

Specification for a Sine Output OCXO

MtronPTI P/N: XO5089-016R

Electrical Specifications:

Unless otherwise specified; $T = +25^{\circ}\text{C}$, $V_S = +5V_{DC}$, $V_C = +2.5V_{DC}$, Load= 50 Ω

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F_0		10.000000		MHz	
Initial Frequency		-50		+50	ppb	At time of shipment
Frequency Stabilities						
vs. Temperature Range		-10		+10	ppb	-40°C to +85°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		-0.5		+0.5	ppb	After 30-days Power On
90-Day Aging		-20		+20	ppb	
Aging/Year		-40		+40	ppb	
Aging (10 year)		-350		+350	ppb	
Short Term Stability (Allan deviation)				1	$\times 10^{-11}$	Per Second.
RF Output						
Output Type	Sinewave					
Output Load			50		Ω	±5%
Level			+10		dBm	In a 50 Ω load
Frequency Adjustment						
Method	External Voltage Tuned					
Tuning Slope	Positive					
Tuning Voltage	V_{TUNE}	0		+5	V_{DC}	
Other Parameters						
Low Phase Noise						
				-112	dBc/Hz	@ 1Hz Offset
				-142		@ 10Hz Offset
				-155		@ 100Hz Offset
				-162		@ 1kHz Offset
				-170		@ 10kHz Offset
				-170		@ 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	4.75	5.0	5.25	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		+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					

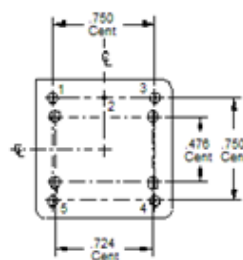
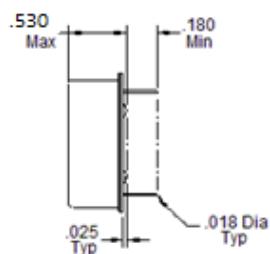
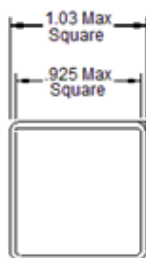
Mechanical, marking and pin out Information:

Part Marking	
Line 1	MtronPTI
Line 2	XO5089-016R
Line 3	10.0000MHz
Line 4	Serial Number
Line 5	Date Code

Pad	Function
1	RF Output
2	Case Ground
3	VTUNE
4	NC
5	Supply Voltage

Legend	
yy	Year
ww	Work Week

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



Pin Numbers Shown For Reference Only
All Dimensions are in Inches

Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
04-17-19	A	BRR	Preliminary Release.