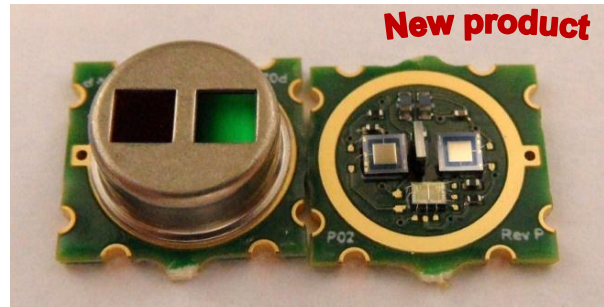


PYREOS

SURFACE MOUNT DUAL CHANNEL GAS DETECTOR

Introduction

Pyreos introduces a revolutionary change in format with surface mount pyroelectric gas detectors. The surface mount package offers new possibilities in product design, as well as compatibility with fully automated surface mount manufacturing. Offering exceptional high responsivity, wide operating frequency range, as well as unsurpassed thermal and electrical stability, the surface mount device maintains Pyreos' uniquely high standards of performance and also delivers higher levels of EMC protection. An additional feature is that the sensor elements have integrated temperature sensors on each channel to provide the most accurate possible temperature reference and further simplify product development.

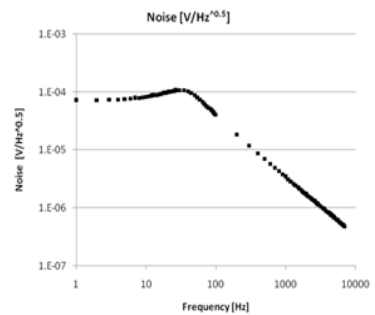
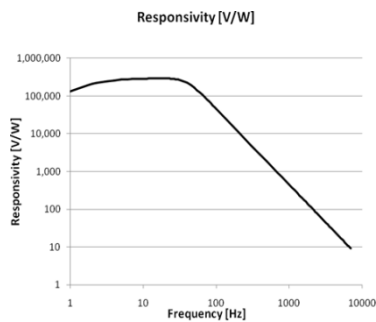
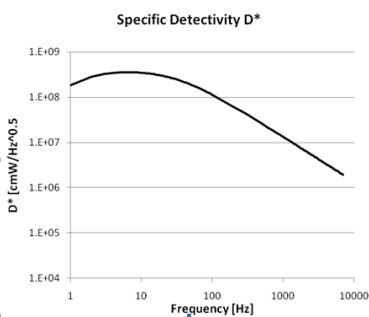


Sensor Information (Nominal)

Filter aperture	2.60 mm square
Element size	1000 μm x 1000 μm
Op amp with 10G Ohm feedback resistor (100M Ohm version is also available)	
Time Constant	~12 ms
Responsivity ¹	140,000 V/W
$D^* \text{ }^1$	$3.5 \times 10^8 \text{ cm}^2/\text{Hz}/\text{W}$
Noise (mean) ¹	60 $\mu\text{V}/\text{Hz}$
¹ 10Hz normalized without window & optics	

Max. Voltage	8.0V
Min. Voltage	2.7V
Output Voltage	Normalised around mid rail
Microphonics	$S_{\text{vib}} \sim 2 \mu\text{V}/\text{g}$ at 10Hz
Package	Surface mount
Filter	8 standard types & custom
Operating Temperature -20 to +70 C	
Storage Temperature -40 to +110 C	

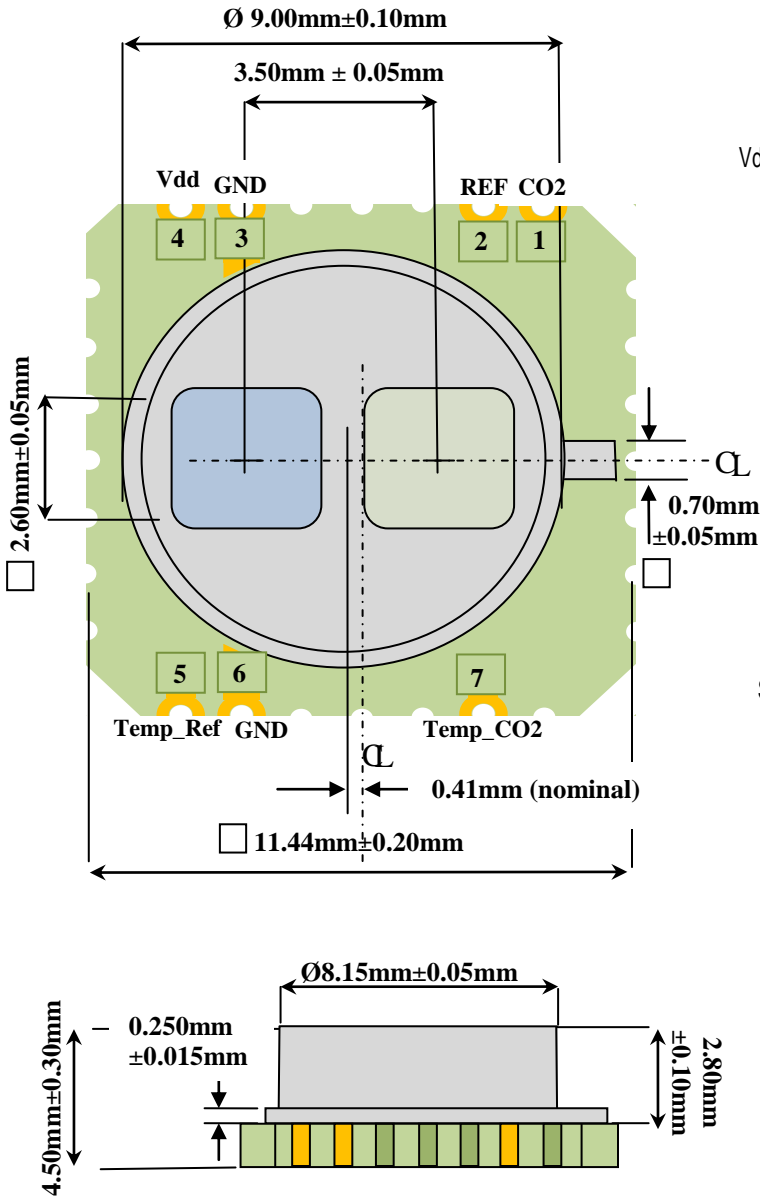
Frequency Characteristics



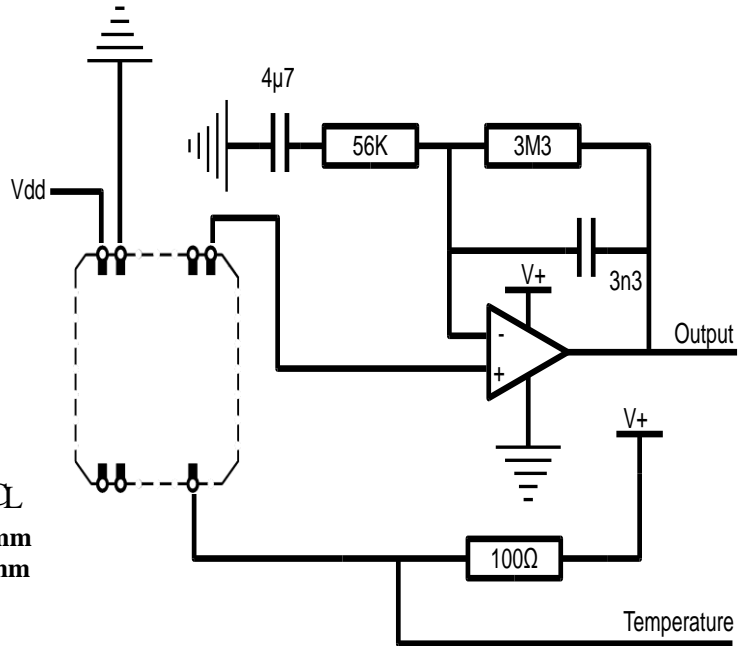
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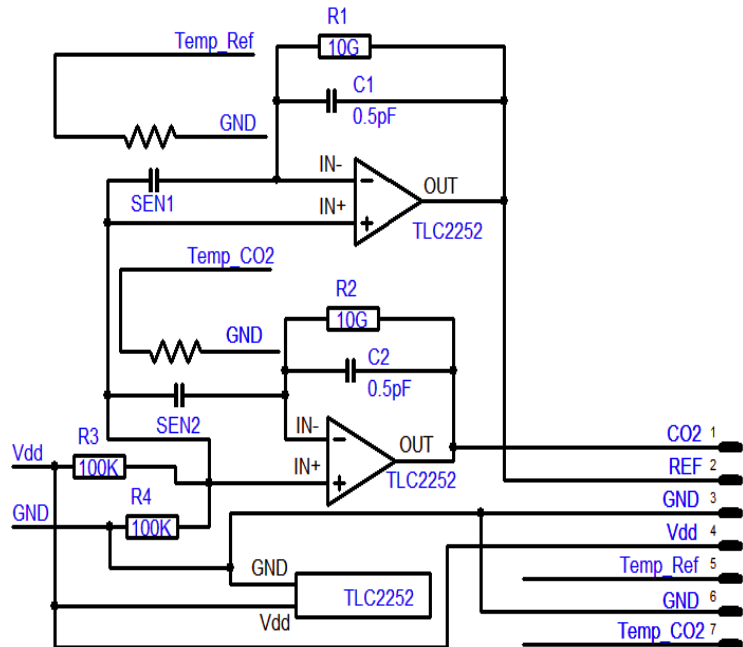
Package Information



Example circuit



Schematic



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