



## Concentration: keeping the picture clear

### Low g-sensitivity OCXOs for radar, satcom and portable instrumentation



#### Focus on the content, not the display

Whether flying at 40,000' watching videos online or at 500' watching over-the-hill radar, it's **the picture that counts** not the display. And vibration from rotary wing engines, weapons fire or simple high altitude turbulence can blur radar images or cause satellite links to loose lock breaking your focus.

In communications and radar applications, **reliability** comes first. The link must stay up, the picture must be clear even when conditions are less than ideal. Radars and satellite tuners use high performance crystal oscillators to keep frequencies *exact* for clear pictures and good channel lock but it's often a difficult tradeoff of performance vs. size, weight and power when flying, or achieving ultimate noise performance when looking for small slow moving targets from shaking mobile platforms.

MtronPTI, with nearly fifty years of crystal experience in both radar and commercial applications has always provided vibration insensitive clocks for demanding applications. Now, MtronPTI steps up the game with the XO5500 series.

#### About MtronPTI

MtronPTI offers a wide range of custom frequency control and data timing solutions including: RF and microwave filters – crystal, cavity, lumped element, switched, digital and analog tunable – and low noise / harsh environment oscillators – crystal, TCXO, VCXO, OCXO, GPS and IEEE-1588 locked.

Vertically integrated with complete control of basic material science and manufacturing, MtronPTI provides high reliability high performance solutions for aero/defense communication and control, Internet, public safety radio, lab and field instrumentation and energy management applications.

**One-on-one technical relationships, extensive characterization, and long term application support** make MtronPTI the first choice to reduce risk and lower costs on your next high reliability project.

#### XO5500 Series Low G-sensitivity OCXOs

First in the new series, the XO5501 10 MHz Reference Oscillator offers a low 0.2 ppb/g (2e-10/g) g-sensitivity spec on any axis and low phase noise under vibration. The sine wave output XO5501 is available today, specified to  $\pm 160$  ppb aging over twenty years and with  $\pm 3$  ppm voltage tuning.

The XO5501 is packaged in a sealed, 0.8" x 0.975" x 0.52" case running on +12 volts and consuming about 3 Watts. Special frequency and supply requests are welcome; contact the factory.

Coming soon are a version with **10X lower g-sensitivity** and one for low SWAP (size, weight and power) applications – the latter based on proprietary Crystal Core Science delivering high performance before compensation or isolation. Samples are in field trials today. Stay tuned. It's going to get even quieter out there.

#### Applications

Avionics:	satellite communications
Commercial:	portable and precision instrumentation
Defense:	airborne and shipborne radar

#### Features

Operating frequency	10 MHz to 30 MHz
G-sensitivity	0.2 to 0.5 ppb/g
Phase noise under vibration	-118 to -155 dB max 50 Hz – 1 MHz offset (see data sheet)

#### Product page

<http://www.mtronpti.com/products/Oscillator/OCXO/xo5500-series>

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Please contact MtronPTI for latest information.