

Specification for a Stratum 3E HCMOS SMD OCXO

MtronPTI P/N: XO5084-050sR

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency Range	F		20.0		MHz	
Initial Accuracy	F _I	-0.5		+0.5	ppm	@ 25°C @ time of shipment
Frequency Stabilities						
Overall		-2		+2	ppm	Over 20-Years
vs Temperature	ΔF _T /F			10	ppb	pk-pk over the operating temperature range
vs. Supply Voltage	ΔF _{VDD} /F	-2.5		+2.5	ppb	±5% change in voltage
vs. Load	ΔF _{LOAD} /F	-2.5		+2.5	ppb	±5% change in load
Aging 1 st Year		-100		+100	ppb	After 30-days Power On
Holdover/Day		-1		+1	ppb	Constant voltage & load; < ±3% °C change in 24-hours
Short Term Stability			1 x 10 ⁻¹¹		per sec	
RF Output						
Output Type	HCMOS					
Output Load			15		pF	
Symmetry (duty cycle)	T _{DC}	40	50	60	%	@ 50% of waveform
Rise/Fall Time	T _R /T _F			10	ns	From 10% to 90% V _{OUT}
Logic “1” Level	V _{OH}	90% V _{DD}			V	HCMOS Load
Logic “0” Level	V _{OH}			10% V _{DD}	V	
Other Parameters						
SSB Phase Noise (under static conditions)			-130		dBc/Hz	@ 100Hz Offset
			-145			@ 1kHz Offset
			-150			@ 10kHz Offset
			-150			@ 100kHz Offset
Warm-up Time (Restabilization)				5	Minutes	To be within ±10ppb of the frequency after 1-hour of operation @ 25°C
Wander Generation	MTIE and TDEV as per Stratum 3E requirements of Telecordia GR-1244-CORE					
Supply Voltage & Power Consumption						
Supply Voltage	V _{DD}	3.135	3.3	3.465	V _{DC}	
Power Consumption			1.25		Watts	Steady state @ 25°C in still air
				3.5	Watts	@ warm-up

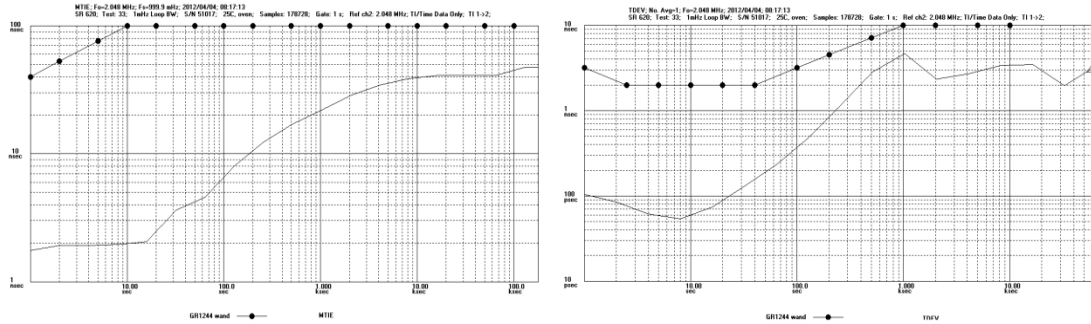
Environmental Conditions:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+105	°C	
Vibration	Per MIL-STD 202G, Method 201 & 204, (10 g's from 20-2000Hz)					
Mechanical Shock	Per MIL-STD 202G, Method 204, (2000 g's, 0.3ms duration, ½ Sinewave)					
Hermeticity (where applicable)	Per MIL-STD 202G, Method 112, Test Condition D					
Solderability	Per EIAJ-STD-002					
Soldering Conditions	See solder profile					
RoHS	Full RoHS Compliance					

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Wander Generation Plots:

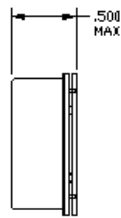
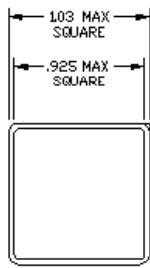


Mechanical, Marking and Layout Information:

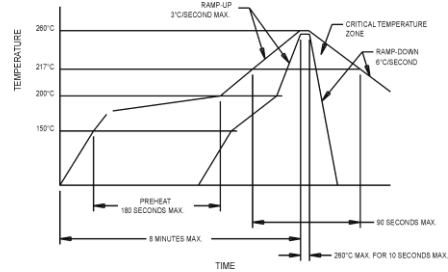
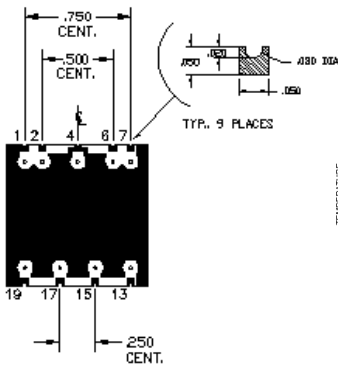
Part Marking	
Line 1	MtronPTI
Line 2	XO5084-050sR
Line 3	20.0000MHz
Line 4	Serial Number
Line 5	Date Code

Legend	
yy	Year
ww	Work Week

Pin	Function
1	RF Output
2	N/C
4	Case Ground
6	N/C
7	N/C
13	N/C
15	N/C
17	N/C
19	Supply Voltage



PIN NO'S. SHOWN FOR REFERENCE ONLY.



Data Sheet Revision Table:

Date	Rev.	Author	Details of Revision
12-17-14	A	BRM	Correct a typographical error in the header (from Thru-Hole to SMD) and updated the MtronPTI address block and customer name as well.
07-30-12	2	BRM	Added the customer's part number to the datasheet header section.
07-28-12	1	BRM	Changed power consumption at Steady state @ 25°C in still air from 1.2-watts maximum to 1.25-watts typical.
05-25-12	0	BRM	Initial release.