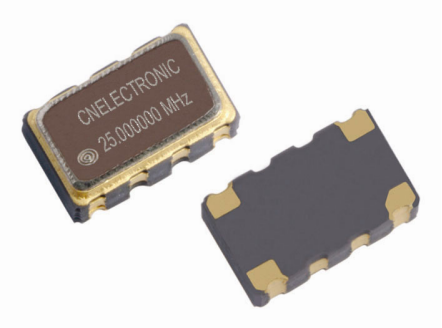
Temperature Compensated Crystal Oscillators (TCXOs)

TC53



Description:

- Stability up to ±0.5×10^{-6}
- Control Voltage Range ±10×10^{-6} Max
- Clipped Sine Wave Output
- Ultra-Miniature Package
- Tape and Reel
- Mobile Phone

Performance Characteristics

Parameter		*Condition*	*TC53*
Frequency Range	F_0		10.000MHz~26.000MHz
Standard Nominal Frequency (MHz)			12.8 13 14.4 19.2 19.68 19.8 26
Frequency Stability		All Condition	See Next Table
Operating Temperature Range	T_{OPR}		See Next Table
Supply Voltage	V_{DD}		B:+5.0VDC±10% / A:+3.3VDC±10%
Supply Current	I_{DD}	10M≤F_0<15M	1.5mA Max
		15M≤F_0<26M	2.0mA Max
Output Load			H: Clipped Sine Wave
Output Level			0.8V (peak to peak) Min
Load			10KΩ//10pF±10%
Control Voltage Range			See Ordering Information
Frequency Stability Vs	Supply Voltage change	±5%	±0.2×10^{-6}
	Load change	±10%	±0.2×10^{-6}
	Aging		±1×10^{-6}/year
Vc Input Impedance			1.0MΩ
Start-Up Time	Ts		2mS Max
Storage Temperature Range	T_{STG}		-55°C~+125°C

Frequency Stability Over Temperature Range

Temperature Range	*Frequency Stability*					
	H:±0.5×10^{-6}	I:±1.0×10^{-6}	J:±1.5×10^{-6}	K:±2.0×10^{-6}	L:±2.5×10^{-6}	N:±5.0×10^{-6}
A:0°C~+50°C	●	●	●	●	●	●
B:-10°C~+60°C	●	●	●	●	●	●
C:-20°C~+70°C		●	●	●	●	●
D:-30°C~+75°C		●	●	●	●	●
G:-40°C~+85°C		●	●	●	●	●

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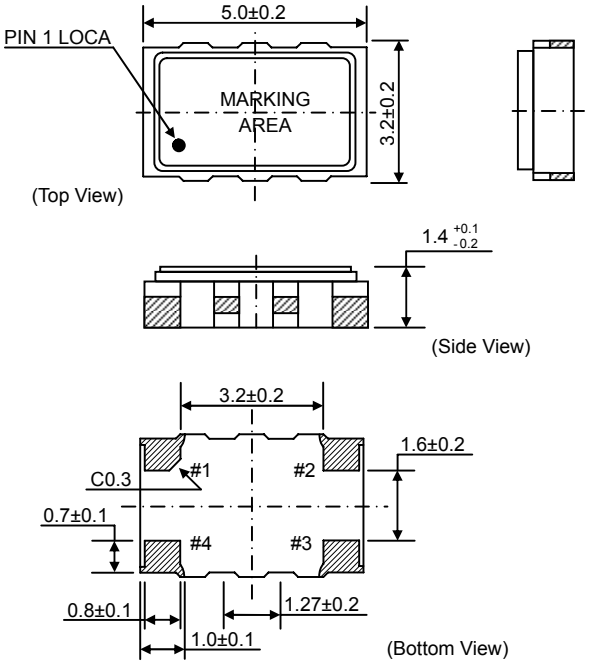
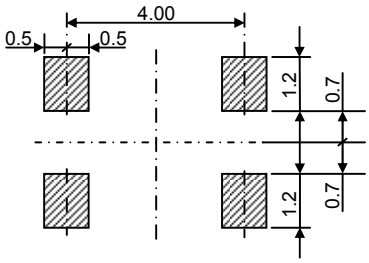
Outline Drawing (mm)



PAD NO.	CONNECTION
#1	VCON VCTCXO GND TCXO
#2	GND
#3	OUTPUT
#4	+DC

Recommended land pattern



Ordering Information

TC	53	—	N	B	A	I	H	—	26	MHz

Product Family
TC= TCXO
VT= VCTCXO

Package
53= 5.0×3.20×1.40mm

Control Voltage Range
N= No Voltage Control Function
A= ±5×10^{-6} 2.5V±2V
B= ±5×10^{-6} 1.65V±1.5V
C= ±10×10^{-6} 2.5V±2V
D= ±10×10^{-6} 1.65V±1.5V
Note: TCXO No Voltage Control Function

Supply Voltage
A= +3.3VDC
B= +5.0VDC

Temperature
A= 0°C~+50°C
B= -10°C~+60°C
C= -20°C~+70°C
D= -30°C~+75°C
G= -40°C~+85°C

Frequency Stability
H= ±0.5×10^{-6}
I= ±1.0×10^{-6}
J= ±1.5×10^{-6}
K= ±2.0×10^{-6}
L= ±2.5×10^{-6}
N= ±5.0×10^{-6}

Output Waveform
H= Clipped Sine Wave

Frequency
10.0MHz~26.0MHz

Ordering Example

TC53-NBAIH-26MHz
TCXO / No Voltage Control Function / +5.0VDC / 0°C~+50°C / ±1.0×10^{-6} / Clipped Sine Wave / 26MHz
VT53-ABAIH-26MHz
VCTCXO / ±5PPM 2.5V±2V / +5.0VDC / 0°C~+50°C / ±1.0×10^{-6} / Clipped Sine Wave / 26MHz