



## Specification for an HCMOS OCXO

### MtronPTI P/N: XO5084-068R

#### Electrical Specifications:

Unless otherwise specified; T = +25°C, V<sub>CC</sub> = +5V<sub>DC</sub>, C<sub>L</sub> = 15pF, V<sub>TUNE</sub> = +2.1V<sub>DC</sub>

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F <sub>0</sub>		10.000000		MHz	
Initial Tolerance		-100		+100	ppb	@ Time of shipment with nominal V <sub>TUNE</sub> = +2.1V <sub>DC</sub>
Frequency Stabilities						
Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
vs. Temp.range		-10		+10	ppb	T= -40°C to +85°C
vs. Supply Voltage		-5		+5	ppb	±5% change in Supply Voltage
vs. Load		-5		+5	ppb	±5% change in Load
Daily Aging		-0.4		+0.4	ppb	After 30-days operation
Yearly Aging		-50		+50	ppb	
RF Output						
Output Type		HCMOS				
Output Load			15		pF	Nominal
Symmetry (duty cycle)		45	50	55	%	@ 50%V <sub>CC</sub>
Rise/Fall Time	T <sub>R</sub> /T <sub>F</sub>			10	ns	From 10% to 90% V <sub>OUT</sub>
Logic “1” Level	V <sub>OH</sub>	+4.5			V <sub>DC</sub>	
Logic “0” Level	V <sub>OL</sub>			+0.5	V <sub>DC</sub>	
Frequency Adjustment						
Method		External Voltage				
Tuning Voltage	V <sub>TUNE</sub>	0		+4.2	V <sub>DC</sub>	
Tuning Range		±0.5	±1.0		ppm	Sufficient to correct for all causes for 20-years
Reference Voltage	V <sub>REF</sub>		+4.2		V <sub>DC</sub>	
V <sub>REF</sub> Source Current				2.0	mA	
Slope		Positive				
SSB Phase Noise						
SSB Phase Noise, Under Static Conditions			-95		dBc/Hz	@ 1Hz Offset
			-120		dBc/Hz	@ 10Hz Offset
			-140		dBc/Hz	@ 100Hz Offset
			-155		dBc/Hz	@ 1kHz Offset
			-155		dBc/Hz	@ 10kHz Offset
Temperature and Supply Voltage						
Operating Temperature		-40		+85	°C	
Storage Temperature		-45		+85	°C	
Operating Voltage	V <sub>CC</sub>	4.75	5.0	5.25	V <sub>DC</sub>	
Power Consumption			1.25		Watts	Steady state @ 25°C, In Still Air
				3.5	Watts	@ warm-up
Warm-up Time	ΔF/F		2	3	Minutes	To be within ±100ppb of the frequency after 1-hour of operation after 24-hours off

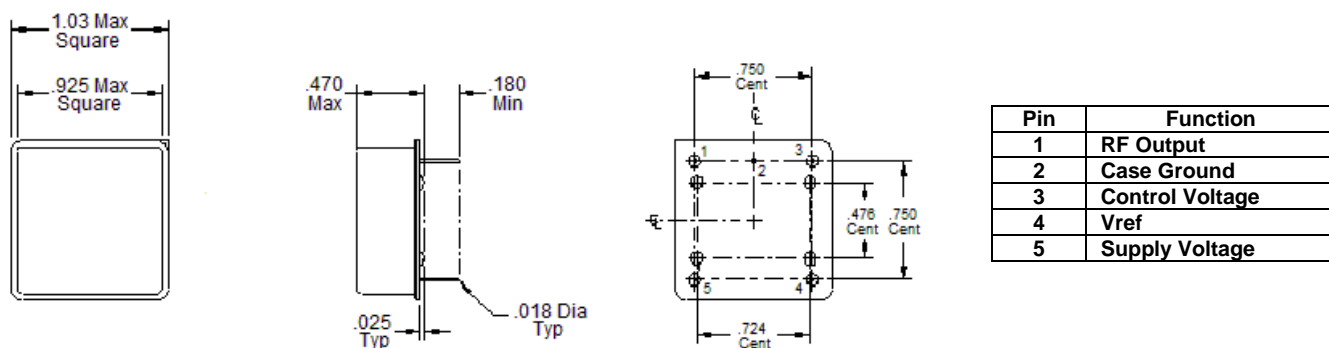


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### Additional Conditions:

Solderability	Per EIAJ-STD-002
RoHS	Full RoHS Compliance.

### Package and marking Information:



Pin Numbers Shown For Reference Only  
All Dimensions are in Inches

Figure 1: XO5084-068R Package Outline Drawing

Part Marking	
Line 1	MtronPTI
Line 2	XO5084-068R
Line 3	10.000MHz
Line 4	Serial Number
Line 5	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
11-17-17	1	MM	Removed Harmonics Specification.
03-09-17	0	DPD	Original Release.