

# TPS 2534 - Dual Channel Thermopile

## Two Thermopiles with Individual Infrared Filters



### Description

The dual thermopile sensor **TPS 2534** employs two single thermopile chips mounted in a TO-5 housing with a 40 k $\Omega$  thermistor as temperature reference. The cap has two windows of size 2.3 x 2.6 mm<sup>2</sup> each which can be equipped with different infrared bandpass filters. The sensor is perfectly suited to gas detection by IR absorption.

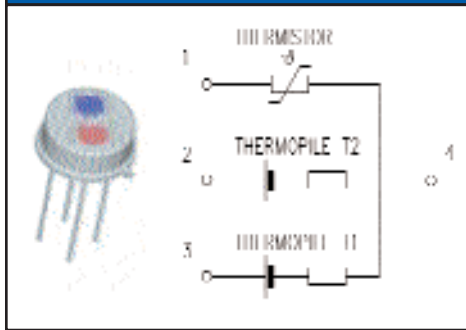
For further information please refer to the TPS 2534 product note.

### Features

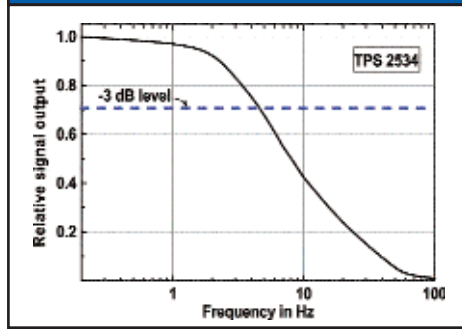
- Thermistor Temperature Reference Included
- Applications: Infrared Absorption (NDIR) Gas Sensing with Reference Channel

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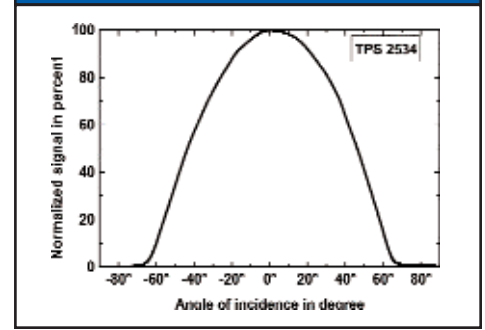
**Figure 1. Package Drawing**



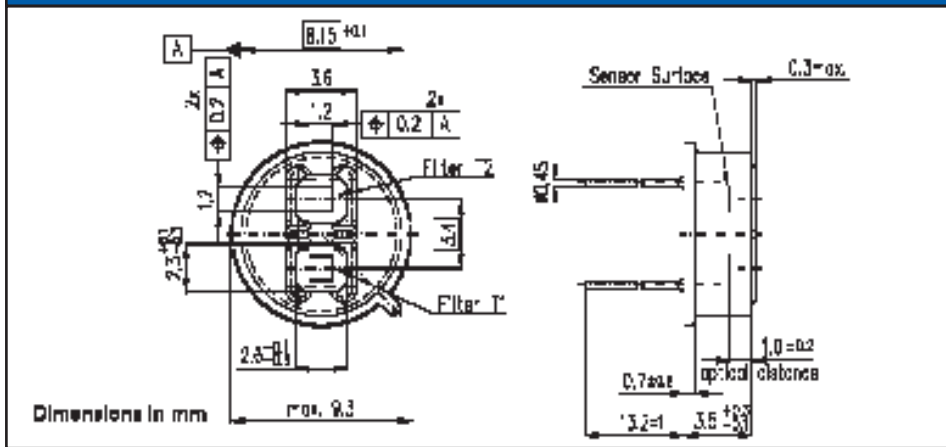
**Figure 2.**



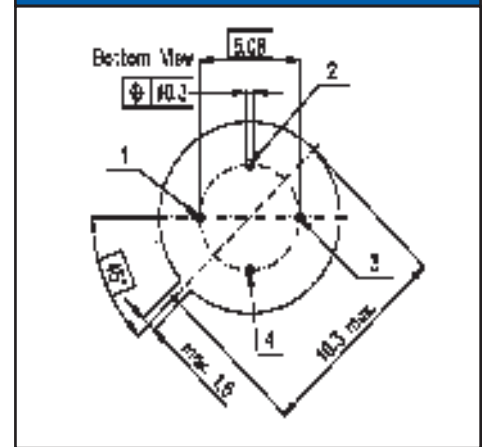
**Figure 3.**



**Figure 4. Top View Package Dimension**



**Figure 5. Bottom View**



**Table 1. TPS 2534**

Parameter	Typical	Units	Condition
Sensitive area	2x 1.2 x 1.2	mm <sup>2</sup>	absorbing area
Window size	2.3 x 2.6	mm <sup>2</sup>	each channel
DC sensitivity	42	V/W	500K BB w/o filter
Resistance	30	kΩ	
Noise	30	nV/√Hz	r.m.s. 300K
NEP	10.7	nW/√Hz	500K BB w/o filter
D*	2.3 x 10 <sup>8</sup>	cm√Hz/W	500K BB w/o filter
TC of sensitivity	-0.01	%/K	
TC of resistance	0.02	%/K	
Time constant	35	ms	
Operating temperature	-40 to 100	°C	non permanent
Storage temperature	-40 to 100	°C	non permanent
Thermistor resistance	30	kΩ	25°C
beta	3964	K	25°C/100°C
Field of view	2x 90	°	at 50% points

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All values are nominal; specifications subject to change without notice.

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