

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

40MHz Frequency 5V Supply voltage CMOS Output waveform ±0.2ppm Stability Vs -20C --+70C 7x5mm Size -135dBc/Hz @1KHz phase noise value

Typical Applications

SATCOM System Cellular Base Stations Radar Applications

Description

#4

#1

9±0.2

5±0.2

TCXO7500BM-40MHz-B is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

TCXO7500BM-40MHz-6

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Mechanical Drawing & Pin Connections

#3

#2

Top View

7±0.2

Side View

1mm = 0.0394 inches

Unit in mm



Pin	Funttion					
#1	N.C/GND					
#2	GND					
#3	Output					
#4	VDD					

Recommend Soldering Pattern

Drawing No:

MD160036-1



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 graphs without notification to potential customers who may have earlier revisions in their possession.



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Specifications

Oscillator	Sum	Condition	Value			Unit	Noto		
Specification	Sym	Condition	Min.	Тур.	Max.	Onic	NOLE		
Operational Frequency	Fnom			40		MHz			
RF Output									
Signal Waveform			CMOS						
Load	R∟		15pf						
H-Level Voltage	V _H		4.5			V			
L- Level Voltage	VL				0.5	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					2	mS			
Power Supply									
Supply Voltage	Vs		4.5	5	5.5	V			
Current		At maximum supply voltage			8	mA			
Frequency Stability									
Versus Operating Temperature Range		-20C+70C	-0.2		+0.2	ppm	Referenced to the midpoint between minimum and		
							maximum frequency value		
Nominal Frequency Tolerance		Frequency at 25 C, 1hour after 2 times reflow.	-2.0		+2.0	ppm			
Versus supply voltage	Vs	±5% change	-0.2		+0.2	ppm			
Aging 1 st Year		at 25 C	-1		+1	ppm			
SSB Phase noise		10Hz		-85		dBc/Hz			
		100Hz		-115		dBc/Hz			
		1kHz		-135		dBc/Hz			
		10kHz		-148		dBc/Hz			
Environmental, Mechanical Conditions									
Operating temperature range	-20°C to -	+70°C							
Storage temperature range	-40°C to 85°C								
Thermal Shock	MIL-STD-883 1010 Condition B, JESD22-A104 Condition B under -55C , 125C ; soak time is 10 mins, with total 200 cycles								
Vibration Test	MIL-STD-883 2007 Condition A, JESD22-B103 Condition 1 under 10~2000Hz, 1.52mm, 20G, each axis for 4hrs								
Mechanical Shock	MIL-STD-883 2002 Condition B, JESD22-B104 Condition B under 1500G, half-sine, 0.5ms, each axis for 3 times								