Melexis MLX90809 Relative Pressure Sensor - Complete Tear-Down Analysis

Description: The MLX90809 is an integrated relative pressure sensor for industrial and automotive applications in harsh environments. It operates over temperatures ranging from -40°C to 150°C and pressures between 0 and 1 bar, with an accuracy of 1.5%. The circuit is available with analog or digital SENT protocol output.

It is easy to use, factory calibrated, fully programmable and integrates analog functions like voltage regulators. The internal diagnostic functions ensure that measurement accuracy is maintained over the time.

Melexis uses smart packaging that is cheap and easy to integrate into a system. The relative pressure measurement uses a soft coating rather than complex packaging with manifolds. The coating protects the silicon die while allowing movement of the membrane.

The MLX90809 is the second generation integrated relative pressure sensor from Melexis. The company has more than 10 years’ experience in pressure sensors and more than 20 years’ experience in MEMS interface ICs.

This report presents a detailed analysis of the sensor structure and its cost.

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