

Dynamic Engineers Inc.

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

Features and Benefits

Frequency range: 38MHz Supply voltage: 3.3V Current: 24mA Output waveform: CMOS Frequency stability vs. temperature: ±1.0PPM from -40°C to +70°C Aging: ±2PPM first year Phase noise: -152dBc/Hz@1MHz: Operating temperature: -40°C to +70°C Size: 7x5x2.5 mm

Typical Applications

Portable Wireless Communications Mobile Test Equipment Beacons and Rescue Systems

Description

TTCXO7501BL-38MHz-A-V is the 38MHz CMOS output TCXO. The frequency stability can less than ±1.0PPM from -40°C to +70°C operating temperature. It can be widely used in the portable communication device.

Mechanical Drawing & Pin Connections

Drawing No: MD220011-2

Land Pattern

42

-18

5.1

2.0









PIN#	Function
#1	Control Voltage
#2	GND
#3	Output
#4	Supply Voltage



Dynamic Engineers, Inc.

Rev. 1

Dynamic Engineers reserves the right to make changes to the company datasheet(s) along with other information contained inside; such as data tables and araphs without notification to potential customers who may have earlier revisions in their possession.



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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Тур.	Max.		
Operational Frequency	f ₀			38		MHz	
RF Output							
Output Waveform				CMOS			
Load				15		pF	
Output Level High			90% V _{cc}			V	
Output Level Low					10% V _{cc}	V	
Duty Cycle		±5%		50%		%	@50% V _{cc}
Rise & Fall Time		10%<>90% waveform		1.5	3.0	ns	
Start-up Time					5	ms	
Power Supply							
Voltage	V _{cc}	±5%		3.3		V	
Current				24		mA	
Control Voltage							
Control Voltage			0.5	1.5	2.5	V	
Frequency Pulling Range			±8			ppm	
Linearity					10	%	
Bandwidth		Measured at -3dB	10			KHz	
Frequency Stability							
Initial Tolerance		@+25°C±2°C			±2.0	ppm	
Vs. Temperature		-40°C to +70°C			±1.0	ppm	
Vs. Supply Voltage		±5% change			±0.2	ppm	
Vs. Load		±10% change			±0.2	ppm	
Vs. Reflow		One reflow and					
		measured after			±1.0 ppm		
		24hours afterward					
Aging @25°C		First year			±2.0	ppm	
		Over 10 years			±10.0	ppm	
Phase Noise		@10Hz		-79			
		@100Hz		-102			
		@1KHz		-125		dBc/Hz	
		@100KHz		-131			
		@1MHz		-152			
Environmental Condition	าร						
Operating temperature ran	nge	-40°C to +70°C					
Storage temperature range	e	-50°C to +100 °C					

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