



### Features and Benefits

Frequency range: 50MHz  
Supply voltage: 3.3V  
Steady current: 8mA/Max  
Output waveform: CMOS  
Frequency stability vs. operating temperature:  $\pm 0.5$ ppm  
Aging:  $\pm 1$ ppm per year  
Phase noise@100KHz: -157dBc/Hz  
Operating temperature: -40°C to +85°C  
Size: 7x5x1.75mm

### Typical Applications

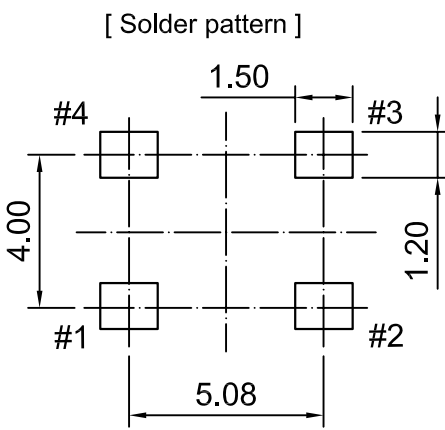
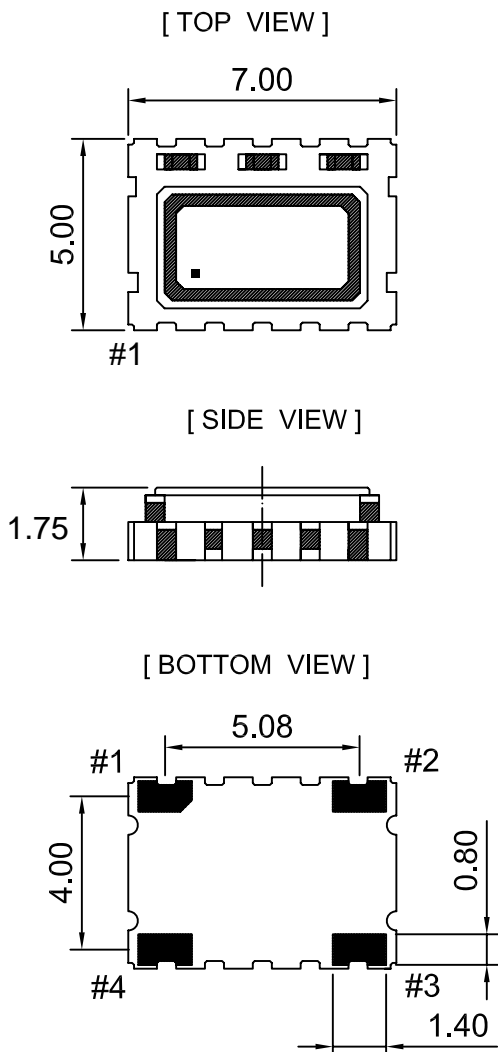
UHF Synthesizers  
SATCOM System  
Portable Microwave Applications

### Description

TCXO7500BT-50MHz-D-V offers wide temperature operation from -40°C to +85°C with outstanding frequency stability and low phase noise performance.

### Mechanical Drawing & Pin Connections

**Drawing No: MD150004-7**



PIN	FUNCTION
#1	Vc(EFC)
#2	GND
#3	RF output
#4	Vdc

Unit in mm  
1mm = 0.0394 inches



**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F <sub>nom</sub>			50		MHz	
Output				(LV)CMOS			
Output Level				V <sub>OH</sub> ≥ 0.9 x V <sub>CC</sub> V <sub>OL</sub> ≤ 0.1 x V <sub>CC</sub>			
Output load				1kohm//15 pF			
<b>Power Supply</b>							
Voltage	V <sub>cc</sub>	±5%		3.30		V	
Current Consumption					8	mA	
<b>Frequency Control*</b>							
Control voltage range	V <sub>c</sub>		0.5		2.5	V	
Tuning range				±5		ppm	Tuning Slope Positive
Control voltage input impedance			100			kohm	
<b>Frequency Stability</b>							
Vs. temperature		-40°C to +85°C, ref to (f <sub>max</sub> +f <sub>min</sub> )/2	-0.5		+0.5	ppm	
Vs. supply voltage changes		±5%	-0.1		+0.1	ppm	referenced to frequency at nominal supply
Vs. load changes		±5%	-0.1		+0.1	ppm	referenced to frequency at nominal supply
G-sensitivity		per axis		2.0		ppb/g	
Tolerance at 25°C			0		+1.0	ppm	
First Year Aging		@+40°C	-1.0		+1.0	ppm	
Phase noise		10 Hz		-84		dBc/Hz	
		100 Hz		-110			
		1000 Hz		-137			
		10 KHz		-153			
		100 KHz		-157			
<b>Environmental Conditions</b>							
Operating temperature range		-40°C to +85°C					
Storage temperature range		-55°C to +105°C					
Reflow Profiles		≤ 260 °C over 10 sec. Max. as per IPC/JEDEC J-STD-020C					