

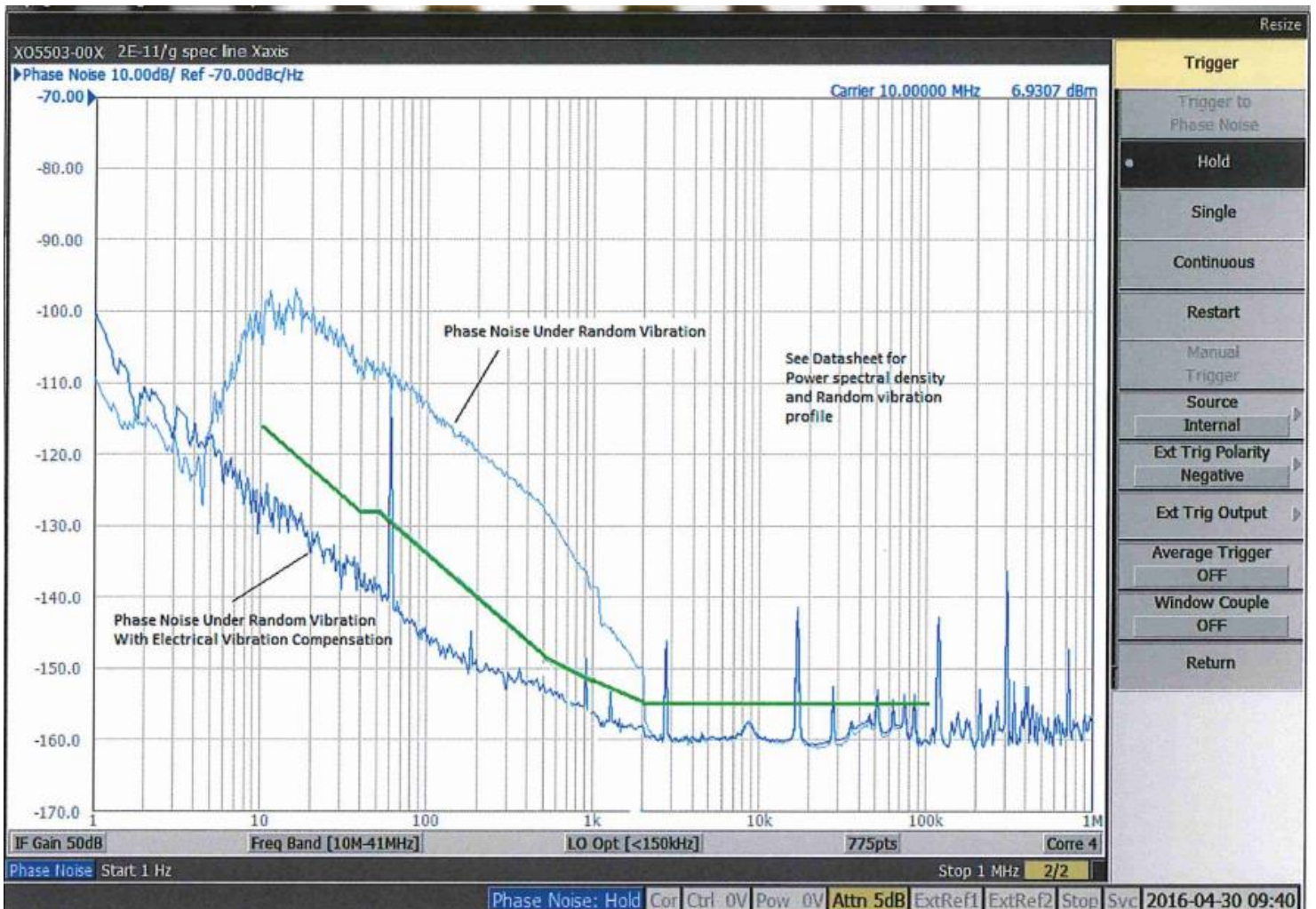
ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F ₀	10.000000			MHz	
Initial Tolerance	Δ _{F/F}	-100		+100	ppb	@ Time of shipment
Frequency Stabilities						
vs. Temperature	Δ _{F/F}	-30		+30	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 Supply Load
Daily Aging		-0.5		+0.5	ppb	After 30-days operation
Yearly Aging		-100		+100	ppb	
Short Term Stability				1	x10 ⁻¹¹	Per Second.
RF Output						
Output Type		Sinewave				
Output Load			50		Ω	±5%
Level	V _{OH}	+5.0	+7.0	+9.0	dBm	In a 50Ω load
Harmonics				-30	dBc	
Frequency Adjustment						
Method		External Voltage Tuned				
Tuning Slope		Positive				
Tuning Range		+/- 0.8			ppm	
Tuning Voltage	V _{TUNE}	0		+5	V _{DC}	
Tuning Bandwidth		500			Hz	
Tuning Linearity				10	%	
Input Impedance		50			kΩ	
Phase Noise and G-Sensitivity						
SSB Phase Noise (Under Static Conditions)				-120	dBc/Hz	10Hz Offset
				-140		100Hz Offset
				-155		1kHz Offset
				-155		10kHz Offset
				-155		100kHz Offset
SSB Phase Noise With Random Vibration (operational) (any axis)				-116	dBc/Hz	10Hz Offset
				-128		40Hz Offset
				-128		52Hz Offset
				-133		100Hz Offset
				-148		500Hz Offset
				-152		1kHz Offset
				-155		2kHz Offset
				-155		10kHz Offset
				-155		100kHz Offset
G-sensitivity				0.02	ppb/g	
Random Vibration (operational)						
Power Spectral Density			0.012		g ² /Hz	10Hz
			0.012			40Hz
			0.020			52Hz
			0.020			500Hz
			0.00126			2000Hz

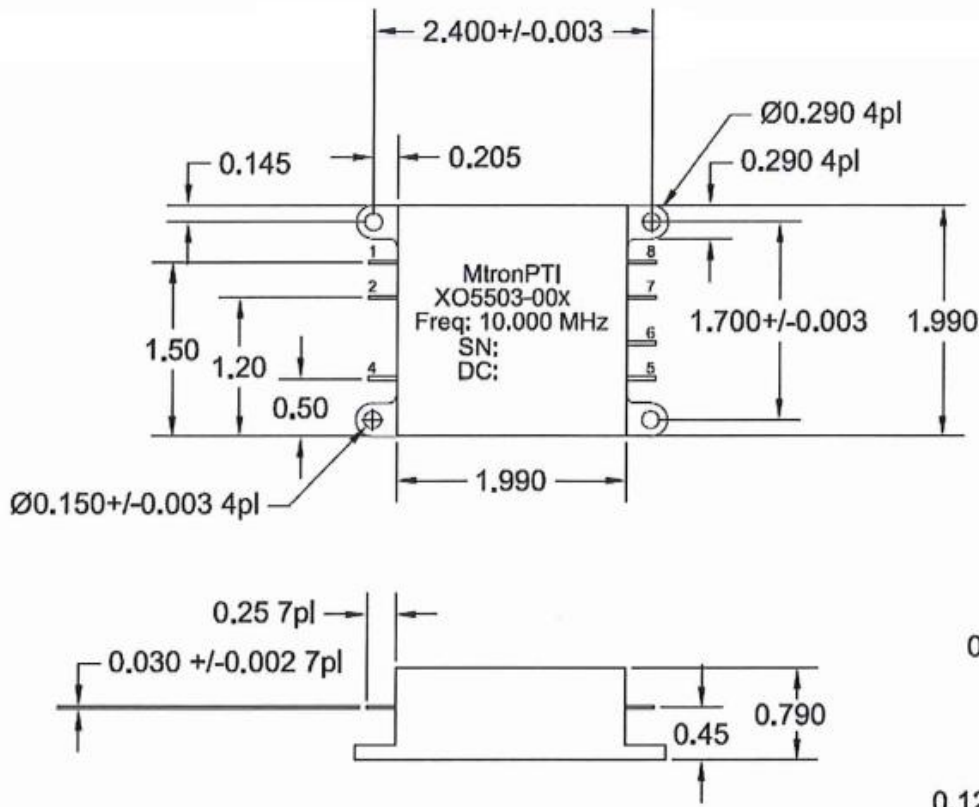
ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Additional Parameters						
Supply Voltage	Vs	+4.75	+5.0	+5.25	V _{DC}	
Power Consumption				5	Watts	@ Start-up
				3	Watts	@ Steady state @ 25°C, In Still Air
PIN 4 Oven Not Ready				0.5	V _{DC}	3.3V HCMOS Compatible
PIN 4 Oven Ready		2.7			V _{DC}	
Warm-up Time				5	Minutes	@ ±10ppb of the frequency @ 1 hour @ 25°C
Operating Temperature	OTR	-40		+85	°C	
Storage Temperature	STR	-55		+95	°C	
RoHS	Full RoHS Compliance					

REPRESENTATIVE PHASE NOISE PERFORMANCE



MECHANICAL AND PIN OUT INFORMATION



Dimensions are in inches
Tolerance (unless noted otherwise)
x.xxx → ±0.005
x.xx → ±0.01

Part Marking	
Line 1	MtronPTI
Line 2	XO5503-0xx
Line 3	10.000MHz
Line 4	Serial Number
Line 5	Date Code

Pin	Function
1	+12V
2	Case Ground
4	Oven Ready
5	GND/CASE
6	RF Out
7	GND/CASE
8	Vtune

Data Sheet Revision Table			
Date	Rev	Author	Details of Revision
05/10/16	A	AR	Original Release.

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