



Features and Benefits

- Frequency range:1000MHz
- Supply voltage:3.3V
- Current: 40mA Max.
- Frequency stability vs. temperature: ± 50 PPM
- Aging: ± 2 PPM 1st year
- Operating temperature: -40°C to +85°C
- Size: 7x5x1.7mm
- Package type: SMD

Typical Applications

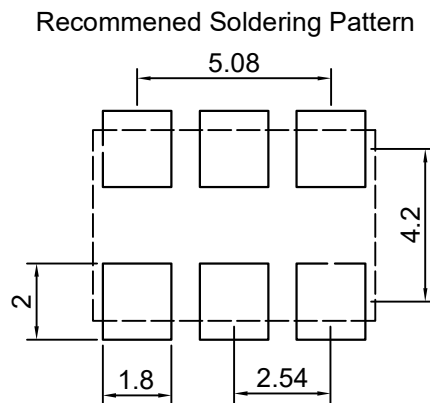
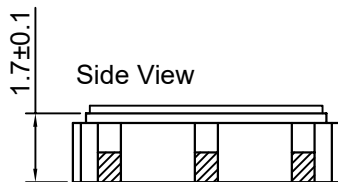
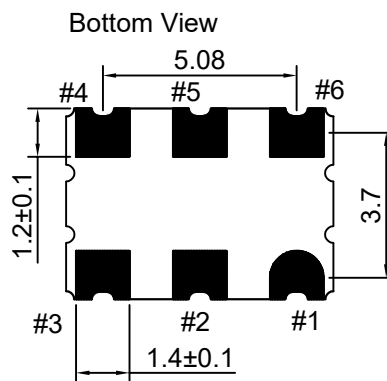
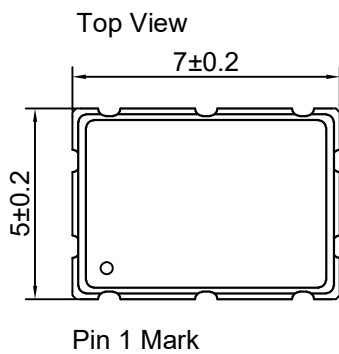
- Wearable device
- Sport Video Cams
- Ultra-small Notebook PC
- Mobile Phones
- Digital Circuit

Description

XO7500BL-1000MHz-A is the ultra-low jitter crystal oscillator. It can be widely used in the digital circuit and communication applications.

Mechanical Drawing & Pin Connections

Drawing No: MD240077-1



PIN	Function
PAD #1	OE
PAD #2	N.C.
PAD #3	GND
PAD #4	Output
PAD #5	Complementary
PAD #6	Supply Voltage

Unit in mm
1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f ₀			1000		MHz	
RF Output							
Output Wave			LVDS Differential				
Output Load		between output and complementary output		100		ohm	
Output Level High				1.4	1.6	V	
Output Level Low			0.9	1.1		V	
Output swing			250		450	mV	
Rise / Fall Time		@20%-80%		0.2	0.4	ns	
Duty Cycle			45	50	55	%	
Startup Time					10	ms	
OE Control on Pad 1 (Open connection prohibit.)			If V _{cc} x 70% (min.) is applied : Output. Enable Oscillation enable time : 200 n sec. (max.)				
			If V _{cc} x 30% (max.) is applied : Output Disable Oscillation disable time : 50 n sec. (max.) Current consumption is 16 mA (max.)				
Power Supply							
Voltage	V _{cc}	±10%		3.3		V	
Current		measured with terminating resistors			40	mA	
Current with output disabled				16		mA	
Frequency Stability							
Vs. Temperature		@-40°C to +85°C	-50		+50	ppm	
Aging		1 st year	-2		+2	ppm	
Phase noise		10Hz		-55		dBc/Hz	
		100Hz		-85			
		1KHz		-109			
		10KHz		-116			
		100KHz		-118			
		1MHz		-139			
		10MHz		-146			
Integrated Phase Jitter		12KHz-20MHz		1.3		ps	
Environmental Conditions							
Operating temperature range	-40°C to +85°C						
Storage temperature range	-55°C to +150 °C						
Temperature Cycling Test	(1) Extreme Cold Temp: -55 °C (+0/-10°C)/ 15±3min; (2) Extreme Hot Temp: +125 °C (+15/-0°C)/ 15±3min; (3) 10 cycles min Result: Frequency and wave form of tested products must remain within specifications.						
Thermal Shock Test	Temperature -55(+0/-10) °C to 125(+10/-0) °C with Duration of cycle 15 times(min); ExTotal Transfer Time < 10 seconds; Total Dwell time > 2minutes; Specified Temp reached in < 5 minutes;						



	Result: Frequency and wave form of tested products must remain within specifications.
Low Temperature Test	Temperature -50°C±5 °C with Duration of test 168hours(min); Result: Frequency and wave form of tested products must remain within specifications.
Accelerated Life Test(Aging Biased)	Temperature +85°C±5°C with Duration of test 168hours±6hours; Result: DC Power supply; Frequency and wave form of tested products must remain within specifications.
Salt Spray Test	Temperature 35°C with Duration of test 24 hours; NaCl 5%; Result: There Should be no rust on surface of products
Humidity Test	Temperature: 85°C±5 °C; Relative humidity:85%±5°C; Duration of test:168 hours(min); Result: Frequency and wave form of tested products must remain within specifications.
Vibration Test	Freq. range: 20~2000Hz Peak to Peak; amplitude:1.52mm Peak acceleration:20G(98m/s2); 3direction(X,Y,Z),each 20min, 4cycles; Result: Frequency and wave form of tested products must remain within specifications.
Drop Test	Method of drop: Free drop; Dropping floor: Hard wood board; Height: 75 cm +1/-0cm; Number of drops: 3 times; Result: Frequency and wave form of tested products must remain within specifications.

Note:

1. DEI requires the copy of this specification returned with approved.
2. Any change to these specification have to be agreed by both parties and new revision of the specification will be issued.