



Specification for a Sine Output Thru-Hole OCXO

MtronPTI P/N: XO5123-034R

Electrical Specifications:

Unless otherwise specified; $T = +25^{\circ}\text{C}$, $V_S = +12\text{V}_{\text{DC}}$, $V_C = +2.5\text{V}_{\text{DC}}$, Load= 50 Ω

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F_0		10.000000		MHz	
Initial Frequency		-0.1		+0.1	ppm	At time of shipment
Frequency Stabilities						
vs. Temperature Range		-10		+10	ppb	-40°C to +90°C
vs. Supply Voltage		-2.5		+2.5	ppb	±5% change in voltage
vs. Load		-2.5		+2.5	ppb	±5% change in load
Aging/Day		-1		+1	ppb	After 30-days Power On
Aging/Year (extrapolation)		-50		+50	ppb	
Short Term Stability (Allan deviation)				5	$\times 10^{-11}$	Per Second.
RF Output						
Output Type			Sinewave			
Output Load			50		Ω	±5%
Level	V_{OH}	+5		+10	dBm	In a 50 Ω load
Frequency Adjustment						
Frequency Adjustment						
Method						External Voltage Tuned
Tuning Slope						Positive
Tuning Voltage	V_{TUNE}	0	2.5	+5	V_{DC}	
Tuning Range		±0.5		±1.5	ppm	
Input Impedance			100		k Ω	
Linearity				10	%	
Other Parameters						
SSB Phase Noise (under static conditions)			-120		dBc/Hz	@ 10Hz Offset
			-140			@ 100Hz Offset
			-145			@ 1kHz Offset
			-152			@ 10kHz Offset
			-155			@ 100kHz Offset
Warm-up Time	$\Delta F/F$			5	Minutes	To be within ±100ppb, @ 25°C, referenced to the frequency after 24-hour power on
Harmonics				-30	dBc	
Spurious				-80	dBc	
Supply Voltage & Power Consumption						
Supply Voltage	V_S	11.4	12.0	12.6	V_{DC}	
Power Consumption				2.5	Watts	Steady state @ 25°C, in still air
				4.5	Watts	In still air @ turn on

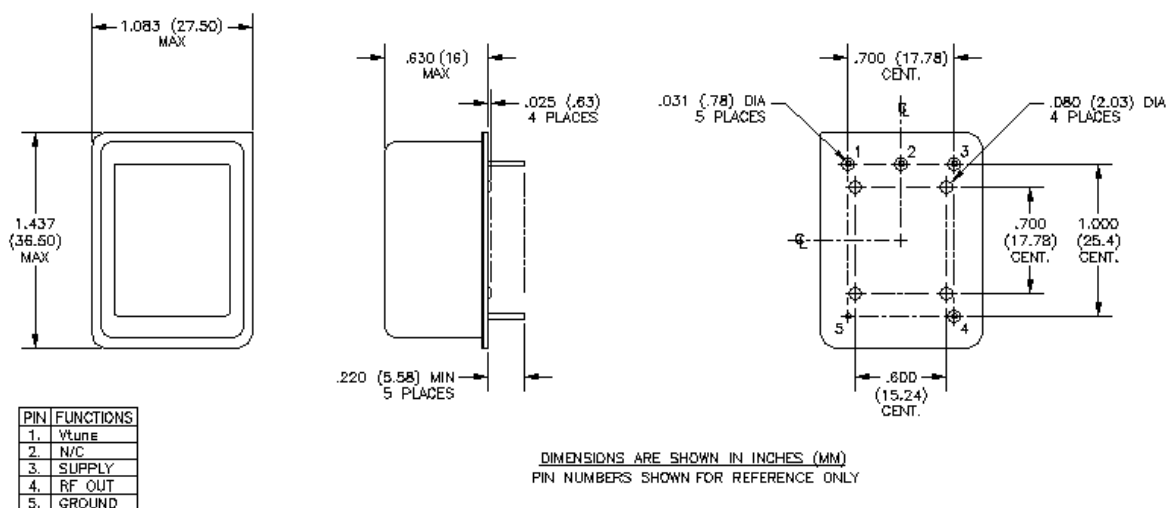


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Environmental Conditions:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Operating Temperature	OTR	-40		+90	°C	
Storage Temperature	STR	-45		+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 _{TUNE}
2	N/C
3	Supply Voltage
4	RF _{OUT}
5	Ground

Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
02-01-12	0	BRM	Original Release.