



### Features and Benefits

1.8V, 2.5V, 2.8V, 3.0V, 3.3V Supply voltage  
Clipped sinewave Output waveform

### Typical Applications

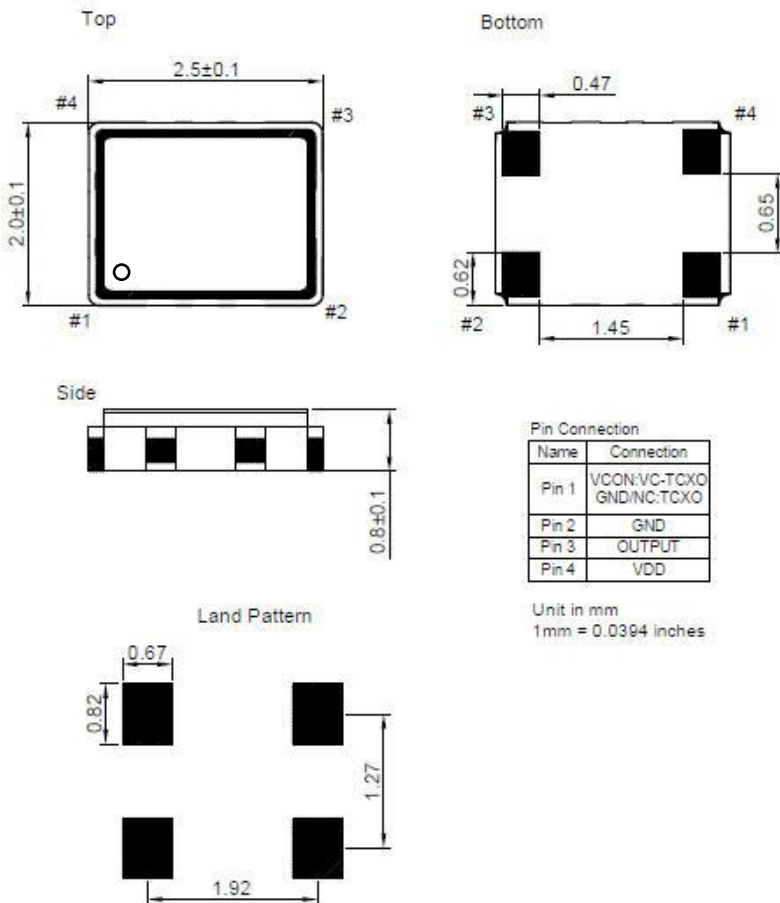
Frequency reference for real time clocks (RTCs)  
Portable instruments  
Timing synchronization for networks, servers, hubs, routers and switches  
Smart metering, data loggers  
GPS receivers. Telematics

### Description

TCXO2520BL is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

### Mechanical Drawing & Pin Connections

Drawing No: MD160034-3





**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F <sub>nom</sub>		10		52	MHz	
Standard Frequency			10,12.8,13,14.4,14.7456,15.36,16.367667,16.384,19.2,19.44,20,25,26,27			MHz	
<b>RF Output</b>							
Signal Waveform			Clipped sinewave				
Load	R <sub>L</sub>	±10%	10kohm//10pf				
Output Voltage Level (peak to peak)			0.8Vp-p min				
Startup time		reach 90% amplitude and at +25°C ± 2°C	2.0 m sec. (typ.), 5.0 m sec. (max.)				
<b>Power Supply</b>							
Supply Voltage	V <sub>cc</sub>	±5%	1.8V,2.5V,2.8V,3.0V,3.3V			V	
Current consumption		10-15MHz			1.5	mA	
		15.1-26MHz			2	mA	
		26.1-52MHz			3.5	mA	
<b>Frequency Stability</b>							
Versus Operating Temperature Range						ppm	See below table
Initial Calibration Tolerance			± 1.0 ppm. max. at +25°C±2°C				
Versus supply voltage		±5% change			±0.2	ppm	
Versus load		±10% change			±0.2	ppm	
Versus Reflow		1 reflow and measured 24 hours afterwards			±1.0	ppm	
Aging 1 <sup>st</sup> Year					±1.0	ppm	25°C
Storage Temperature			-40°C to +85°C				
<b>Control Voltage Function on Pad 1</b>							
Control Voltage Center			+1.5V ± 1.0V				
		1.8V	0.9 V ± 0.6 V				
		2.5V	1.4 V ± 1.0 V				
		3.0V	1.5 V ± 1.0 V				
Frequency Pulling Range		V <sub>control</sub> = +1.5 V±1.0 V	± 5 ppm min.				
Linearity			± 10% max.				
Transfer Function			Positive Transfer				
Modulation Bandwidth			3KHz min				
Input Impedance			1MΩ min				
Phase Noise		10Hz	-80			dBc/Hz (typical)	
		100Hz	-115				
		1KHz	-135				
		10KHz	-148				
		100KHz	-148				

**Frequency Stability vs. Temperature**

	±0.5PPM	±1PPM	±1.5PPM	±2PPM	±2.5PPM	±3PPM
0°C to +50°C	Available	Available	Available	Available	Available	Available
-10°C to +60°C	Conditional	Available	Available	Available	Available	Available
-20°C to +70°C	Conditional	Available	Available	Available	Available	Available
-30°C to +75°C	Conditional	Available	Available	Available	Available	Available
-30°C to +85°C	Conditional	Available	Available	Available	Available	Available
-40°C to +85°C	Conditional	Conditional	Available	Available	Available	Available