# Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA TEL: 1-281-870-8822 EMAIL:Sales@DynamicEng.com

# TCXO7501BM\_series High Precision TCXO

### **Features and Benefits**

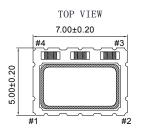
Typical 7.0 x 5.0 x 1.9 mm ceramic SMD package High Precision and High Temperature for -40°C  $\sim$  +95°C, ±0.1ppm, -40°C  $\sim$  +105°C , ±0.2ppm.

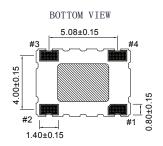
CMOS and Clipped Sine wave (without DC-cut capacitor) output optional.

#### **Typical Applications**

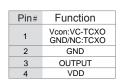
Femtocell, Base Stations WLAN / WiMAX / WiFi, Wireless Communications

## **Mechanical Drawing & Pin Connections**





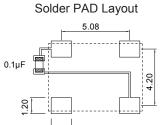




Unit in mm 1mm = 0.0394 inches

#### **Drawing No:**

MD160036-1



To ensure optimal oscillator performance, place a by-pass capacitor of  $0.1\mu F$  as close to the part as possible between Vdd and GND pads.



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## **Specifications**

On a differentiant	<b>.</b>	3.3V		2.5V		1126
Specification	Conditon	Min.	Max.	Min.	Max.	Unit
Supply Voltage Variation(VDD)		V <sub>DD</sub> -5%	V <sub>DD</sub> +5%	V <sub>DD</sub> -5%	V <sub>DD</sub> +5%	V
Frequency Range		10	52	10	52	MHz
Standard Frequency		10,19.2,20				MHz
Frequency Tolerance			±1.5		±1.5	ppm
Frequency Stability						
Vs Supply Voltage	±5% Change		±0.1		±0.05	ppm
Vs Load	±10% Change		±0.05		±0.05	ppm
Vs Aging	1 <sup>st</sup> year		±1.0		±1.0	ppm
Supply Current	CMOS	-	7.5	-	7	mA
	Clipped Sinewave	-	5.0	-	4.5	
	Output High	90%VDD	-	90%VDD	-	V
Output Level(CMOS)	Output Low	-	10%VDD	-	10%VDD	
	Duty	45	55	45	55	%
Output Level(Clipped Sinewave)		0.8		0.8		Vp-p
Load(CMOS)		15		15		pF
Load(Clipped Sinewave)		10kohm//10pf		10kohm//10pf		•
Control Voltage Range(VCTCXO)		0.5	2.5	0.5	2.5	V
Pulling Range(VCTCXO)		±5		±5		ppm
Vc Input Impedance(VCTCXO)		100		100		kohm
Phase Noise@20MHz						
100Hz		-130		-130		dBc/Hz
1KHz		-148		-148		
10KHz		-156		-156		
Start Time		-	2	-	2	mSec
Storage Temperature		-55	-125	-55	-125	℃

# Frequency Stability vs. Temperature

	±0.05PPM	±0.1PPM	±0.2PPM	±0.28PPM	±0.5PPM	±2PPM
-40°C to +85°C	Conditional	Available	Available	Available	Available	Available
-40°C to +95°C	Conditional	Conditional	Available	Available	Available	Available
-40°C to +105°C	Not Available	Conditional	Available	Available	Available	Available

Note: not all combination of options are available. Other specifications may be available upon request.