

XO53



Description:

- Optional ED Control Function
- TTL/HCMOS Compatibility
- Small Volume
- Dribbling Packaging
- Green Product
- Industrial Control
- Communications Network
- Automotive Electronics
- Instruments and Apparatus
- Military Equipment

Performance Characteristics

Parameter		Condition	XO53			
Frequency Range	F ₀		32.768KHz~125.000MHz			
Frequency Tolerance	F _{tol}	AT 25°C	≤±25 ppm			
Temperature Range	T _{OPR}		See Table Below			
Supply Voltage(V)	V _{DD}	+/-10%	+5.0	+3.3	+2.5	+1.8
Supply Current(mA)	I _{DD}	32.768K	-	2 Max	2 Max	1 Max
		1M≤F ₀ <40M	25 Max	15 Max	10 Max	10 Max
		40M≤F ₀ <70M	40 Max	20 Max	15 Max	15 Max
		70M≤F ₀ ≤200M	50 Max	30 Max	20 Max	—
Stand-by Consumption	E/D=GND	30 μA Max				
Output Waveform		TTL & CMOS		CMOS		
Output Load		15pF & 50pF		15pF		
E/D Control Function	E/D		N:Fixed Frequency, No E/D Control Y:Fixed Frequency, Have E/D Control			
Output Symmetry	SYM	1.4V or 1/2V _{DD}	45%~55%			
Rise time/Fall time	Tr/Tf	32.768K≤F ₀ <1M	50nS Max.			
		1M≤F ₀ ≤125M	5nS Max.			
Fall Times	RMS	12KHz~20MHz	1.0pS Max.			
Output Level	"0"	V _{OL}	0.4V Max. or 10%V _{DD}			
	"1"	V _{OH}	2.4V Min. or 90%V _{DD}			
Start-Up Time	T _s		<30mS (32.768K≤F ₀ <1M); <10mS (1M≤F ₀ ≤125M)			
Frequency Aging	F _{age}	25°C±3°C	±3×10 ⁻⁶ /Year Max.			
Storage Temperature	T _{stg}		-55°C~+125°C			

Frequency Temperature Stability Table

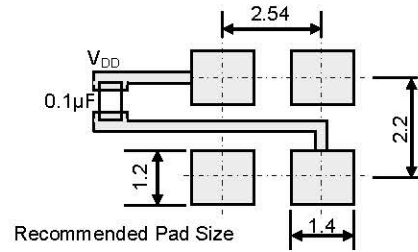
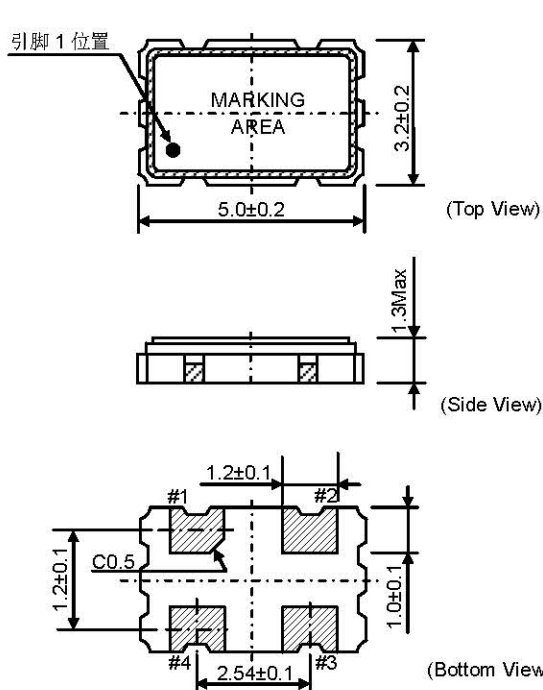
Temperature Range	Frequency Stability			
	Q:±20×10 ⁻⁶	R:±25×10 ⁻⁶	T:±50×10 ⁻⁶	U:±100×10 ⁻⁶
C: -20°C ~ +70°C	●	●	●	●
ΔG: -40°C ~ +85°C		●	●	●
▽Q: -40°C ~ +125°C			●	●
★H: -55°C ~ +85°C			◎	◎
★J: -55°C ~ +125°C			◎	◎

●: Optional ◎: Customized Δ: Industrial ▽: Automotive ★: Military Products

Note: for those not marked in the selection table of frequency and temperature stability, please communicate with us for confirmation

XO53

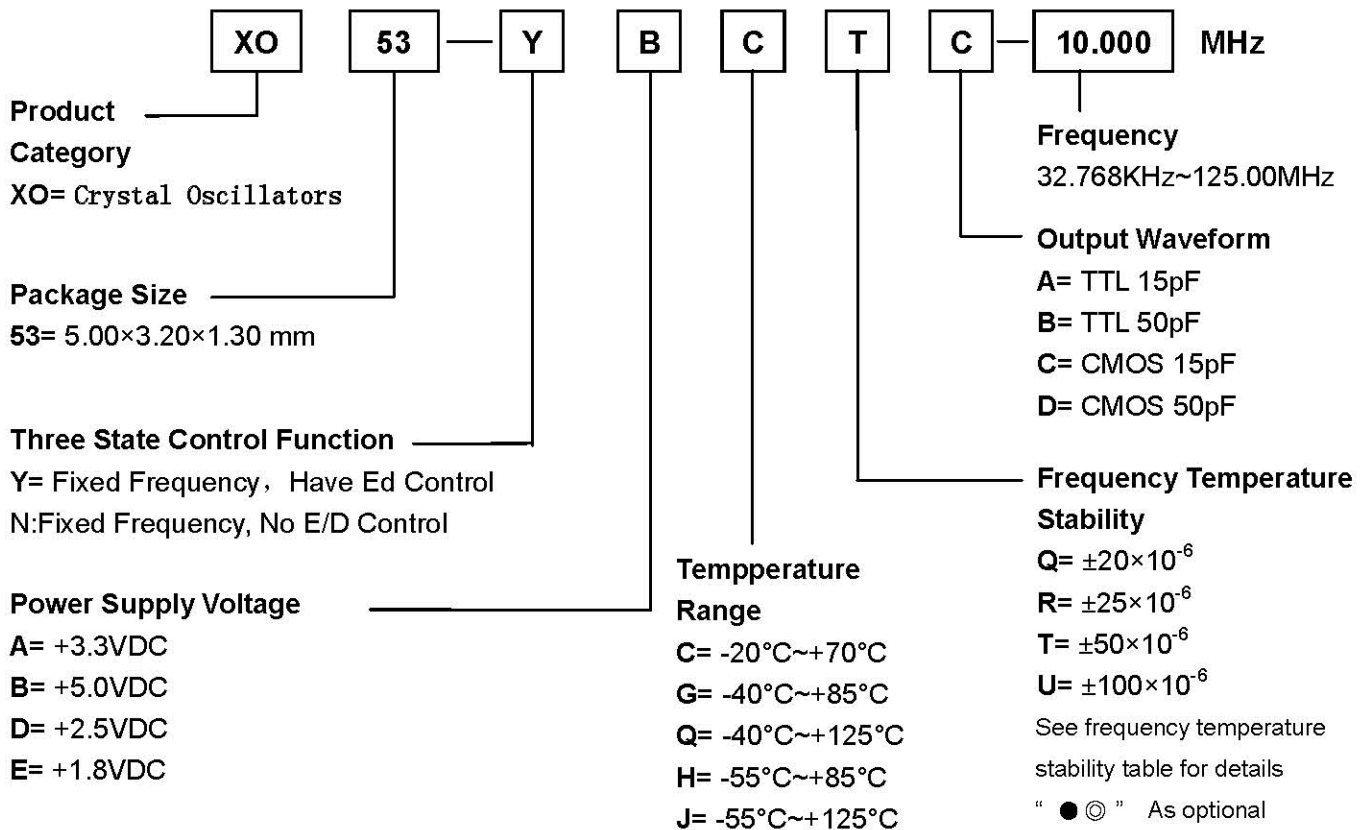
Outline Size (mm)



Pin	Function	Pin	Function
#1	E/D Dangling	#3	Output
#2	Ground	#4	Power

E/D 功能说明	
#1	#3
High Level (70%VDD Min.) Or Open Circuit	Start Up
Low Level (30%VDD Max.) Or Ground	High Resistivity State

Selection Guide



Sample Selection

XO53-YBCTA-10.00MHz

Crystal Oscillators / Fixed frequency, Have E/D Control / +5.0VDC / -20°C~+70°C / ±50×10⁻⁶ / TTL 15pF / 10.000MHz