

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: 50MHz Supply voltage: 3.3V Steady current: 8mA/Max Output waveform: CMOS Frequency stability vs. operating temperature: ±0.5ppm Aging: ±1ppm 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













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

Unit in mm 1mm = 0.0394 inches

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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	Nata	
			Min.	Тур.	Max.	Unit	Note	
Operational Frequency	Fnom			50		MHz		
Output				(LV)CMOS				
Output Loval				V _{OH} ≥ 0.9 x Vo	C			
			V _{OL} ≤ 0.1 x Vcc					
Output load				1kohm//15 pF	-			
Power Supply								
Voltage	V _{cc}	±5%		3.30		V		
Current Consumption					8	mA		
Frequency Control*								
Control voltage range	Vc		0.5		2.5	V		
				. 5			Tuning Slope	
				ΞJ		ppm	Positive	
Control voltage input			100			kohm		
impedance								
Frequency Stability		4000 / 0500 //		1		1		
Vs. temperature		-40°C to +85°C, ref to (fmax+fmin)/2	-0.5		+0.5	ppm		
Vs. supply voltage changes			-0.1				referenced to	
		±5%			+0.1	ppm	frequency at	
							nominal supply	
Vs. load changes		±5%	-0.1		10.1	ppm	frequency of	
					+0.1			
G-sensitivity		per axis		2.0		ppb/g	nominal supply	
Tolerance at 25°C			0	2.0	+1.0	pp <i>b,</i> g		
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				
		1000KHz		-158				
Environmental Conditions								
Operating temperature range	-40°C t	o +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							