

October 9, 2019 | Press Release

Vibration Resistant Quartz Crystal Improves Dynamic Performance in Real World Environments

Introducing the C3VR low G sensitivity crystal with a maximum 0.2ppb/G acceleration sensitivity rating in a small industry standard 3.2x2.5mm ceramic package

Fort Myers, Florida – October 9, 2019 – Fox Electronics has introduced their VIBRATION RESISTANT CRYSTAL - C3VR. The low G sensitivity crystal can improve dynamic performance of customer systems under harsh conditions. The C3VR has a maximum 0.2ppb/G acceleration sensitivity rating. It is not unusual to see an oscillator at rest, (no external vibration), outperform one under vibration by 30dB at 1G. The C3VR state-of-the-art resonator incorporates **Patented Technology** that allows the FOX C3VR Product Series to hold system



performance nearly uniform on all axes. While targeted for new designs, by using an industry standard 3.2x2.5mm ceramic package, the C3VR can be used to easily upgrade existing system performance by replacing a conventional crystal. Details of the C3VR specifications can be found at <https://foxonline.com/pdfs/C3VR.pdf>. The low G sensitivity rating improves system phase noise over conventional crystals making it ideal for wireless communications where signal lock and low data loss are of utmost importance. Applications that could benefit from using the C3VR technology are 5G cellular, V2X automotive connectivity, G.fast DSL, or Ethernet networking. More details along with comparison plots can be found on our website at <https://foxonline.com/c3vr-landing/>

Fox Electronics - known for decades of Programmable ASIC integration with quartz techniques has returned to the basics of quartz physics, developing solutions for today's environmental challenges. The development of the C3VR began several years ago when a problem was presented by a telecom customer. We attacked the problem at the basic quartz structure



resulting in the solution to the customers problem being the patented vibration resistant technology used in the C3VR. Future development will include an Oscillator and a TCXO using the vibration resistant crystal as its source. More Information can be found in our Wireless Communications Whitepaper at

https://foxonline.com/pdfs/C3VRWirelessCommunications_WP.pdf

As we reviewed the performance improvements shown by test results of our innovation, we started thinking about IoT (Internet of Things) and wireless communications that are being expanded into more challenging environments including Automotive and Vehicle Communication to Everything be it V2X using 802.11p or CV2X using cellular. Every rolling or flying vehicle communicating between themselves as well as the external control systems and information systems they communicate with can benefit from the C3VR performance improvement. More information can be found in our C3VR Automotive white paper at

https://foxonline.com/pdfs/C3VRAutomotiveApplications_WP.pdf

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