

## Specification for a Sine Output Thru-Hole OCXO

### MtronPTI P/N: XO5123-040R

#### Electrical Specifications:

Unless otherwise specified; T = +25°C, V<sub>S</sub> = +5V<sub>DC</sub>, V<sub>C</sub> = +0V<sub>DC</sub>, Load = 50Ω

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F <sub>0</sub>		10.000000		MHz	
Initial Frequency		-0.1		+0.1	ppm	At time of shipment
<b>Frequency Stabilities</b>						
vs. Temperature Range		-10		+10	ppb	-40°C to +85°C
vs. Supply Voltage		-2.0		+2.0	ppb	±5% change in voltage
vs. Load		-2.5		+2.5	ppb	±5% change in load
Aging/Day		-0.5		+0.5	ppb	After 30-days Power On
Aging/Year		-0.1		+0.1	ppm	
Short Term Stability (Allan deviation)			5		x10 <sup>-12</sup>	Per Second.
<b>RF Output</b>						
Output Type			Sinewave			
Output Load			50		Ω	±5%
Level	V <sub>OH</sub>	+10			dBm	In a 50Ω load
<b>Frequency Adjustment</b>						
Method			External Voltage Tuned			
Tuning Slope			Negative			
Tuning Voltage	V <sub>TUNE</sub>	-5	0	+5	V <sub>DC</sub>	
Tuning Sensitivity			-1.6		Hz/V	Over tuning voltage range
Modulation Bandwidth		1			kHz	
<b>Other Parameters</b>						
SSB Phase Noise (under static conditions)			-105		dBc/Hz	@ 1Hz Offset
				-137		@ 10Hz Offset
				-155		@ 100Hz Offset
				-162		@ 1kHz Offset
				-169		@ 10kHz Offset
				-169		@ 100kHz Offset
Warm-up Time	ΔF/F			5	Minutes	To be within ±100ppb, @ 25°C, referenced to the frequency after 24-hour power on
Harmonics				-30	dBc	
Spurious				-80	dBc	
<b>Supply Voltage &amp; Power Consumption</b>						
Supply Voltage	V <sub>S</sub>	4.75	5.0	5.25	V <sub>DC</sub>	
Power Consumption				2.5	Watts	Steady state @ 25°C, in still air
				4.5	Watts	In still air @ turn on
Osc Disable Logic		Pin 4: CMOS Logic levels '0' : Oscillator Disabled Pin 4: CMOS Logic levels '1' : Oscillator Enabled				
Oven Monitor				0.5	V <sub>DC</sub>	Pin 7: Oven Not Ready
		3.3			V <sub>DC</sub>	Pin 7: Oven Ready

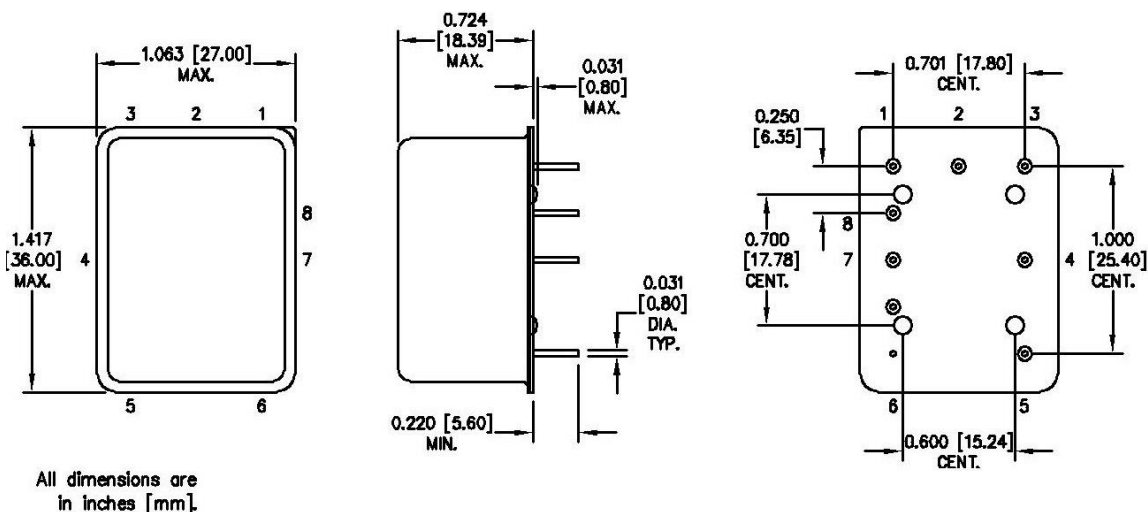
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### Environmental Conditions:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Operating Temperature	OTR	-40		+85	°C	
Storage Temperature	STR	-55		+85	°C	
Vibration (survival)	Per MIL-STD 202G, Method 204, Condition A					
Shock (survival)	Per MIL-STD 202G, Method 213, Condition C					
Solderability	Per EIAJ-STD-002					
RoHS	Full RoHS Compliance					

### Mechanical, Marking and Pinout Information:

Pin	Function
1	V <sub>TUNE</sub>
2	N/C
3	Supply Voltage
4	Enable / Disable
5	RF <sub>OUT</sub>
6	Ground
7	Oven Monitor
8	N/C



### Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
12-07-16	B	DD	OT changed to -40C to +85C from -20C to +70C
10-19-16	A	DD	Preliminary Specification