

Specification for a Sinewave Output Thru-Hole OCXO

MtronPTI P/N: XO5085-019R

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F ₀		100.000000		MHz	
Frequency Stabilities						
vs. Temperature	$\Delta F_T/F$	-500		+500	ppb	Peak-Peak over the operating temperature range
10-Years Aging		-1		+1	ppm	After 30-days Power On
Short Term Stability (ADEV)			1×10^{-11}			Tau = 1sec
RF Output						
Output Type		Sinewave				
Output Level			+10		dBm	Into a 50 Ω Load
Output Load			50		Ω	$\pm 10\%$
Frequency Adjustment						
Adjustment Method		External Voltage				
Adjustment Voltage	V _{TUNE}	0		+10	V _{DC}	
Adjustment Range		Sufficient for 10-years adjustment for all causes				
Tuning Slope		Positive				
Input Impedance		1			M Ω	
Modulation Bandwidth		1			kHz	
Additional Parameters						
Phase Noise (Under Static Conditions)			-100		dBc/Hz	@ 10Hz Offset
			-132		dBc/Hz	@ 100Hz Offset
			-162		dBc/Hz	@ 1kHz Offset
			-170		dBc/Hz	@ 10kHz Offset
			-170		dBc/Hz	@ 100kHz Offset
Phase Noise (Under Dynamic Conditions, 0.06g ² /Hz 10Hz to 1000Hz, 0.015g ² /Hz @ 2000Hz, 10G _{RMS})			-65.7		dBc/Hz	@ 10Hz Offset
			-75.2		dBc/Hz	@ 30Hz Offset
			-85.7		dBc/Hz	@ 100Hz Offset
			-95.2		dBc/Hz	@ 300Hz Offset
			-99.7		dBc/Hz	@ 500Hz Offset
			-105.7		dBc/Hz	@ 1kHz Offset
			-117.7		dBc/Hz	@ 2kHz Offset
Harmonics				-30	dBc	
Spurious				-80	dBc	
G-sensitivity				0.2	ppb/g	
Warm-up Time				5	minutes	@ 25°C, relative to 2-hrs after turn-on following 24-hrs off. To within ± 0.1 ppm of final frequency.

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Temperature, Supply Voltage & Power Consumption						
Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+105	°C	
Operating Voltage	V _S	+11.4	+12.0	+12.6	V _{DC}	
Power Consumption				1.5	Watts	Steady state @ 25°C, In Still Air
				5.0	Watts	@ Warm-up

Environmental Conditions:

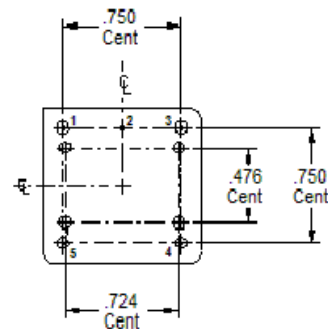
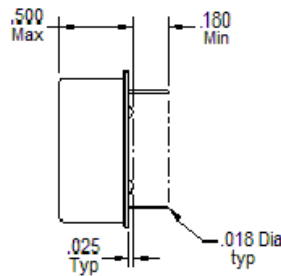
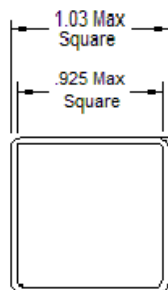
MSL	Level 1
Seal	Hermetic
Altitude (operating)	40,000-ft
Vibration (operating)	10Hz to 1000Hz 0.06g ² /Hz, 100Hz to 2000H -6dB/Octave, 10g's RMS
Shock (survival)	12g for 11msec, three axes (secure when mounting using MIL-Grade epoxy)
Humidity	95% to 100% relative humidity (+28°C to +85°C)

Mechanical, Marking and Layout Information:

Part Marking	
Line 1	MtronPTI
Line 2	XO5085-019R
Line 3	100.0000MHz
Line 4	Serial Number
Line 5	Date Code

Legend	
yy	Year
ww	Work Week

Pin	Function
1	RF Output
4	Case Ground
7	V _{TUNE}
13	N/C
19	Supply Voltage



Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
08/20/14	B	DPD	Updated to ROHS compliant part
07/29/14	A	BRM	Updated the Short Term Stability (ADEV) specifications point.
03/05/14	-	BRM	Original Release.