



Specification for an HCMOS Thru-Hole OCXO MtronPTI P/N: XO5084-056R

Electrical Specifications

(Unless otherwise specified, meaning condition. $T = +25^{\circ}C$, $V_{CC}=+3.3V$, $C_{L}=15pF$)

Parameter	Symbol	Min.	Тур.	Max.	Units	Conditions
Nominal Frequency	Fo		12.800000		MHz	
Initial Tolerance	Fi	-200		+200	ppb	At the time of shipment.
		F	requency Stat	oilities		
vs. Temperature	ΔFτ/F	-10		+10	ppb	Over the operating
vs. Supply Voltage	ΔEvs/F	-2		+2	dqq	100 mV change in V _{CC}
Daily Aging		-0.5		0.5	ppb/day	After 30 days continuous
1 st Year Aging		-100		+100	ppb	operation @ 25°C
			RF Outpu	t	• • •	
Output Type			HCMOS			
Output Load			15		рF	
Symmetry (duty cycle)	T _{DC}	40	50	60	%	@ 50% of waveform
Rise/Fall Time	T _R /T _F			10	nsec	From 10% to 90% Vout
Logic "1" Level	Vон	+2.4			V	HCMOS Load
Logic "0" Level	Vol			+0.4	V	HCMOS Load
			SSB Phase N	oise		
			-90		dBc/Hz	@ 10Hz Offset
SSB Phase Noise			-120		dBc/Hz	@ 100Hz Offset
Typical Under Static			-140		dBc/Hz	@ 1000Hz Offset
Conditions			-145		dBc/Hz	@ 10kHz Offset
			-150		dBc/Hz	@ 100kHz Offset
		Temper	ature and Sup	oply Voltage		
Operating Temperature	TA	-40		+85	O°	
Storage Temperature	Ts	-55		+105	°C	
Operating Voltage	Vcc	3.2	3.3	3.4	VDC	
Power Consumption				1.50	Watts	Steady state @ 25°C, In Still Air
				3.50	Watts	@ Warm-up
Warm-up Time (Restabilization)				5	Minutes	Time to be within 100ppb of the frequency after 1-hour. of operation @ 25°C

Environmental Conditions:

Soldering Conditions	Hand or wave solder utilizing a typical Sn63 solder profile
MSL	Level 1
RoHS	Full RoHS Compliance





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Reliability Assurance Items: (spec.: ±100ppb)

High Temperature	+85 ±2°C 2000-Hours
Low Temperature	-40 ±3°C 96-Hours
Heat Shock	1 cycle = -40±5°C / +85±5°C (30 minutes each) 100 cycle enforcement.
Vibratian	Frequency: $10\sim$ 55Hz, Double amplitude: 1.52mm, Sweep time: 1min, Duration time: 1
Vibration	hours in each of 3 mutually, perpendicular directions
Machanical Shock	Acceleration: 981m/s2(100G), Duration time: 6ms Waveform: Half-sine-pulse, Number of
Mechanical Shock	shocks: 3 shock in each of 6 directions.
Drop test	Height: 5cm, Material (Impact): Oak board, Number of drops: 3 drops in each of 3
	directions.

Mechanical, Marking and Layout Information:

Part Marking	
Line 1	MtronPTI
Line 2	XO5084-056R
Line 3	12.8000MHz
Line 4	Serial Number
Line 5	Date Code

Legend		
уу	Year	
ww	Work Week	

Pin	Function
1	RF Output
2	Case Ground
3	N/C
4	N/C
5	Supply Voltage



Pin Numbers are Shown for Reference Only All Dimensions are in Inches [mm]

Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
09/28/12	2	BRM	Corrected a typographical error in the metric dimension for the OCXO cover
09/27/12	1	BRM	Updated the package outline drawing to reflect both English & Metric dimensions at customer request
09/24/12	0	BRM	Initial Release