

Special Seminar

The seminar is in English.

“Automotive MEMS Accelerometer Design for Harsh Environment”

Organizer: Micro/Nano Machining Research and Education Center (MNC)
S. Tanaka Laboratory, Tohoku University

Date/Time: 2 November 2023, 16:30-17:30

Room: MNC 3F Seminar Room

Lecturer: Akira Konno, MEMS designer, Kanazawa Murata Manufacturing Co., Ltd.



Akira Konno earned his master's degree in 2014 from Tanaka Laboratory, Tohoku University, Japan. He joined Murata Electronics in the same year, and from 2016 to 2022, he worked for Murata Electronics Oy in Finland as an expatriate. During his tenure at Murata Electronics Oy, he served as a lead designer for various MEMS accelerometers utilized in automotive applications.

Abstract: MEMS inertial sensors are extensively employed across consumer, industrial, medical, and automotive applications. The requirements for MEMS inertial sensors can vary depending on the application. Murata's sensors originally exhibit superior temperature-dependent performance and vibration robustness. For specific applications like brake units, however, further enhancements were achieved through optimal MEMS design, realizing novel performance attributes. In this seminar, Akira Konno will explain the key technologies and design strategies employed to achieve the performance improvements in MEMS accelerometers for harsh environment.

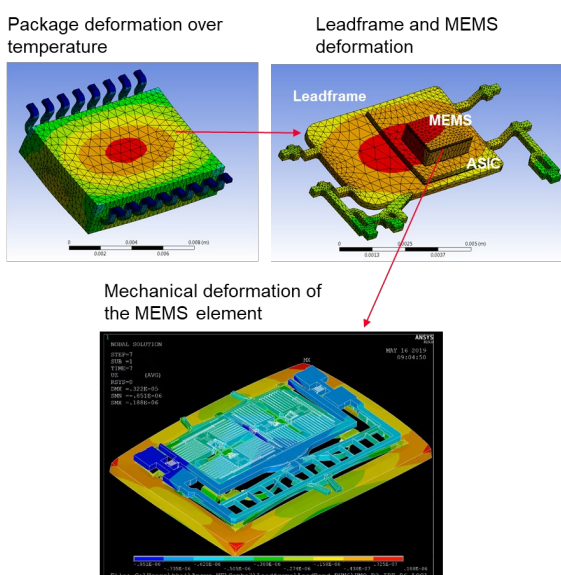


Fig. 1 Packaging stress over temperature

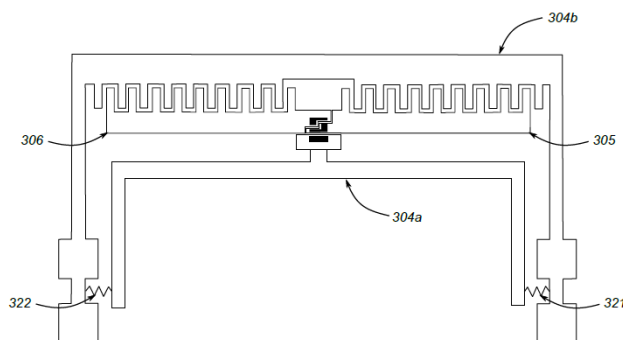


Fig. 2 MEMS anchor design optimized for wider temperature range