

## Specification for an LVC MOS SMD OCXO

### MtronPTI P/N: XO5084-063sR

#### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F <sub>O</sub>		40.000000		MHz	
Frequency Stabilities						
vs. Temperature	ΔF <sub>T</sub> /F	-20		+20	ppb	over operating temperature range
vs. Supply Voltage	ΔF <sub>VDD</sub> /F	-3		+3	ppb	+/- 100mV change in Voltage
1 Year Aging				±0.25	ppm	At the time of Shipment
10 year Aging ( long term stability)				±1.0	ppm	After 30 days continuous operation @ +25°C : For all causes that includes F/T, supply sense and aging
Frequency Adjust						
Adjustment Method		External Voltage				
Adjustment Voltage	V <sub>tune</sub>	0		5	V <sub>dc</sub>	
Tuning			+/- 2		ppm	
Adjustment Slope		Positive				
RF Output						
Output Type		CMOS				
Output Load			15		pF	
Symmetry (duty cycle)	T <sub>DC</sub>	47.5	50	52.5	%	@ 50% of waveform
Logic “1” Level	V <sub>OH</sub>	4.8			V	
Logic “0” Level	V <sub>OL</sub>			0.2	V	
Temperature and Supply Voltage						
Operating Temperature	T <sub>A</sub>	-40		+85	°C	
Storage Temperature	T <sub>S</sub>	-50		+90	°C	
Operating Voltage	V <sub>DD</sub>	4.75	5	5.25	V	
Power Consumption			1.5		W	Steady state @ 25°C In still air
				5	W	@ warm-up
Warm-up Time (Restabilization)				5	Minutes	Time to be within ±100 ppb of the frequency after 24 hours of operation @ 25°C
Additional Parameters						
Phase Noise (under static conditions)				-90	dBc/Hz	10 Hz
				-117	dBc/Hz	100 Hz
				-147	dBc/Hz	1KHz
				-157	dBc/Hz	10 KHz
				-157	dBc/Hz	100 KHz
G-sensitivity				0.5	ppb/g	Worst case axis

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### Environmental Conditions:

Mechanical Shock	Per MIL-STD-202, Method 213, (2000 g's, 0.3 ms duration, ½ Sinewave)
Vibration (survival)	Per MIL-STD-202, Method 201 & 204 (10 g's from 20-2000 Hz)
Solderability	Per EIAJ-STD-002
Soldering Conditions	220C peak for 10 sec or hand solder
RoHS	Full RoHS 6 Compliance except surface mountable board would be attached with Sn10.

### Mechanical, Marking and Layout Information:

Part Marking	
Line 1	MtronPTI
Line 2	XO5084-063sR
Line 3	40.0000MHz
Line 4	Serial Number
Line 5	Date Code

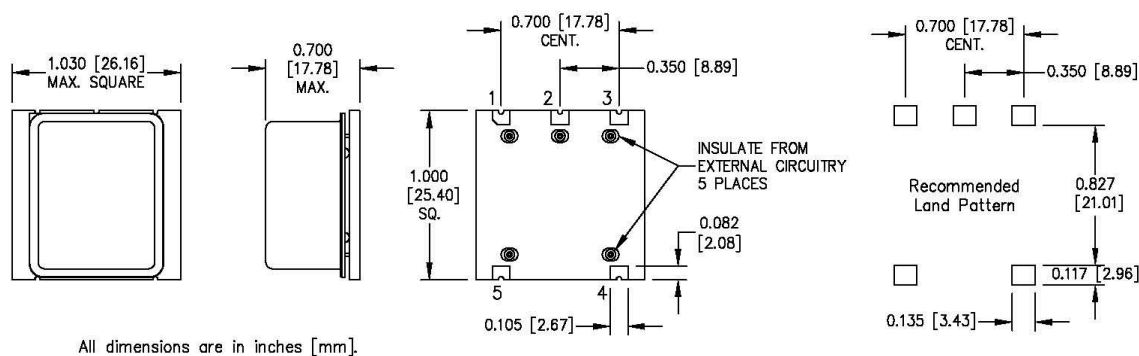


Figure 1

### Data Sheet Revision Table:

Date	Rev.	Author.	Details of Revision
10-20-15	E	DPD	Phase noise spec firmed up as per customer request after proto build. Figure 1. Changed to be representative of product.
04-23-15	D	DPD	Supply sensitivity spec changed from +/- 1ppb to +/- 3ppb-Customer Approved 4-23-15
03-02-15	C	DPD	1 year aging spec changed to +/-0.25ppm and notes added into phase noise specs.
02-26-15	B	DPD	Phase noise spec changed to max. Added long term stability spec
02-12-15	A	DPD	Preliminary Datasheet