

# **MEMS**

# **Thermal Conductivity Sensor**

Date: 9-Sep-2019

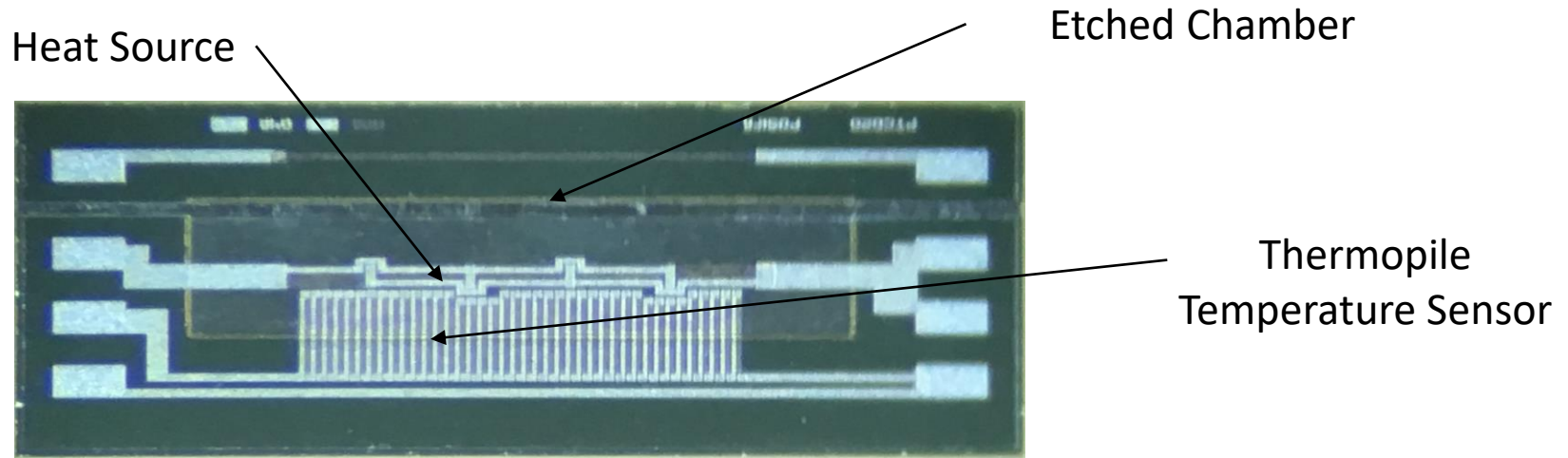
Version: 1

*Vacuum, gas and absolute humidity sensors, which enable many industrial applications. Now, all are getting a MEMS platform .....*



## Thermal Conductivity Sensing Chip

# MEMS Thermal Conductivity Sensor



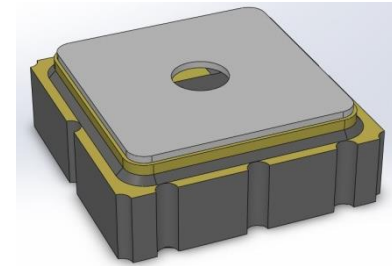
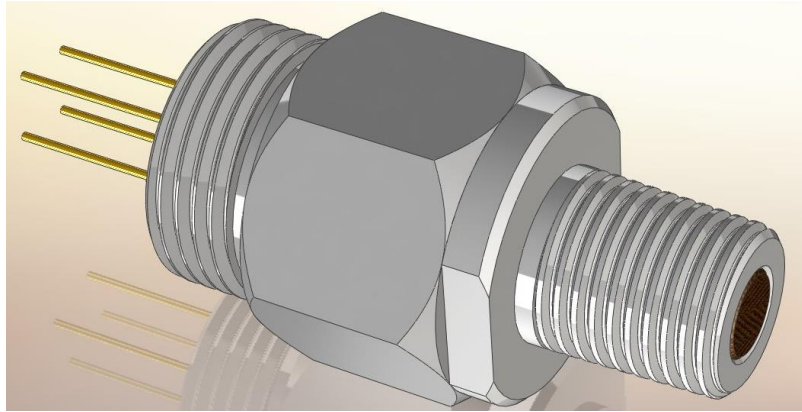
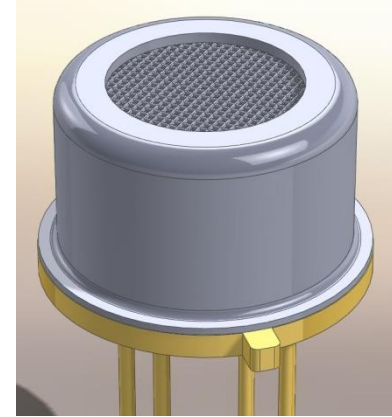
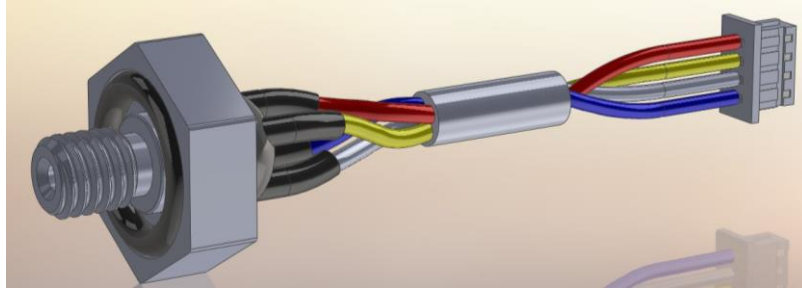
- Easy of fabrication and CMOS integration
- Single-wafer micromaching
- Microstructure formation at the final step
- Small dimension of cavity eliminates convection flow

# Applications being explored

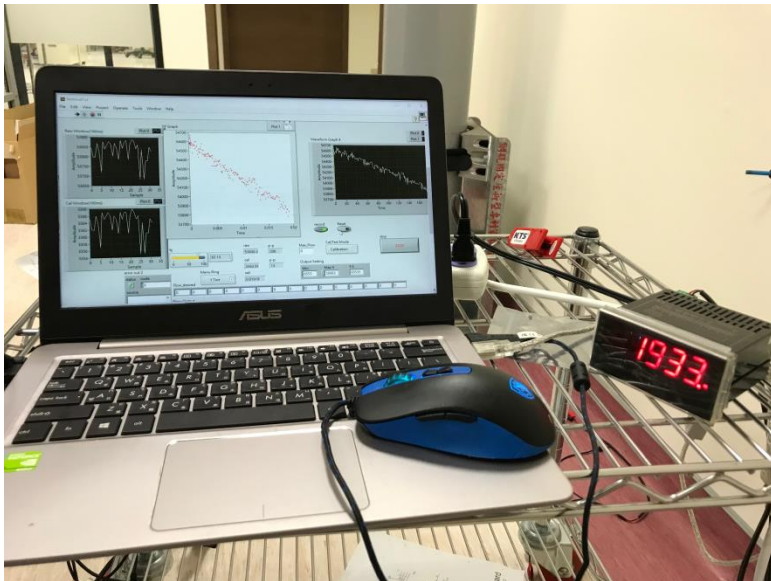
- *Vacuum Gauge* ... HVAC Refrigerant Management
- *Absolute Humidity* ... Smart Toaster Oven
- *CO<sub>2</sub> Sensor* ... Respiratory Gas Exchange
- *R32 Leak Detecting* ... Air Conditioner

All are based on detection of the thermal properties of gases

## *Standard or Custom Package Available*



***Built-in Signal Conditioning for  
plug-and-play***



# Implementation of vacuum measurement

Application: Micron Gauge

