



## DIP QUARTZ CRYSTAL OSCILLATOR

### 4 Pin Version 13.08×13.08 mm



- ±20 ppm type available
- Excellent Reliability Performance



RoHS compliant

### ★ PARAMETERS

PARAMETERS	SPECIFICATION		
Frequency Range	0.4~200MHz		
Supply voltage	1.8V、3.3V、5.0V		
Input Current		TTL	CMOS
	0.5MHz ~ 24.999MHz	25mA max	20mA max
	25MHz ~ 99.999MHz	40mA max	40mA max
	100MHz ~ 200MHz	60mA max	60mA max
Frequency Stability Overall	±20ppm~±100ppm		
Operating Temp. Range	-10~+60°C to -40~+85°C		
Storage Temp. Range	-55~+125°C		
Output Load	CMOS or TTL (15pF/1-10TTL)		
Symmetry	45% ~ 55% typ. (40% ~ 60% max.) at 0.5×Vdc		
Start-up time	10mS max		
Rise & Fall Time	10nS max		
Aging	±5ppm max/Year		

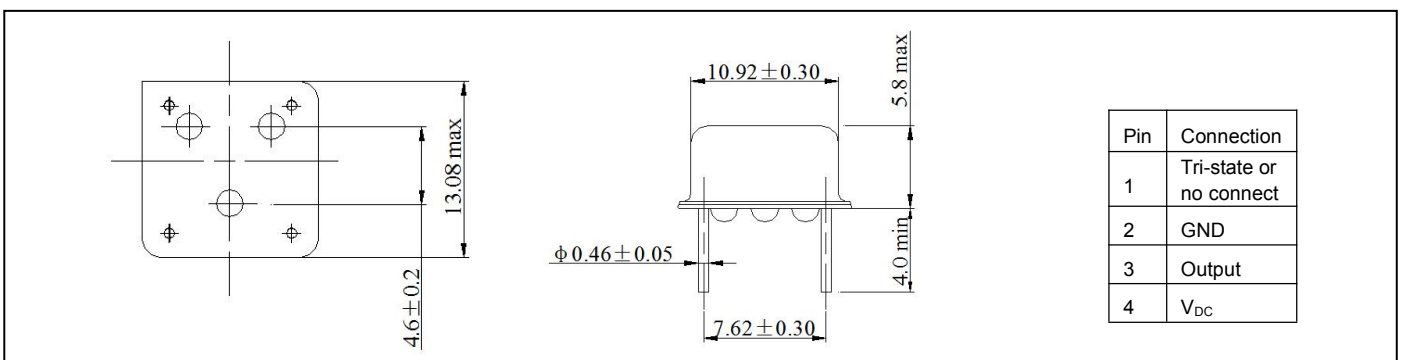
⊙ All specification subject change without notice

### ★ FREQUENCY STABILITY VS. TEMPERATURE

Operation Temperature Range	Frequency Stability			
	±20ppm	±25ppm	±30ppm	±50ppm
-10°C~+60°C	○	●	○	○
-20°C~+70°C	○	○	●	○
-40°C~+85°C				●

● standard ○ available

### ★ DIMENSIONS & LAND PATTERN LAYOUT (Unit: mm)





★ **PART NUMBER GUIDE** e.g. HXO12.000M3.3H-50D (\*H=Half Size, DIP8)

Logo	Quartz Crystal Oscillator	Frequency Hz	Supply voltage V	Package	Frequency Stability ppm	Operating Temp. Range
H	XO	12.000M	3.3	H	50	D

Definition	Description
Operating Temperature Range	<b>A:</b> -10~+60°C
	<b>B:</b> -20~+70°C
	<b>C:</b> -30~+80°C
	<b>D:</b> -40~+85°C
	<b>E:</b> Customer specified

★ **WAVE SOLDERING PROFILE**

