Dynamic Engineers Inc.

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TCXO7500BT-50MHz-C-V
High reliable, High precision TCXO

Features and Benefits

Frequency range: 50MHz
Supply voltage: 3.3V
Steady current: 10mA/Max
Output waveform: CMOS
Frequency stability vs. operating temperature: ±0.5ppm
Aging: ±1ppm per year
Phase noise@100KHz: -153dBc/Hz
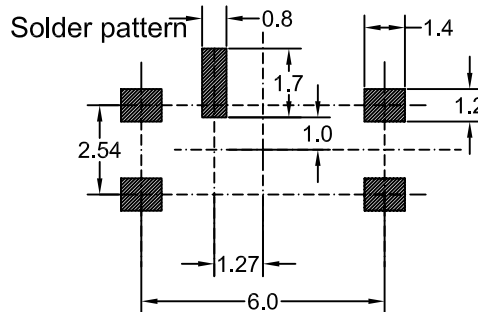Operating temperature: -40°C to 85°C
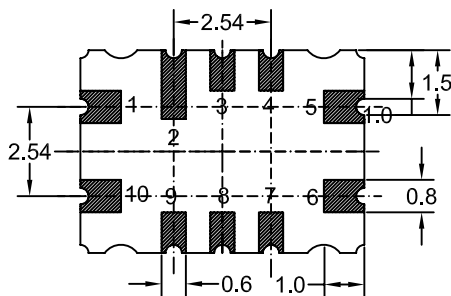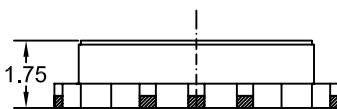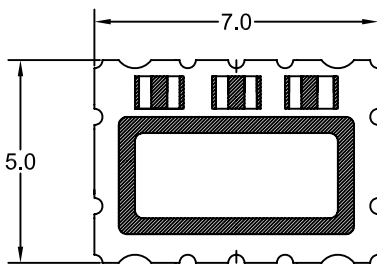Size: 7x5x1.75mm

Typical Applications

UHF Synthesizers
SATCOM System
Portable Microwave Applications

Description

TCXO7500BT-50MHz-C-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: MD150075-8

Solder pattern

Pin Function

#1 Control Voltage

#5 GND

#6 Output

#9 Tri-state or NC

#10 Vcc

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

Unit in mm
1mm = 0.0394 inch

Specifications

Oscillator Specification	Sym	Condition	Value Min.	Value Typ.	Value Max.	Unit	Note
Operational Frequency	F_{nom}			50		MHz	
Output				(LV)CMOS			
Output Level				$V_{OH} \geq 0.9 \times Vcc$ $V_{OL} \leq 0.1 \times Vcc$			
Output load					15	pF	
Power Supply							
Voltage	V_{cc}	±5%		3.30		V	
Current Consumption			2		10	mA	
Frequency Control*							
Control voltage range	V_c		0.5	1.5	2.5	V	
Tuning range			±5			ppm	Tuning Slope Positive
Control voltage input impedance			100			kohm	
Tri-state function			pin9 high or open pin6 oscillation pin9 low or GND pin6 high impedance				
Frequency Stability							
Vs. temperature		-40°C to 85°C, ref to (fmax+fmin)/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		100 Hz		-109		dBc/Hz	
		1000 Hz		-133			
		10 KHz		-149			
		100 KHz		-153			
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					