



Features and Benefits

- Frequency range: 10-52MHz
- Supply voltage: 2.5V or 3.3V
- Steady current: 8.0mA Max
- Output waveform: CMOS or Clipped Sinewave
- Frequency stability vs. operating temperature: ± 0.28 PPM
- Phase noise@10KHz: -154dBc/Hz
- Operating temperature: -40°C to +85°C
- Size: 7.0x5.3x1.5mm

Typical Applications

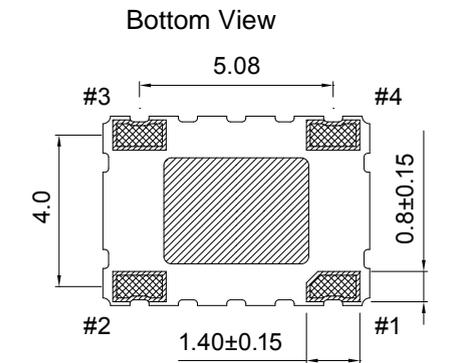
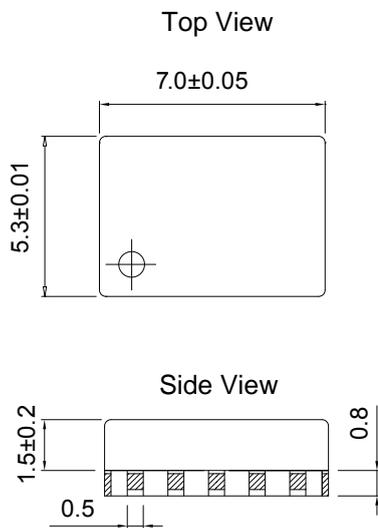
- Guidance
- Avionics
- Precision GNSS/Positioning
- Real Time Kinematic (RTK)

Description

TCXO7500BM-LG is the Ultra-Low G Sensitivity TCXO. The frequency stability can be less than ± 0.28 PPM. It can be widely used in the portable communication devise.

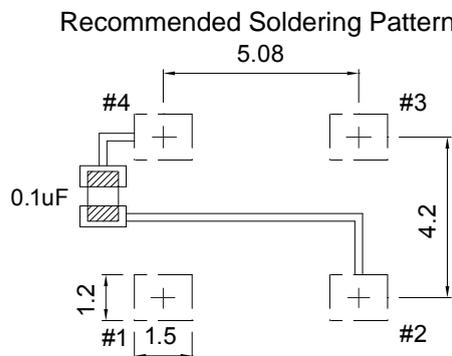
Mechanical Drawing & Pin Connections

Drawing No: A8 &&\$ \$' %%



Pin #	Function
1	Vcon:VC-TCXO NC/GND:TCXO
2	GND
3	OUTPUT
4	V _{CC}

Unit in mm
1mm = 0.0394 inches



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1uF as close to the part as possible between V_{CC} and GND PAD



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f ₀		10		52	MHz	
RF Output							
Output Waveform			CMOS				
Load				15		pF	
Output Level High			0.9*V _{cc}			V	
Output Level Low					0.1*V _{cc}	V	
Duty Cycle			45		55	%	
Output Waveform			Clipped Sine				
Load				10k//10pF		Kohm/pF	
Output Level			0.8			Vp-p	
Start Time					5	ms	
Power Supply							
Voltage	V _{cc}	±5%		2.5/3.3		V	See ordering section
Current		CMOS output			8.0	mA	
		Clipped sine output			5	mA	
Frequency Stability							
Versus Temperature					±0.28	ppm	See ordering section
Versus Supply Voltage		±10%			±0.1	ppm	
Versus Load		±10%			±0.05	ppm	
Aging @ first year					±1.0	ppm	
Frequency Tolerance		Frequency at 25°C, 1 hour after reflow			±2.0	ppm	
G Sensitivity		Gamma Vector, 3-axes			0.3	ppb/g	
Phase Noise @10MHz		@10Hz		-107		dBc/Hz	
		@100Hz		-135			
		@1KHz		-149			
		@10KHz		-154			
Environmental Conditions							
Operating temperature range		-40°C to +85°C (see ordering section)					
Storage temperature range		-55°C to +125 °C					



Ordering Information

TCXO7500BM-LG-XXMHz	-	01	02	03	04
Group		Code			

For example, TCXO7500BM-LG-10MHz-2222 denotes the TCXO has the following specifications:

Frequency: 10MHz
 Temperature Range: -40°C to +85°C
 Stability Over Temperature: ±0.5 ppm
 Supply Voltage: 3.3V
 Output Waveform: Clipped sine

01	Temperature Range
Code	Specification
1	-20°C to +70°C
2	-40°C to +85°C

02	Frequency Stability
Code	Specification
1	±0.28 ppm
2	±0.5 ppm
3	±1.0 ppm
4	±2.5 ppm

03	Supply Voltage
Code	Specification
1	2.5 V
2	3.3 V

04	Output Waveform
Code	Specification
1	CMOS
2	Clipped Sine

Frequency Stability vs. Temperature

Temperature Range [°C]	Frequency Stability			
	±0.28 ppm	±0.5 ppm	±1.0 ppm	±2.5 ppm
-20°C to +70°C	Conditional	Available	Available	Available
-40°C to +85°C	Not Available	Available	Available	Available

Note: This is the general datasheet, for reference only.
For the detail datasheet, pls contact us.