Abstracts

Acceleration Sensitivity Study for Commercially Available SAW Oscillators

R. McGowan, J. Kosinski, R. Lindenmuth, J. Himmel and T. Lukaszek. "Acceleration Sensitivity Study for Commercially Available SAW Oscillators." 1993 MTT-S International Microwave Symposium Digest 93.1 (1993 Vol. I [MWSYM]): 381-384.

SAW stabilized oscillators are currently being considered for use in many future military systems. In operation, these devices will be subjected to harsh environmental conditions including temperature, humidity and vibration. This study was initially devised to accomplish two objectives. The primary objective was to determine the feasibility of using commercially available SAW oscillators to meet the stringent acceleration sensitivity requirement of 10/sup -11/g needed for state-of-the-art military applications. The second objective was to establish a performance baseline of acceleration sensitivity since there was very little preexisting data for use by system developers. However, when the acceleration sensitivity data collected for the various oscillators was correlated with the physical attributes of the oscillator circuits and SAW resonators, more general design guidelines could be inferred from the data for the production of vibration insensitive oscillators.

❑ Return to main document.