Dynamic Engineers Inc.
2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA
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TCXO7500BM-40MHz-D

40MHz SMD TCXO

Features and Benefits

Frequency range: 40MHz
Supply voltage: 3.3V
Current: 8mA
Output waveform: CMOS
Frequency stability vs. temperature: ±0.28PPM from -40°C to +85°C
Aging: ±1PPM per year
Phase noise: -148dBc/Hz@10KHz:
Operating temperature: -40°C to +85°C
Size: 7x5x1.9 mm

Typical Applications

Portable Wireless Communications
Mobile Test Equipment
SATCOM System
Beacons and Rescue Systems

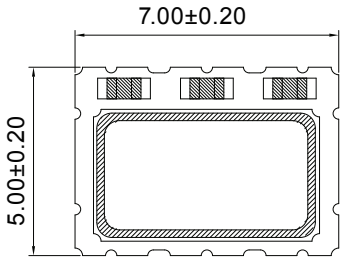
Description

TCXO7500BM-40MHz-D is the 40MHz CMOS output TCXO. The frequency stability can less than ±0.28PPM from -40°C to +85°C operating temperature. It can be widely used in the portable communication device.

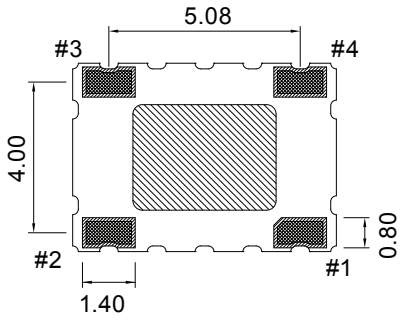
Mechanical Drawing & Pin Connections

Drawing No: MD160036-1

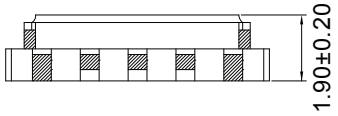
Top View



Bottom View

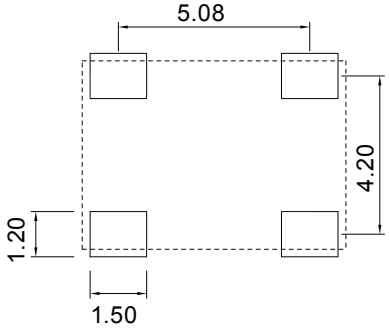


Side View



Pin	Function
#1	N.C/GND
#2	GND
#3	Output
#4	Vcc

Recommended Soldering Pattern



Unit in mm
1mm = 0.0394 inches

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F_{nom}			40		MHz	
RF Output							
Output Waveform				CMOS			
Load					15	pF	
H-Level Voltage	V_H		2.97			V	
L- Level Voltage	V_L				0.33	V	
Duty Cycle		Measured at 50% VDD trigger level	45	50	55	%	
Rise and Fall Times		CMOS logic output at 10% to 90%			6	ns	
Start time					10	ms	
Power Supply							
Supply Voltage	V_{cc}		2.97	3.3	3.63	V	
Current					8	mA	
Frequency Stability							
Nominal Frequency Tolerance		Frequency at 25°C, before reflow			±0.5	ppm	
Vs. Temperature		From -40°C to +85°C			±0.28	ppm	Referenced to the midpoint between minimum and maximum frequency value
Vs. Supply Voltage		±5% change			±0.2	ppm	@25°C
Aging 1st Year		@25°C			±1.0	ppm	
SSB Phase Noise		10Hz		-84		dBc	
		100Hz		-112		dBc	
		1kHz		-134		dBc	
		10kHz		-148		dBc	
Environmental Conditions							
Operating Temperature Range	-40°C to +85°C						
Storage Temperature Range	-40°C to +85°C						
Thermal Shock	Reference Std.:MIL-STD-883 1010 Condition B, JESD22-A104 Condition B Test Condition: -55°C, 125°C; soak time is 10 mins, with total 200 cycles						
Vibration Test	Reference Std.:MIL-STD-883 2007 Condition A, JESD22-B103 Condition 1 Test Condition: 10~2000Hz, 1.52mm, 20G, each axis for 4hrs						
Mechanical Shock	Reference Std.:MIL-STD-883 2002 Condition B, JESD22-B104 Condition B Test Condition: 1500G, half-sine, 0.5ms, each axis for 3 times						