SiTime enters $2 billion resonator market with world?s first MEMS resonator for real time clock and time keeping applications

Medical Design Technology

SiTime Corporation, the leader in MEMS-based silicon timing solutions, today introduced the SiT1052, the first MEMS resonator for real time clock and time-keeping applications. The SiT1052 can be cost-effectively integrated inside a plastic package, eliminating all external time-keeping components from an electronic system. The device enables total frequency stability of ± 5 PPM in a system, which is the best for any silicon-based timing device. Typical users of the SiT1052 include IC manufacturers of real time clocks, microprocessors, microcontrollers, low power radios, sensor nodes, watches, SmartCards and ASSPs for portable, handheld and consumer applications.

“SiTime is the only company that is successfully addressing all three product segments of the timing market, namely resonators, oscillators and clock generators. We have successfully penetrated the $1.5B oscillator market with our revolutionary MEMS-based products that offer unmatched features, exceptional performance, faster availability and lower cost,” said **Rajesh Vashist**, CEO of SiTime. *“We are now expanding into the $2B (12BU) Resonator market by offering the first MEMS resonator for real time clock and time keeping applications. SiTime has formed partnerships with key, large semiconductor companies who are already integrating the SiT1052 into their high volume chips. As the category creator, SiTime is unique in addressing these markets.”*

The SiT1052 MEMS resonator is one-tenth the size of the smallest 32.768 kHz crystal device and enables the industry’s smallest real time clock and time keeping devices. By using SiTime’s patented MEMS First™ process, the MEMS resonator is vacuum sealed in silicon, which eliminates the need for expensive ceramic packages and hermetic sealing. Unlike quartz crystals, SiTime’s MEMS resonator die can be combined with a SOC, ASIC or ASSP die using either wire-bonding or flip-chip, and encapsulated in a cost-effective, standard semiconductor plastic package. Customers benefit from this integration with smaller board space, fewer components and faster time to market.

The SiT1052 also enables better frequency stability than quartz, as good as ± 5 PPM over temperature, voltage, and process. 32 kHz quartz resonators are known to exhibit significant frequency shifts due to solder down and reflow. Silicon MEMS resonators do not exhibit these characteristics. As a result, customers experience higher performance and reliability as well as simplicity in design and purchasing.

SiTime’s silicon MEMS resonators come with all the benefits of the semiconductor industry. Product lead times are significantly shorter than quartz devices. SiTime’s MEMS resonators can withstand shocks up to 50,000 G and vibration up to 70 G,

which is 10 times better than quartz crystals. MEMS resonators also benefit from Moore's Law and offer a cost trajectory that is significantly better than legacy quartz devices.

The SiT1052 MEMS resonator is available as Known Good Die (KGD) and is in production now. SiTime provides a complete solution, including resonator die and analog circuit IP to enable fast implementation and short time to revenue. Pricing is available upon request.

About SiTime
SiTime Corporation, an analog semiconductor company, offers MEMS-based silicon timing solutions that replace legacy quartz products. With 85% market share and over 30 million devices shipped, SiTime is driving the $5 Billion timing market's transition to 100% silicon-based timing.

SiTime's configurable solutions enable customers to differentiate their products with higher performance, reduced size and better reliability. The rich feature set and flexibility of our solutions allows customers to consolidate their supply-chain, reducing cost of ownership and time to market. By using standard semiconductor processes and high volume plastic packaging, SiTime offers the best availability and shortest lead times in the industry.

Top-tier manufacturers are experiencing these benefits and recognize SiTime as The Smart Timing Choice™.

SOURCE [1]

SOURCE [2]

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http://www.ecnmag.com/news/2010/12/sitime-enters-2-billion-resonator-market-worlds-first-mems-resonator-real-time-clock-and-time-keeping-applications?qt-recent_content=0

Links:
[1] http://www.i-micronews.com/lectureArticle.asp?id=5895
[2] http://www.MDTmag.com/News/Feeds/2010/12/products-electronic-components-sitime-enters-2-billion-resonator-market-with-wor/