MEMS IR Temperature Sensing for Transportation

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This presentation focuses on MEMS Infrared sensing and complimentary MEMS based sensing solutions for Automotive and Transportation applications. Having an applications based theme, the presentation will address existing platforms for this advanced sensing technology. The presentation will address market opportunity and direction in primary application sectors and impart ideas and knowledge related to complimentary applications requiring non-contact temperature measurement solutions.

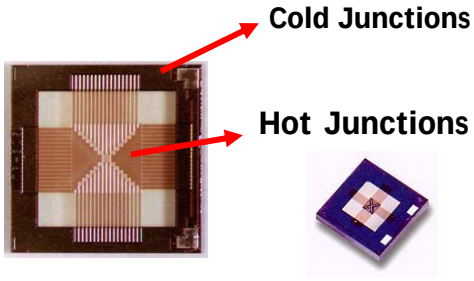
Main Body:

The advantages of using Infrared MEMS based sensing is derived from the need to measure moving targets and sense temperature remotely. In Automotive uses, infrared temperature sensor applications include HVAC control, gas concentration measurement and blind spot detection. For HVAC, the IR sensor compares the skin temperature reading to the dash board HVAC setting and adjusts the cabin air temperature accordingly.

For gas concentration applications, engineers use NDIR technology. Cabin air is forced into a small glass tube with a IR light source and a detector on the ends. The amount of IR absorbed in the tube is directly proportional to the gas concentration.

In blind spot applications, IR sensors are mounted in the front and rear of the car where they can accurately measure a focused area of the road surface almost at identical times. By comparing these readings, it alerts the driver when an object, having a heat profile moves into this zone.

Other uses today include non-contact measurement in medical / neonatal and ICU applications, where patient body temperature can be wirelessly detected on a continuous basis. Heat profiling can also be used in security applications; replace event turnstiles for entry counting systems and max count detection and many more.



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