



### Features and Benefits

- 40MHz Frequency
- 5V Supply voltage
- CMOS Output waveform
- ±0.2ppm Stability Vs -20C ---+70C
- 7x5mm Size
- 135dBc/Hz @1KHz phase noise value

### Typical Applications

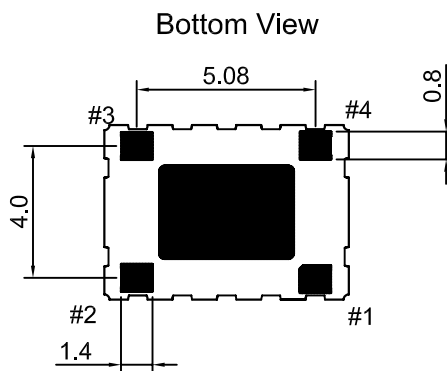
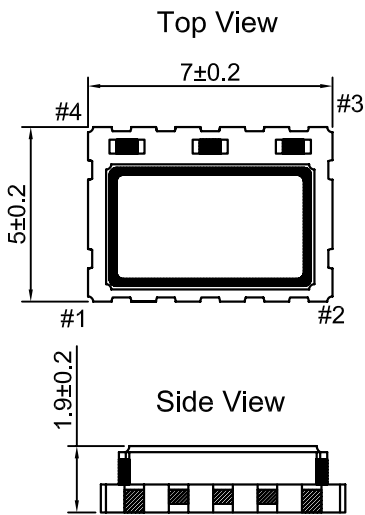
- SATCOM System
- Cellular Base Stations
- Radar Applications

### Description

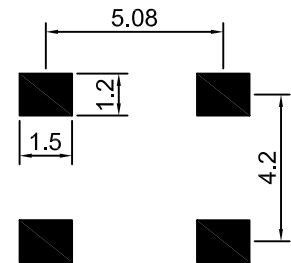
TCXO7500BM-40MHz-B is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

### Mechanical Drawing & Pin Connections

Drawing No: MD160036-1



### Recommend Soldering Pattern



Pin	Funttion
#1	N.C/GND
#2	GND
#3	Output
#4	VDD

Unit in mm  
1mm = 0.0394 inches



## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F <sub>nom</sub>			40		MHz	
<b>RF Output</b>							
Signal Waveform			CMOS				
Load	R <sub>L</sub>		15pf				
H-Level Voltage	V <sub>H</sub>		4.5			V	
L- Level Voltage	V <sub>L</sub>				0.5	V	
Duty Cycle		Measured at 50% VDD trigger level	45	50	55	%	
Rise and fall times		CMOS logic output at 10% to 90%			6	nS	
Start time					2	mS	
<b>Power Supply</b>							
Supply Voltage	V <sub>s</sub>		4.5	5	5.5	V	
Current		At maximum supply voltage			8	mA	
<b>Frequency Stability</b>							
Versus Operating Temperature Range		-20C ---+70C	-0.2		+0.2	ppm	Referenced to the midpoint between minimum and maximum frequency value
Nominal Frequency Tolerance		Frequency at 25 C, 1hour after 2 times reflow.	-2.0		+2.0	ppm	
Versus supply voltage	V <sub>s</sub>	±5% change	-0.2		+0.2	ppm	
Aging 1 <sup>st</sup> Year		at 25 C	-1		+1	ppm	
SSB Phase noise		10Hz		-85		dBc/Hz	
		100Hz		-115		dBc/Hz	
		1kHz		-135		dBc/Hz	
		10kHz		-148		dBc/Hz	
<b>Environmental,Mechanical Conditions</b>							
Operating temperature range		-20°C to +70°C					
Storage temperature range		-40°C to 85°C					
Thermal Shock		MIL-STD-883 1010 Condition B, JESD22-A104 Condition B under -55C , 125C ; soak time is 10 mins,with total 200 cycles					
Vibration Test		MIL-STD-883 2007 Condition A, JESD22-B103 Condition 1 under 10–2000Hz, 1.52mm, 20G, each axis for 4hrs					
Mechanical Shock		MIL-STD-883 2002 Condition B, JESD22-B104 Condition B under 1500G, half-sine, 0.5ms, each axis for 3 times					