SiTime Expands Automotive SAM with New Family of Precision Timing Solutions

SiT1881 Oscillators Deliver Unmatched Combination of 4x Better Stability, 20% Lower Power, 30% Smaller Size

SANTA CLARA, Calif.--(BUSINESS WIRE)--Oct. 18, 2022-- SiTime Corporation (NASDAQ: SITM), the precision timing company, today introduced an ultra-low-power 32 kHz oscillator family that provides accurate time keeping for advanced driver assistance systems (ADAS), infotainment, instrument clusters and electronic control units (ECUs). The unique combination of 4x better stability and up to 20% lower power extends system battery life.

According to Gartner, the automotive electronics segment will continue its double-digit growth over the next three years as semiconductor content per vehicle surges during the market's transition to electric and autonomous vehicles. Gartner projects semiconductor content per vehicle will increase from $712 in 2022 to $931 in 2025. This continued growth is driving demand for precision timing content in automotive applications. An electric car uses up to 60 timing devices, and that number is expected to grow as cars incorporate more and smarter electronics.

"SiTime invented the 32 kHz precision timing market. With the launch of this new oscillator family, we are expanding our kHz portfolio from mobile IoT-consumer into automotive," said Piyush Sevalia, EVP marketing, SiTime. "Building on more than a decade of precision timing innovation, SiTime is delivering a unique combination of miniature size, exceptional stability, and ultra-low power in 32 kHz oscillators. SiT1881 will quickly become the standard for power- and space-constrained time-keeping applications in today's cars."

To conserve power, electronic subsystems need to be turned on and off frequently and accurately. Since the 32 kHz oscillator (XO) is the time keeping element, and is always-on, its accuracy and power consumption play a significant role in reducing overall system power. The SiT1881 is the industry's smallest XO, delivering ±50 ppm of stability, the most accurate amongst all 32 kHz XOs, with up to 20% lower power.

As electronics become smaller and denser, semiconductor devices also need to shrink. Unlike legacy quartz alternatives, in which resonator size increases with decreasing frequency, SiTime MEMS technology enables SiT1881 XO to fit in a tiny QFN package that is 30% smaller.

SiT1881 kHz Oscillator Family Highlights

- Stability: ±50 ppm frequency stability over entire temperature range ensures robust system performance in hostile environments and lower power consumption
- Ultra-low power: 490 nA current (<0.6 µW typical power consumption)
- Industry's smallest form-factor: 1.2 mm x 1.1 mm x 0.55 mm QFN package (1.32 mm^2 footprint, 0.67 mm^3 volume)
- AEC-Q100 Grade 2 qualified with extended -40 ^oC to +105 ^oC temperature range
- Superior reliability: 2 billion hours MTBF
- Industry's smallest, ultra-low power 32.768 kHz automotive XO designed to operate over a wide voltage and temperature range

Availability

Engineering samples of the SiT1881 oscillators will be available through SiTimeDirect beginning Nov. 1, 2022. Volume production is expected in Q2 2023.

Contact SiTime for additional product and ordering information.

Resources

SiT1881 Datasheet | SiT1881 Product Page
SiTime Automotive Solutions
Video
Media image
Blog: A small but mighty 32-kHz ultra-low power automotive clock

About SiTime

SiTime Corporation is the precision timing company. 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 2.5 billion devices shipped, SiTime is changing the timing industry. For more information, visit https://www.sitime.com.

Note on Forward-Looking Statements

This press release may contain forward-looking statements regarding future events. These forward-looking statements are intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. Readers are cautioned that these forward-looking statements involve risks and uncertainties that could cause our actual results and the timing of events to differ materially from those anticipated in such forward-looking statements, including, but not limited to: our ability to ship products; adoption of our new solutions by our customers; quality and performance of our products; introduction of new products by our competitors; and other risks and uncertainties described more fully in our documents filed with or furnished to the Securities and Exchange Commission. More information about these and other risks that may impact our business is set forth in our more recent Form 10-Q filed with the Securities and Exchange Commission. All forward-looking statements in this press release are based on information available to us as of the date hereof and qualified in their entirety by this cautionary statement, and we assume no obligation to revise or update these forward-looking statements

View source version on businesswire.com: https://www.businesswire.com/news/home/20221018005322/en/

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

Source: SiTime Corporation