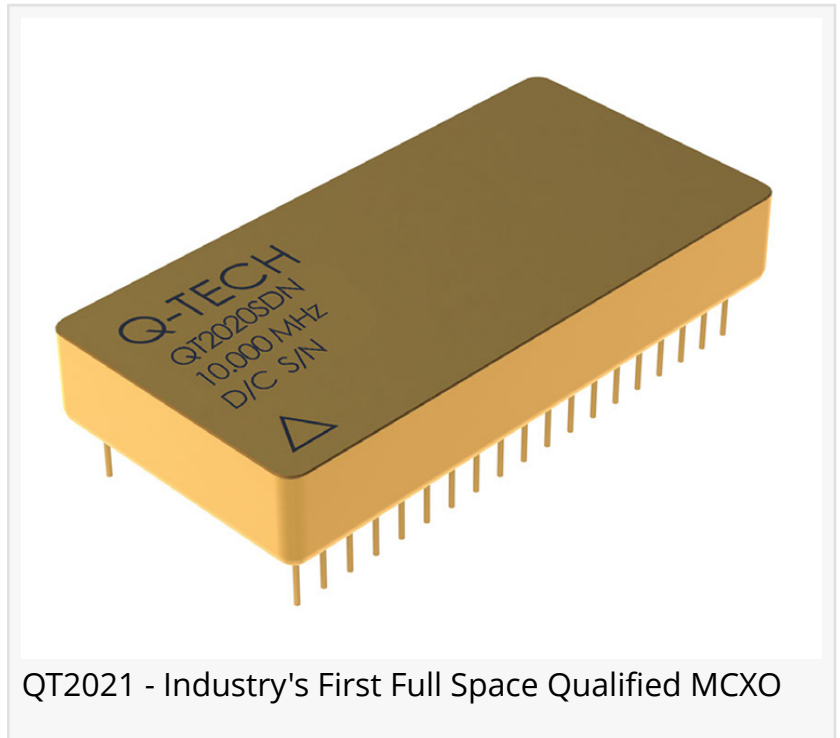


Q-Tech's QT2021 Series MCXO Crystal Oscillators Deliver OCXO-Level Stability and High Radiation Tolerance

QT2021 Series microcomputer-compensated crystal oscillators (MCXOs) deliver superior SWaP over comparable oven-controlled devices for space applications.

CYPRESS, CA, UNITED STATES, October 31, 2023 /EINPresswire.com/ -- [Q-Tech Corporation](#), a US-based leading supplier of space-qualified crystal oscillators, announces the introduction of the [QT2021 Series](#) microcomputer compensated crystal oscillators (MCXOs). These new devices provide exceptional OCXO-level temperature stability (up to ± 20 ppb over -40°C to $+85^{\circ}\text{C}$) while consuming a maximum of 90mW—thirty orders of magnitude lower than comparable OCXOs.



Key features of the QT2021 Series are radiation tolerance to 50kRad(Si) TID, single event latch-up (SEL) of 75MeV-cm²/mg (min) and high shock and vibration tolerance with G-sensitivity of 1ppb/g. The QT2021 small form-factor package weighs just 50g, vs. comparable oven-controlled (OCXO) units weighing 100g or more. This significant improvement in size, weight, and power (SWaP) offers a highly preferable option for a wide array of advanced, and demanding space applications.

Q-Tech's QT2021 microcomputer compensated crystal oscillator (MCXO) uses a high-stability overtone SC-cut crystal with microprocessor-controlled compensation. The self-temperature sensing resonator, using a dual-mode oscillator, virtually eliminates thermometry-related errors, resulting in OCXO-level stability.

"When MCXOs were first developed in the early 2000s, space- and rad hard-level digital components were very costly, which meant an MCXO space-level product would be prohibitively expensive," said Scott Sentz, Q-Tech's Director of Marketing and Sales. "Applying our engineering



Applying our engineering expertise and by utilizing advanced microcontrollers and other digital devices that are rad tolerant, Q-Tech has broken the barrier of space limitations for MCXOs”

*Scott Sentz, Q-Tech's Director
of Marketing and Sales*

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The series is offered with standard frequencies of 10, 20, 30, 40, 50, 60 and 80MHz, with either CMOS or Sine Wave logic outputs with low phase noise and jitter.

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