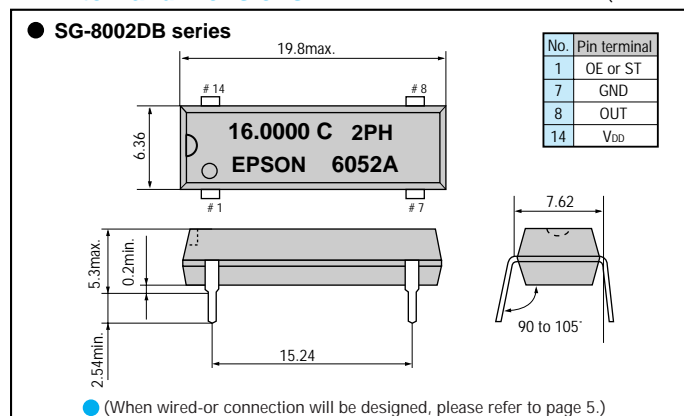
Item	Symbol	PT/ST	PH/SH	PC/SC	Remarks
		Specifications			
Output frequency range	f_0	1.0000 MHz to 125.0000 MHz		1.0000 MHz to 106.2500 MHz	
Power source voltage	Max. supply voltage	V_{DD-GND}	-0.5V to +7.0V		
	Operating voltage	V_{DD}	5.0V±0.5V	3.3 ± 0.3V	3.0V ±0.3V; $f_0 \leq 66.7$ MHz(PC/SC)
Temperature 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}	Under 260°C within 10 sec.			
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.			$I_{OH} = -16$ mA(PT/ST, PH/SH), -8mA(PC/SC)
Low output voltage	V_{OL}	0.4V max.			$I_{OL} = 16$ mA(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.	
Output enable/disable input voltage	V_{IH}	2.0V min.		$0.7 \times V_{DD}$ min.	\overline{ST} , OE terminal
	V_{IL}	0.8V max.		$0.2 \times V_{DD}$ max.	
Output rise time	C-MOS level	t_{rLH}	—		C-MOS load: 20%→80% V_{DD}
	TTL level	t_{rLH}	4ns max.	—	TTL load: 0.4V→2.4V
Output fall time	C-MOS level	t_{fHL}	—		C-MOS load: 80%→20% V_{DD}
	TTL level	t_{fHL}	4ns max.	—	TTL load: 2.4V→0.4V
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)

