SiTime Introduces XCalibur, an Innovative MEMS Solution for the Timing Industry's Supply Chain Disruption

New category of Active Resonators Deliver a Drop-in Replacement Reducing Design Time

SANTA CLARA, Calif.--(BUSINESS WIRE)--Feb. 1, 2022-- SiTime Corporation (NASDAQ: SITM), a market leader in MEMS timing, today introduced the SiTime® XCalibur™ active resonator. This innovative new product category solves supply chain constraints using programmable semiconductors to deliver a drop-in replacement for quartz crystal resonators. Additionally, XCalibur provides higher performance and reliability while reducing development time by up to two months in automotive, enterprise, and industrial applications.

"SiTime's portfolio consists of many unique solutions that deliver value to customers. We are continuing that tradition by creating a new category of MEMS-based active resonators that opens up a $200 million SAM within the $4 billion resonator market," said Piyush Sevalia, executive vice president of marketing at SiTime. "Our new XCalibur active resonators solve quartz availability problems through programmability and by using the semiconductor supply chain that is independent of quartz. Additionally, quartz resonators are notorious for posing design challenges requiring additional testing and development, delaying customers' projects. XCalibur solves these challenges by providing a more reliable, flexible drop-in replacement that's much easier to implement."

Quartz resonators have well-known weaknesses such as being susceptible to strong EMI fields and requiring negative resistance testing in every design and layout cycle, as well as requiring qualification for each frequency. With XCalibur active resonators, customers no longer experience EMI or start-up issues. They no longer need to send their board to quartz vendors for negative resistance testing. Furthermore, customers can implement a new frequency in the same design without re-qualifying the part. All these benefits enable the customer to get to market faster.

SiTime XCalibur active resonators provide 10x better reliability than quartz, making them ideal for automotive and industrial applications that demand robustness and long life in harsh environments. The many benefits of these MEMS-based resonators also extend to communications and networking, enterprise, consumer electronics, mobile and IoT, and aerospace and defense applications.

XCalibur Active Resonator Features and Benefits

The SiTime XCalibur active resonators can replace 4-pin SMD crystal resonators in demanding automotive, industrial, and enterprise equipment applications. They provide excellent stability, greater reliability, reduced BOM, and ease of design.

- Complete portfolio: SiT1408, SiT1409, SiT1418, SiT1419, SiT1420, SiT1421, SiT1424, SiT1425
- Drop-in replacement for a wide variety of 4-pin crystal resonators offered by leading suppliers
- Broad range of frequencies: 1 MHz to 137 MHz
- Stability over temperature: ±20 ppm (-55 °C to +125 °C) and ±15 ppm @+25 °C
- Surface-mount package options: 3.2 mm x 2.5 mm and 2.5 mm x 2.0 mm
- Sample lead times within 48 hours
- Production lead times within two weeks

Learn more about the SiTime XCalibur active resonators.

Learn more about the full range of SiTime MEMS-based timing solutions.

Download XCalibur SiT14xx Active MEMS Resonators image.

About SiTime

SiTime Corporation is a market leader in silicon MEMS timing. Our programmable solutions offer a rich feature set that enables customers to differentiate their products with higher performance, smaller size, lower power, and better reliability. With over 2 billion devices shipped, SiTime is changing the timing industry. For more information, visit www.sitime.com.

View source version on businesswire.com: https://www.businesswire.com/news/home/20220201005552/en/

Green Flash Media for SiTime
Donna St. Jean Conti
pr@gflashmedia.com

Source: SiTime Corporation