SiTime Delivers Timing Products for 5G Radio Synchronization in Global Wireless Network

Highlights

- SiTime delivers volume production of 105°C Elite Platform™ MEMS Super-TCXOs™ fo synchronizing 5G and 4G+ radios that operate in harsh environments
- SiTime enables smaller, more densely-deployed radios on telephone poles, buildings, and lampposts, without sacrificing network service quality

SANTA CLARA, May 14, 2019 – SiTime Corporation, a market leader in MEMS-based silicon timing system solutions, announced volume production of its award-winning Elite Platform of temperature-compensated oscillators (TCXOs) that provide high stability and dynamic performance at 105°C for IEEE 1588-based synchronization in 5G/4G+ radios and enable wireless service providers to begin their network overhaul.

"5G is expected to revolutionize the data economy but first it is re-writing the rules for wireless network deployment," said Piyush Sevalia, executive vice president of marketing at SiTime. "5G radios will be deployed in outdoor environments – on lamp posts, buildings, traffic lights – with exposure to heat and rapid temperature changes that can cause loss of radio synchronization, which can disrupt services like advanced driver assistance systems and telemedicine. Unlike other timing vendors, SiTime takes a systems approach to solve these problems. We optimize our SiT5356/7 Super-TCXO system of MEMS, analog, advanced packaging and temperature compensation to deliver industry-leading performance of ±100 ppb stability and ±1 ppb/°C frequency slope (ΔF/ΔT) over -40°C to 105°C. We believe that radios with SiTime's Super-TCXOs will minimize disruptions to 5G/4G+ services and ensure a better user experience."

Meeting 5G's Tougher Timing Requirements

Radio synchronization is a crucial technology that enables 5G and 4G+ to maintain service quality and

reliability. The use of eCPRI and distributed architectures in 5G and 4G+ networks, along with outdoor deployment, increases timing complexity for synchronization.

Video: Watch the dynamic performance of a ±100-ppb Elite Super-TCXO versus a ±50-ppb quartz TCXO under airflow, temperature ramp, tap test, and VDD fluctuation

About Elite Super-TCXOs
Leveraging SiTime's unique DualMEMS™ temperature sensing and TurboCompensation™ technologies, the SiT5356/7 MEMS Super-TCXOs deliver dynamic performance for timing stability in the presence of environmental stressors due to air flow, temperature changes, vibration, shock, and electromagnetic interference. The SiT5356/7 can be factory-programmed to many combinations of frequency, stability, voltage, and pull range. This programmability enables designers to optimize the clock configuration while significantly reducing the lead-time and customization costs associated with quartz TCXOs where each frequency is custom built. The device also integrates multiple on-chip regulators to filter power supply noise, eliminating the need for a dedicated external LDO.

Availability
Samples and production volume of Elite Platform Super-TCXOs are available now. Pricing is available upon request.

For more information and datasheets, visit:
Elite Platform SiT5356: https://www.sitime.com/datasheet/SiT5356
Elite Platform SiT5357: https://www.sitime.com/datasheet/SiT5357

Elite Platform 105°C Super-TCXO for 5G image: https://www.sitime.com/sites/default/files/news/105C-Elite-5G-PR-image-W1200.jpg

About SiTime
SiTime Corporation, a market leader in MEMS timing and a wholly owned subsidiary of MegaChips Corporation (Tokyo Stock Exchange: 6875), offers MEMS-based silicon timing system solutions. SiTime's configurable solutions offer a rich feature set that enables customers to differentiate their products with high performance, small size, low power, and high reliability. By using standard semiconductor processes and high-volume packaging, SiTime offers short lead times and can meet unforecasted demand. With over 1 billion devices shipped, SiTime is changing the timing industry. www.sitime.com.