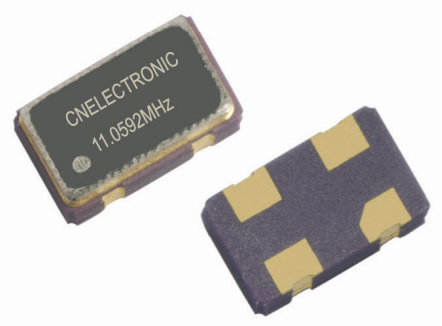
Crystal Oscillators

XO53



Description:

- Stability up to ±10×10^{-6}
- Tri-State Enable/Disable
- TTL/HCMOS Compatible
- Ultra-Miniature Package
- Tape and Reel
- SMT Applications
- PC's, Laptop, Palmtop Computers
- Portable Equipments
- PCMCIA Cards, Disc Drives

Performance Characteristics

Parameter			*Condition*	*XO53*			
Frequency Range		F_0		1.000MHz~125.000MHz			
Frequency Stability			All Condition	See Next Table			
Operating Temperature Range		T_{OPR}		See Next Table			
Supply Voltage (V)		V_{DD}		+5.0	+3.3	+2.5	+1.8
Supply Current (mA)		I_{DD}	1M≤F_0<40M	25	15	10	10
			40M≤F_0<70M	40	20	15	15
			70M≤F_0<125M	50	30	20	—
Output Load				A: TTL 15pF C: CMOS 15pF B: TTL 50pF D: CMOS 50pF			
Stand-by Function (Tri-state)				N: Fixed-Frequency without Tri-State Y: Fixed-Frequency with Tri-State			
Output Duty			1.4V or 1/2V_{DD}	45%~55%			
Rise Time		Tr	0.4V~2.4V 10%V_{DD}~90%V_{DD}	10nS Max			
Fall Time		Tf	2.4V~0.4V 90%V_{DD}~10%V_{DD}	10nS Max			
Output Level	"0"Level	V_{OL}		0.4V Max or 10%V_{DD}			
	"1"Level	V_{OH}		2.4V Min or 90%V_{DD}			
Start-Up Time		Ts		10mS Max			
Aging (First Year)		Fa	25°C±3°C	±5×10^{-6}			
Storage Temperature Range		T_{STG}		-55°C~+125°C			
Package				SMD5.0×3.20×1.0 mm			

Frequency Stability Over Temperature Range

Temperature Range	*Frequency Stability*			
	O:±10×10^{-6}	R:±25×10^{-6}	T:±50×10^{-6}	U:±100×10^{-6}
A:0°C~+50°C	●	●	●	●
B:-10°C~+60°C	●	●	●	●
C:-20°C~+70°C	●	●	●	●
G:-40°C~+85°C		●	●	●

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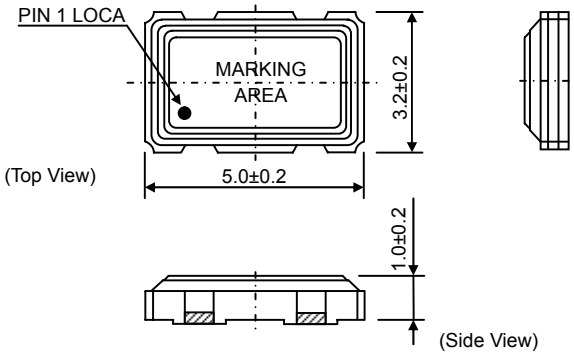
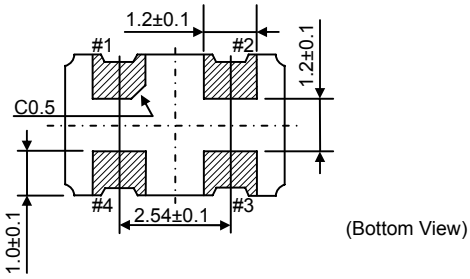
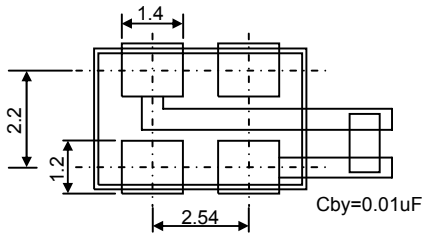
Outline Drawing (mm)



PAD NO.	CONNECTION
#1	NC/TRI-STATE
#2	GND
#3	OUTPUT
#4	+DC



Recommended land pattern



Ordering Information

XO | **53** — **Y** | **B** | **C** | **T** | **A** — **10** **MHz**

Product Family
XO= Crystal Oscillators

Package
53= 5.0×3.20×1.0 mm

Stand-by Function
N= Fixed-Frequency without Tri-State
Y= Fixed-Frequency with Tri-State

Supply Voltage
A= +3.3VDC
B= +5.0VDC
D= +2.5VDC
E= +1.8VDC

Temperature
A= 0°C~+50°C
B= -10°C~+60°C
C= -20°C~+70°C
G= -40°C~+85°C

Frequency Stability
O= ±10×10^{-6}
R= ±25×10^{-6}
T= ±50×10^{-6}
U= ±100×10^{-6}

Output Waveform
A= TTL 15pF
B= TTL 50pF
C= CMOS 15pF
D= CMOS 50pF

Frequency
1.0MHz~125MHz

Ordering Example

XO53-YBCTA-10MHz
Crystal Oscillators / Fixed-Frequency with Tri-State / +5.0VDC / -20°C~+70°C / ±50×10^{-6} / TTL 15pF / 10MHz