Dynamic Engineers Inc.

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TCXO7500BT-LG-20MHz-A

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Features and Benefits

Frequency range: 20MHz
Supply voltage: 3.3V
Steady current: 3mA Typ.
Output waveform: Clipped Sinewave
Frequency stability vs. operating temperature: ±1.0ppm
Aging: ±1.0ppm per year
Phase noise@1KHz: -145dBc/Hz
Operating temperature: -40°C to +85°C
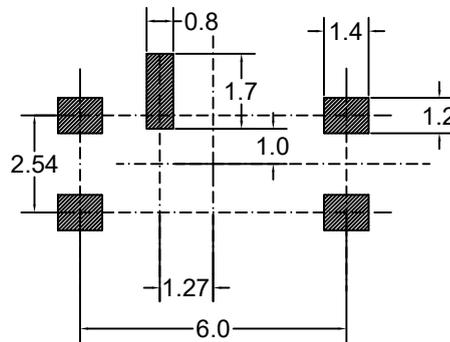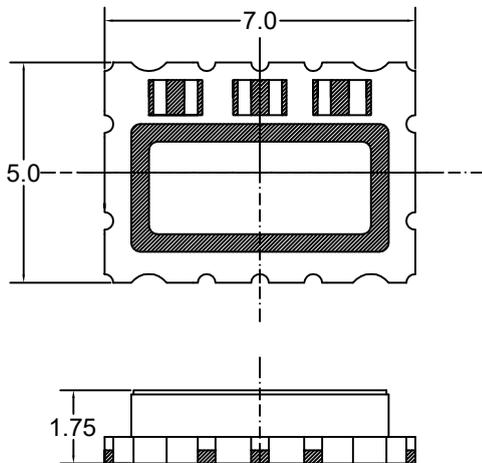Size: 7.0x5.0x1.75mm

Typical Applications

UHF Synthesizers
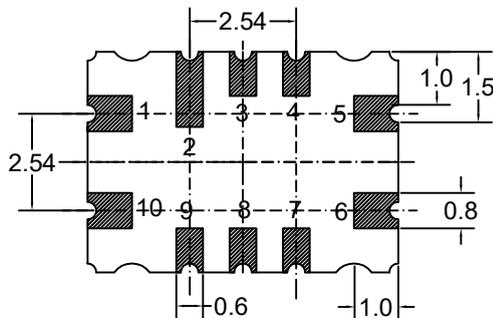SATCOM System
Portable Microwave Applications

Description

TCXO7500BT-LG-20MHz-A 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: MD220008-1

Solder pattern

Pin Function

#1 NC or GND

#5 GND

#6 Output

#9 NC or E/D

#10 Vcc

Do not connect #2, #3, #4, #7, #8

Unit in mm
1mm = 0.0394 inches

Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F$_{nom}$			20		MHz	
Output			Clipped sine wave				
Output Level			>0.8Vp-p				
Output load			10 kΩ // 15 pF				
Current consumption				3.0		mA	
Start-up Time					5.0	ms	
Tri-State Function			PIN9:high or open;PIN6:oscillation PIN9:low or GND;PIN6:high impedance				
Power Supply							
Voltage	V$_{cc}$	±5%		+3.3		V	
Frequency Stability							
Versus temperature		-40°C to +85°C, ref to (fmax+fmin)/2			±1.0	ppm	
Versus supply voltage changes referenced to frequency at nominal supply		±5%			±0.1	ppm	
Versus load changes referenced to frequency at nominal load		±5%			±0.1	ppm	
G-sensitivity		per axis			0.25	ppb/g	
Tolerance at 25°C			0		+1.0	ppm	
First Year Aging		@+40°C			±1.0	ppm	
Short Term Stability ADEV		0.1—1.0 s			1x10^{-10}		
Phase noise		10 Hz		-80		dBc/Hz	
		100 Hz		-120			
		1000 Hz		-145			
		10 KHz		-155			
		100 KHz		-158			
		1MHz		-160			
Environmental Conditions							
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					
Moisture sensitivity		Level 1(unlimited)					