



XO5153 Series Dual Oven Crystal Oscillators

FEATURES

- Tight stability < 0.5ppb
- Low Phase Noise
- Low Aging
- Low G and Low Spurious

APPLICATIONS

- Electronic Warfare
- Satcom
- Telecom



SPECIFICATIONS at 10MHz

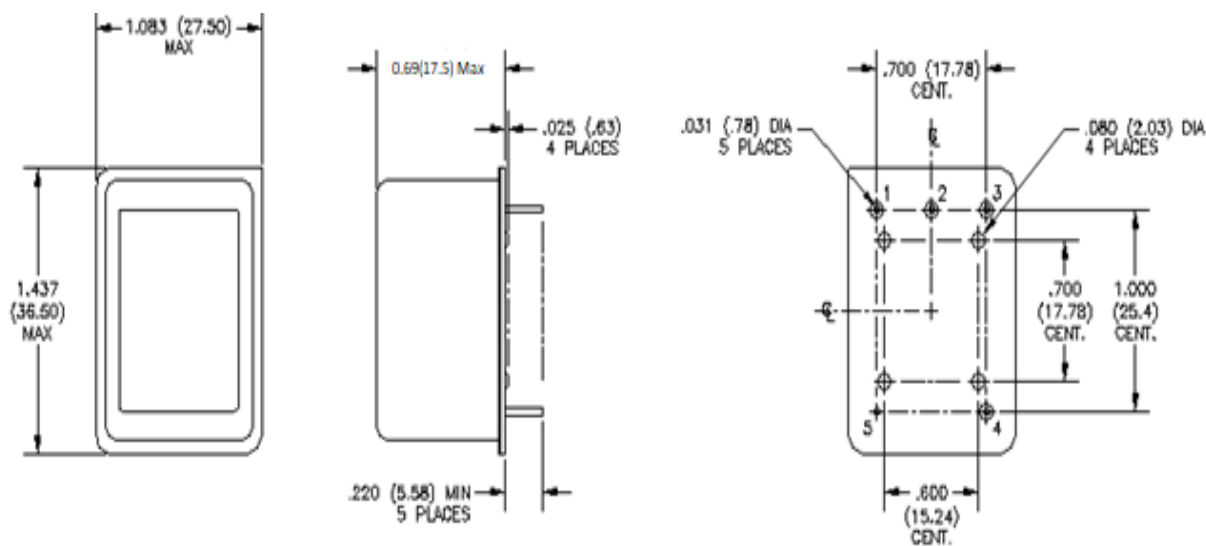
Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency (RF Output)	FO		10		MHz	
Frequency Stabilities						
vs. Temperature	$\Delta F/T/F$	-0.25		+0.25	ppb	Over the Operating Temperature Range
vs. Supply voltage variation		-0.2		+0.2	ppb	5% change in supply voltage
Daily Aging		-0.1		+0.1	ppb	After 30-days Power On
1 Year Aging		-30		+30	ppb	
20-Years Aging		-600		+600	ppb	
Retrace			+/-100		ppb	24 hours OFF and after 30 minutes ON
Allan Deviation			1E-12			1sec
RF Output						
Output Type		Sinewave				
Output Level		+10			dBm	
Output Load			50		Ω	$\pm 10\%$
Additional Parameters						
Control Voltage(Vc)		0	2.5	5.0	V	
Tuning			+/- 2.0		ppm	
Tuning slope		Positive				
Input Impedance		10			kohm	At Vc pin

Modulation Bandwidth		150			Hz	
Phase-Noise (Under Static Conditions)				-95	dBc/Hz	1Hz Offset
				-120	dBc/Hz	10Hz Offset
				-140	dBc/Hz	100Hz Offset
				-150	dBc/Hz	1kHz Offset
				-162	dBc/Hz	10kHz Offset
				-162	dBc/Hz	100kHz Offset
Harmonics				-45	dBc	
Sub-Harmonics				-45	dBc	
Spurious				-80	dBc	
g-sensitivity				0.3	ppb/g	Worst case axis
Warm-up time			3	5	minutes	Test Condition(@ 25°C): Oscillator turned ON after 24hrs OFF. Frequency change 5 minutes after turn ON will be within ± 0.1 ppm of Long-term stable nominal frequency. Test Condition (@ 0°C):
Start-up time				1	sec	Output level to be 90% of max output level
Temperature, Supply Voltage & Power Consumption						
Operating Temperature	OTR	-40		+85	°C	Full Specification Compliance
Operating Voltage	VCC	+11.5	+12.0	+12.5	VDC	
Power Consumption				2	Watts	Steady state @ 25°C, In Still Air
				7	Watts	@ Start-up @ -30C

Environmental Conditions:

Seal	Hermetic
RoHS	Full RoHS Compliance
Mechanical Shock	Per MIL-STD-202, 30G, 11ms
Vibration	Per MIL-STD-202, 5G 50Hz to 2KHz

Outline



DIMENSIONS ARE SHOWN IN INCHES (MM)
PIN NUMBERS SHOWN FOR REFERENCE ONLY

Pin	Function
1	V _{TUNE}
2	V _{ref}
3	Supply Voltage
4	RF _{OUT}
5	Ground