



Features and Benefits

- 30.72MHz Frequency
- 3.3V Supply voltage
- CMOS Output waveform
- ±0.25ppm Stability Vs -40C --+85C
- 7x5mm Size
- 135dBc/Hz @1KHz phase noise value

Typical Applications

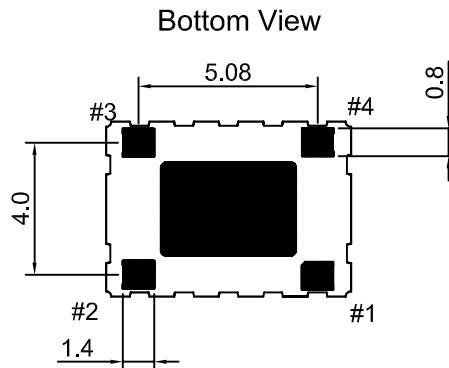
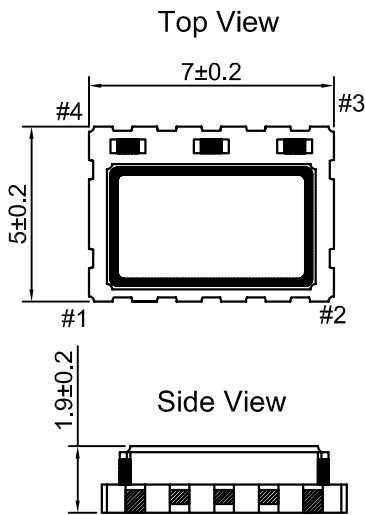
- SATCOM System
- Cellular Base Stations
- Radar Applications

Description

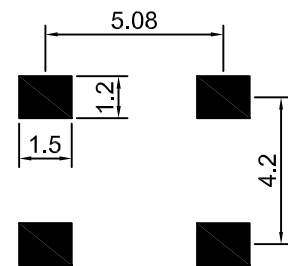
TCXO7500S-30.72MHz-A-V are designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections

Drawing No: MD160036-1



Recommend Soldering Pattern



Pin	Function
#1	VCON
#2	GND
#3	Output
#4	VDD

Unit in mm
1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F _{nom}			30.72		MHz	
RF Output							
Signal Waveform			CMOS				
Load	R _L		15pF				
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%			8	nS	
Start time					2	mS	
Power Supply							
Supply Voltage	V _s		3.13	3.3	3.47	V	
Current		At maximum supply voltage			6	mA	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)		Referenced to VCON at 1.5V	±5			ppm	
EFC voltage	V _c		0.5	1.5	2.5	V	
Linearity					+10	%	
Vcon Input Impedance		Measured between VCON and GND pin	100			kohm	
Frequency Stability							
Versus Operating Temperature Range		-40C --+85C	-0.25		+0.25	ppm	Referenced to the midpoint between minimum and maximum frequency value
Nominal Frequency Tolerance		Frequency at 25 oC, 1hour after reflow.	-2.0		+2.0	ppm	
Versus supply voltage	V _s	±5% change	-0.2		+0.2	ppm	
Aging 1 st Year			-1		+1	ppm	
SSB Phase noise		100Hz		-115		dBc	
		1kHz		-135		dBc	
		10kHz		-150		dBc	
		100kHz		-152		dBc	
Environmental, Mechanical Conditions							
Operating temperature range	-40 °C to +85 °C						
Storage temperature range	-55 °C to 125 °C						
Thermal Shock	MIL-STD-883 1010 Condition B, JESD22-A104 Condition B under -55 oC , 125 oC ; 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						