

Programmable Clock Oscillator

SG - 8002DB,DC series (-20 to +70 °C)

- Using PLL technology and One Time PROM programmability for quick-turn custom version.
- Package compatible with SG-51(DB type) & SG-531(DC type).
- Operable 5.0 V and Out put frequencies from 1.0 MHz to 125 MHz.
- Output enable (OE : P type) or Standby (ST : S type) function allow more low current consumption.

Specifications

1. Absolute Maximum Ratings

Item	Symbol	PH / SH	PT / ST	Remarks
Storage Temperature	T _{STG}	- 55 to +125 °C		Stored as bare product after unpacking
Maximum supply voltage	V _{DD}	- 0.5 to 7.0 V		
Maximum input voltage	V _{IN}	- 0.5 to V _{DD} +0.5 V		
Soldering condition	T _{SOL}	Twice at under +260 °C within 10s		

2. Operating Conditions

Item	Symbol	PH / SH	PT / ST	Remarks
Operating Temperature	T _{OPR}	- 20 to +70 °C		
Operating voltage	V _{DD}	4.5 to 5.5 V		
Input voltage	V _{IN}	GND to V _{DD}		
Output load condition	CL	25 pF		(≤ 125 MHz)
		50 pF		(≤ 66.7 MHz)
			5TTL+15 pF 25 pF	(≤ 125 MHz) (≤ 66.7 MHz)

3. Frequency Characteristics

Item	Symbol	PH / SH	PT / ST	Remarks
Output frequency range*	f ₀	1.0 to 125MHz		
Frequency stability	f / f ₀	B : +/- 50 × 10 ⁻⁶ C : +/- 100 × 10 ⁻⁶		- 20 to +70 °C - 20 to +70 °C
Aging	f _a	+/- 5 × 10 ⁻⁶ Max.		

*Note :

Concerning frequency, please contact us to check the possibility in advance.
Because SG-8000 series has unavailable frequency.

4. Characteristics

Item		Symbol	PH / SH	PT / ST	Remarks
Current consumption		IOP	45 mA Max.		
Disable current		IOE	30 mA Max.		P type only
Standby current		IST	50 μ A Max.		S type only
OE or ST input voltage		V _{IH}	2.0 V		
		V _{IL}	0.8 V		
OE or ST input current		I _{IH}	5.0 μ A Max.		OE or ST = V _{DD}
		I _{IL}	10.0 μ A Max.		OE or ST = GND
Duty		tw / t	45 to 55%		50 % V _{DD} , C _L =25 pF ($\leq$ 66.7 MHz)
			40 to 60%		50 % V _{DD} , C _L =25 pF ($\leq$ 125 MHz)
			40 to 60%		50 % V _{DD} , C _L =50 pF ($\leq$ 66.7 MHz)
				45 to 55%	1.4 V, 5 TTL+15 pF ($\leq$ 66.7 MHz)
				40 to 60%	1.4 V, 5 TTL+15 pF ($\leq$ 125 MHz)
				40 to 60%	1.4 V, C _L =25 pF ($\leq$ 66.7 MHz)
Output voltage	C-MOS TTL	V _{OH}	V _{DD} -0.4		I _{OH} =-16 mA
		V _{OL}	0.4 V		I _{OL} =16 mA
Output rise time	C-MOS	tr	4.0 ns		20 % to 80 % V _{DD} C _L =Max.
	TTL			2.0 ns 4.0 ns	0.8 V to 2.0 V C _L =Max. 0.4 V to 2.4 V C _L =Max.
Output fall time	C-MOS	tr	4.0 ns		80 % to 20 % V _{DD} C _L =Max.
	TTL			2.0 ns 4.0 ns	2.0 V to 0.8 V C _L =Max. 2.4 V to 0.4 V C _L =Max.
Oscillation start up time		tosc	10 ms Max.		

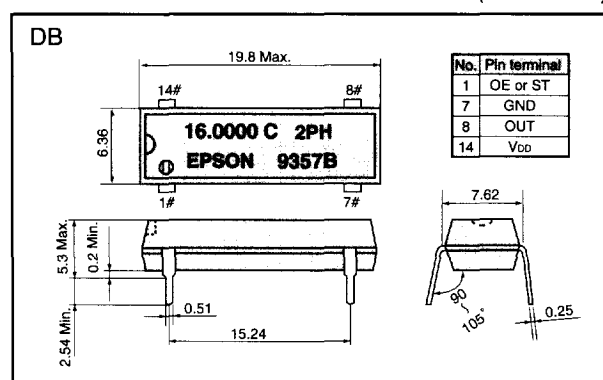
** Note :

Output wave form is not compatible with C-MOS level and TTL level.

Programmable wave form only for C-MOS level or TTL level.

5. External Dimensions

(Unit : mm)



(Unit : mm)

