



## Specification for High Frequency Sine wave Output OCXO Series MtronPTI P/N: XO9095 Series

MtronPTI introduces a small form factor high frequency XO9095 OCXO series that has multiplier stages to generate high frequency signal between 200MHz to 6GHz. XO9095 OCXO series offers exceptional stability, low phase noise and low-g sensitivity.

**Key Features:**

Standard Frequencies: 1GHz, 1.28GHz, 2GHz, 4GHz, 6GHz

Various custom output frequencies available upto 6GHz

Low Phase Noise

Low Aging

Low Spurious

Product Classification: EAR99

**Applications:**

Radar

GPS

Test Equipment

EW

Satcom



**Representative Electrical Specifications at 1.28GHz:**

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency (RF Output)	FO		1.28		GHz	
<b>Frequency Stabilities</b>						
vs. Temperature	$\Delta F_T/F$	-100		+100	ppb	Over the Operating Temperature Range
vs. Supply voltage variation		-10		+10	ppb	5% change in supply voltage
Daily Aging		-5.0		+5.0	ppb	After 30-days Power On
1 Year Aging		-0.5		+0.5	ppm	
20-Years Aging		-2.0		+2.0	ppm	
Retrace			+/-100		ppb	24 hours OFF and after 30 minutes ON
Allan Deviation			1E-10			0.1 sec to 10 sec
<b>RF Output</b>						
Output Type		Sinewave				
Output Level		+10			dBm	
Output Load			50		$\Omega$	$\pm 10\%$
<b>Additional Parameters</b>						
Control Voltage(Vc)		0	2.25	4.5	V	
Tuning			+/- 2.5		ppm	
Tuning slope		Positive				
Input Impedance		10			kohm	At Vc pin



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Modulation Bandwidth		150			Hz	
Vref			4.5		V	
Phase-Noise (Under Static Conditions)				-76	dBc/Hz	10Hz Offset
				-110	dBc/Hz	100Hz Offset
				-135	dBc/Hz	1kHz Offset
				-151	dBc/Hz	10kHz Offset
				-154	dBc/Hz	100kHz Offset
Harmonics				-45	dBc	
Sub-Harmonics				-45	dBc	
Spurious				-80	dBc	
g-sensitivity				0.7	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 ±0.1ppm of Long-term stable nominal frequency.
Start-up time				1	sec	Output level to be 90% of max output level
<b>Temperature, Supply Voltage &amp; Power Consumption</b>						
Operating Temperature	OTR	-40		+85	°C	Full Specification Compliance
Operating Voltage	VCC	+4.75	+5.0	+5.25	VD	
Power Consumption				2.0	Watts	Steady state @ 25°C, In Still Air
				3.0	Watts	@ Start-up @ -30C
<b>Absolute Maximum Ratings (operable only)</b>						
Supply voltage				+5.5	VD	
Operable Temperature		-55		+85	°C	
Storage Temperature	STR	-55		+100		
Output Load		45		55	Ω	

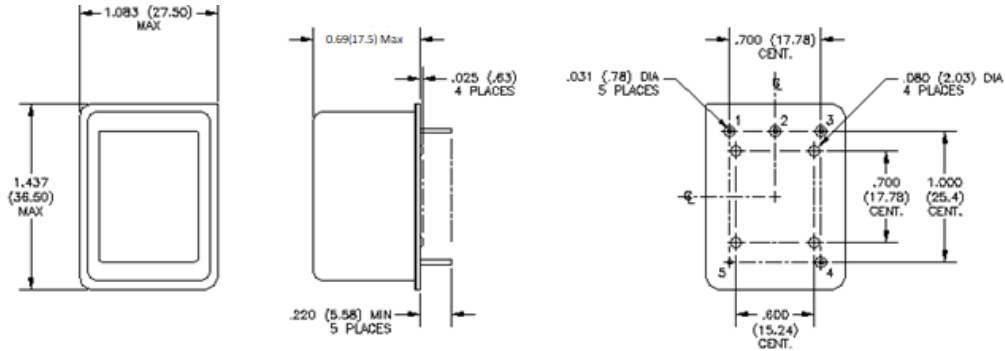
**Environmental Conditions:**

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



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### Mechanical, Marking and Layout Information:



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

Pin	Function
1	V <sub>TUNE</sub>
2	V <sub>ref</sub>
3	Supply Voltage
4	RF <sub>OUT</sub>
5	Ground

Part Marking
XO9095
Serial Number
Date Code

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES  
 DECIMALS  
 .XX ± .01  
 .XXX ± .005

### Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
04-26-19	A	DPD	Preliminary Release