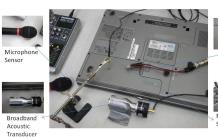
Acoustic Monitoring of Electronic Devices

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Background

Tests are being conducted to evaluate electrical components. One such component class is DC to DC converters.



→ EM Sensor



Sensors Set-up

Procedure

- Using a LeCroy Oscilloscope and 4 different probes, collect frequency and amplitude over time from the acoustic waves produced by a DC to DC converter of a computer battery.
- Plot a signature of time versus frequency and color code each point by amplitude in Mathematica.



Set up of the LeCroy and sensors

Discussion

- Organize signatures produced by Mathematica of the acoustic waves produced by a DC to DC converter.
- Determine the patterns of frequency and amplitude.

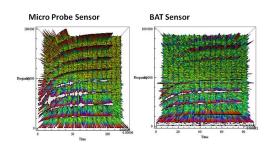


View of the Inputs into the LeCroy

DC to DC Converters

- Electronic circuit that converts a source of direct current from one voltage level to a higher level.
- Found in portable electronic devices such as cell phones and laptop computers that are powered from batteries primarily.
- Offer a method of increasing voltage from a lowered battery voltage in place of using multiple batteries.

Acoustic Signature



Future of Project

Apply the method of monitoring acoustic signatures.



Running a test on a digital oscilloscope (LeCroy)

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