SUPERIOR PERFORMANCE SINCE 1965

MtronPTI®

XO5503 Series
E-Vibe Compensated OCXOs

FEATURES

Frequency: 10 and 100MHz
Vibration Compensated
Low Phase Noise
Low Aging

APPLICATIONS

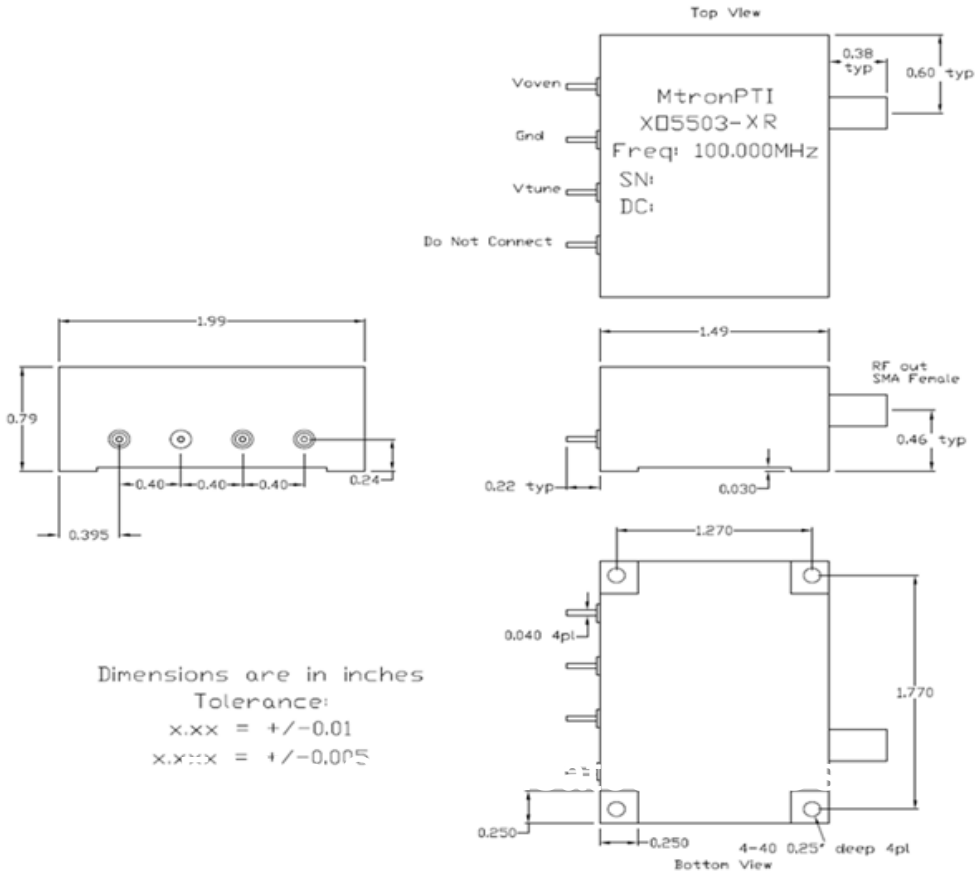
RADAR
Satcom
Electronic Warfare

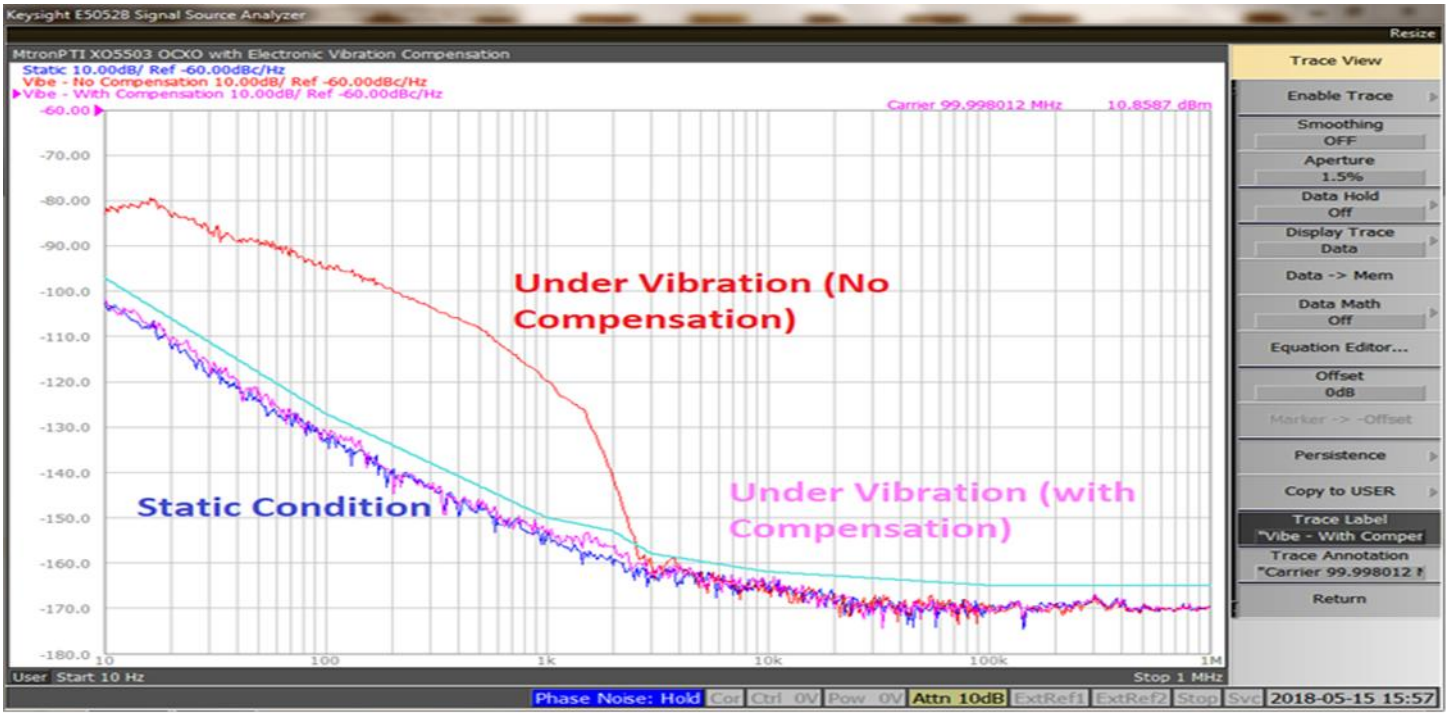
SPECIFICATIONS at 100MHz

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F_O	10		100	MHz	Standard Frequencies: 10 MHz, 100 MHz
Frequency Stability						
Vs. Temperature Range		-100		+100	ppb	Over operating temp(-40C to +85C)
Vs. Supply Voltage variation		-15		+15	ppb	±5% change in V_S
Vs. Load Change		-15		+15	ppb	±5% change in Load
Aging		-250		+250	ppb	1st year
[After 30 days of operation]		-200		+200	ppb	Per year after 1st year
RF Output						
Output Type	Sinewave					
Output Level		+5.0	+7.0	+9.0	dBm	Into a nominal 50Ω load
Output Load			50		Ω	±5%
Harmonics				-30	dBc	
Frequency Adjustment						
Adjustment Method	External Voltage					
Tuning Voltage	V_{TUNE}	0		+5.0	V_{DC}	
Tuning Range			±2.5		ppm	
Input Impedance		50			KΩ	
Tuning Slope		Positive				

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Phase Noise						
SSB Phase Noise – Static				-97	dBc/Hz	@ 10Hz Offset
				-127		@ 100Hz Offset
				-150		@ 1kHz Offset
				-162		@ 10kHz Offset;
				-165		@ 100kHz Offset;
SSB Phase Noise – With Random Vibration (operational) (any axis)				-97	dBc/Hz	@ 10Hz Offset
				-127		@ 100Hz Offset
				-150		@ 1kHz Offset
				-153		@ 2kHz Offset
				-162		@ 10kHz Offset
				-165		@ 100kHz Offset
Random Vibration (operational)						
Power Spectral Density			.012		g^2/Hz	@ 10Hz
			0.012			@ 40Hz
			0.020			@ 52Hz
			0.020			@ 500Hz
			0.00126			@ 2000Hz
Additional Parameters						
Supply Voltage	V_S	11.4	12.0	12.6	V_{DC}	
Power Consumption				5	Watts	@ Start-up
				2	Watts	@ +25°C Steady State
Operating Temperature		-40		+85	°C	

Outline:


Top View
Voven
Gnd
Vtune
Do Not Connect
MtronPTI
XO5503-XR
Freq: 100.000MHz
SN:
DC:
0.38 typ
0.60 typ
1.99
0.79
0.40
0.40
0.40
0.24
0.395
1.49
RF out
SMA Female
0.46 typ
0.22 typ
0.030
1.270
0.040 4pl
1.770
0.250
0.250
4-40 0.25" deep 4pl
Botton View
Dimensions are in inches
Tolerance:
x.xx = +/-0.01
x.xxx = +/-0.005


Keysight E5052B Signal Source Analyzer
MtronPTI XO5503 OCXO with Electronic Vibration Compensation
Static 10.00dB/ Ref -60.00dBc/Hz
Vibe - No Compensation 10.00dB/ Ref -60.00dBc/Hz
Vibe - With Compensation 10.00dB/ Ref -60.00dBc/Hz
Carrier 99.998012 MHz
10.8587 dBm
Under Vibration (No Compensation)
Static Condition
Under Vibration (with Compensation)
User Start 10 Hz
Stop 1 MHz
Phase Noise: Hold
2018-05-15 15:57
Trace View
Enable Trace
Smoothing OFF
Aperture 1.5%
Data Hold Off
Display Trace Data
Data -> Mem
Data Math Off
Equation Editor...
Offset 0dB
Marker -> -Offset
Persistence
Copy to USER
Trace Label "Vibe - With Compen
Trace Annotation "Carrier 99.998012
Return