Dynamic Engineers Inc.
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TCXO7500BM02-STR3
High Stability Stratum3 TCXO

Features and Benefits

Frequency range: 5-52MHz
Supply voltage: 2.5V or 3.3V
Steady current: 6.0mA Max
Output waveform: CMOS or Clipped Sinewave
Frequency stability vs. operating temperature: ±0.28PPM
Phase noise@10KHz: -148dBc/Hz
Operating temperature: -40°C to +85°C
Size: 7.0x5.0x1.9mm

Typical Applications

Stratum 3
Base Stations

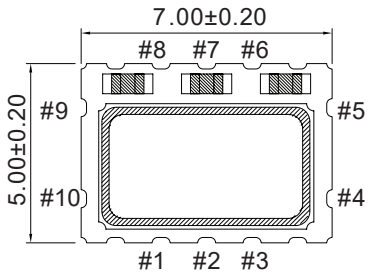
Description

TCXO7500BM02-STR3 is the high stability stratum3 TCXO. The frequency stability can be less than ±0.28PPM. It can be widely used in the portable communication devise.

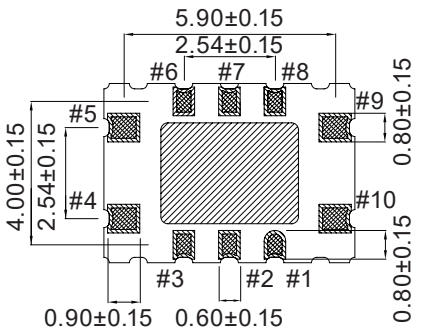
Mechanical Drawing & Pin Connections

Drawing No: MD220033-1

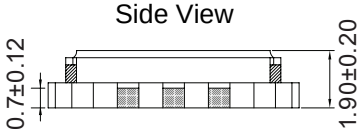
Top View



Bottom View



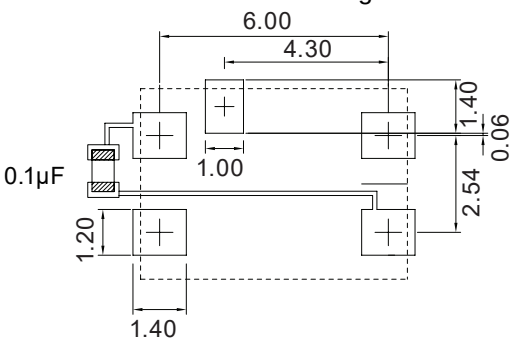
Side View



Pin#	Function
1	NC
2	NC
3	NC
4	GND
5	Output
6	NC
7	NC
8	Tri-State/NC
9	Vcc
10	Vcon:VC-TCXO GND/NC:TCXO

Unit in mm
1mm = 0.0394 inches

Recommended Soldering Pattern



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1uF as close to the part as possible between Vcc and GND PAD

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f_0		5		52	MHz	
RF Output							
Output Waveform				CMOS			
Load				15		pF	
Output Level High			0.9*V_{cc}			V	
Output Level Low					0.1*V_{cc}	V	
Duty Cycle			45		55	%	
Output Waveform				Clipped Sine			
Load				10k//10pF		Kohm/pF	
Output Level			0.8			Vp-p	
Start Time					5	ms	
Tri-state		Disable			1.5 for 2.5V supply. 0.99 for 3.3V supply	V	
		Enable	3.5 for 2.5V supply. 2.31 for 3.3V supply			V	
Power Supply							
Voltage	V_{cc}	±5%		2.5/3.3		V	See ordering section
Current		CMOS output			6.0	mA	
		Clipped sine output			3.5	mA	
Control Voltage							
Control Voltage	V_c		0.5		2.5	V	
Pulling Range			±5.0			ppm	
Vc Impedance			100			Kohm	
Frequency Stability							
Versus Temperature					±0.28	ppm	
Overall, 20 Years					±4.6	ppm	Note1
Holdover Stability					±0.37	ppm	Note2
Phase Noise @10MHz		@100Hz		-120		dBc/Hz	
		@1KHz		-140			
		@10KHz		-148			
Environmental Conditions							
Operating temperature range		-40°C to +85°C (see ordering section)					
Storage temperature range		-55°C to +125 °C					

Note1: Including calibration @ 25°C, supply voltage Vcc±5%, load 15pF±5%, reflow soldering, 20 years aging and frequency stability over temperature.

Note2: Including 24hours aging, supply voltage Vcc±5% and frequency stability over temperature.

Ordering Information

TCXO7500BM02-STR3-XXMHz	-	01	02	03
Group		Code		

For example, TCXO7500BM02-STR3-10MHz-222 denotes the TCXO has the following specifications:

Frequency:	10MHz
Temperature Range:	-40°C to +85°C
Supply Voltage:	3.3V
Output Waveform	Clipped sine

01	**Temperature Range**
Code	Specification
1	-20°C to +70°C
2	-40°C to +85°C

02	**Supply Voltage**
Code	Specification
1	2.5 V
2	3.3 V

03	**Output Waveform**
Code	Specification
1	CMOS
2	Clipped Sine

Note: This is the general datasheet, for reference only.
For the detail datasheet, pls contact us.