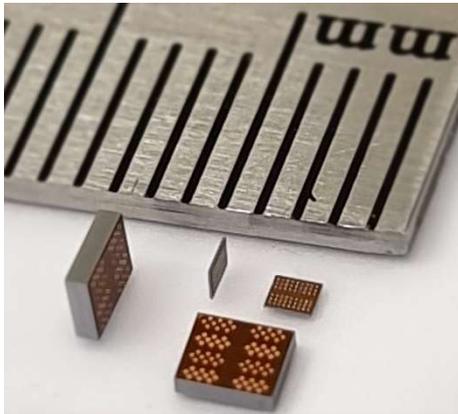


ELOHIM Incorporation Unveils Ultra-High Density Silicon Capacitor with Record-Breaking Low ESL



[Seoul, September 2023] – Elohim Incorporation, a leading company in passive devices, is proud to announce the latest advancement in silicon capacitor technology. Building on their reputation for innovation and quality, Elohim is introducing an upgraded version of their silicon capacitor product that is set to redefine industry standards.

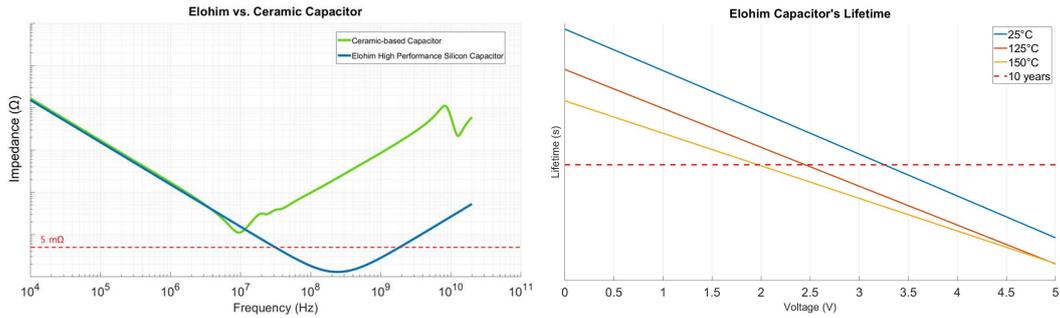


This latest offering from Elohim Inc. offers capacitance density as high as $1,000 \text{ nF/mm}^2$ to supply market demands and is produced using mass production Fab. This shows an evolution of their previous achievements on May 2022 of 500 nF/mm^2 , as highlighted in the article previously published on Semiconductor Packaging News, doubled its value in only a year. This remarkable feature is enabled by producing its product on one of the best Foundry in the world, making it significantly

enhances the capacitor's capacity and functionality, making it a standout choice for a wide range of applications in the semiconductor industry.

Elohim's new silicon capacitor breaks records with its extremely low Equivalent Series Inductance (ESL) of less than 1 pH , followed by its low Equivalent Series Resistance (ESR) of less than $5 \text{ m}\Omega$. These impressive values translate into enhanced efficiency and reduced energy losses, making it an ideal choice for power-sensitive applications.

One of the standout features of Elohim's upgraded silicon capacitor is its unrivaled stability. With changing coefficients of less than 1% in both voltage and temperature variations, this capacitor delivers consistent and reliable performance, even under demanding operating conditions.



<Impedance and lifetime graph of Elohim silicon capacitor; source: ELOHIM>

In addition, Elohim's silicon capacitor is engineered for long-lasting reliability. It boasts a lifetime of more than 10 years in its operating voltage, even when subjected to extreme temperatures as high as 150°C. This durability ensures that the capacitor will continue to perform flawlessly in critical applications over extended periods.

In the future, Elohim's silicon capacitors are being applied as embedded capacitors in the Landside Capacitor of mobile application processors and GPU and CPU packages for data centers, and the development of application capacitors such as automotive and optical transfer networks is being expanded.

Elohim Inc. provides turn-key solutions, including the design of silicon passive devices, the entire process using mass production Fab, Package & testing service through OSAT. In addition, for miniaturization and high capacity, they aim to supply Ultra High-Density Silicon Capacitors required in the market with a Capacitance Roadmap that increases by 1 uF/mm² (1,000 nF/mm²) every 1.5 year. You can see the details on www.elohiminc.com.

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