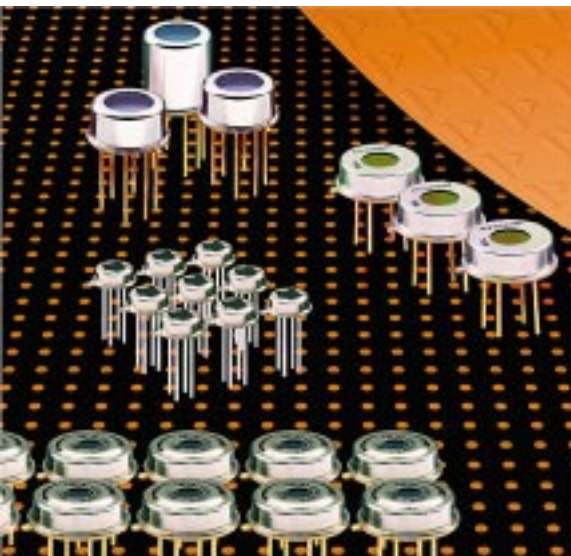


Thermopile Infrared Detectors

# Thermopile Detector TPS 534



**Large absorber size – high signal output**

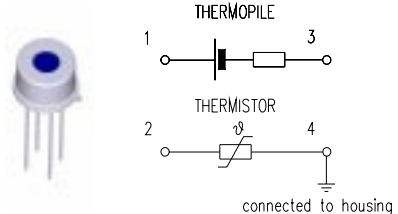
**Low temperature coefficient of sensitivity**

**Thermistor temperature reference included**

**Applications in pyrometers, and - with additional infrared bandpass filters - in gas detectors**

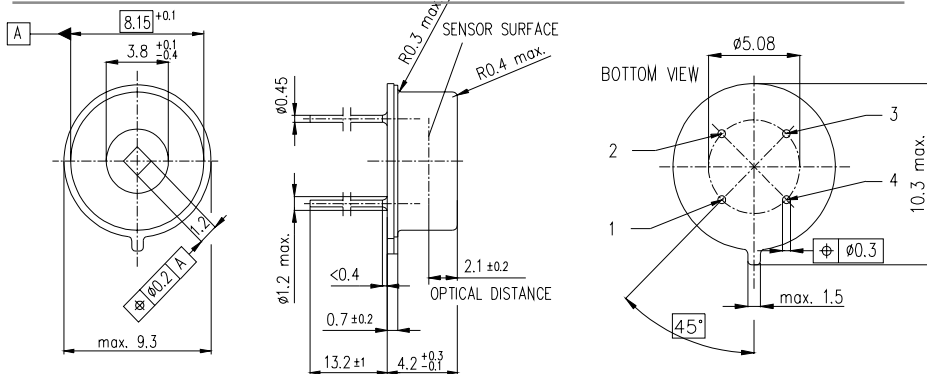
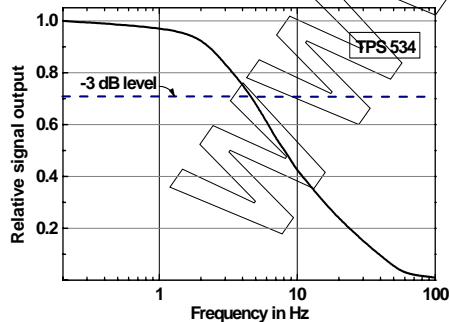
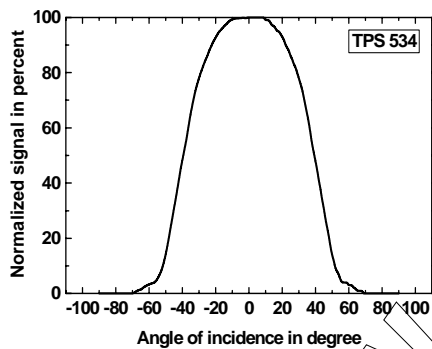
The **TPS 534** thermopile sensor in TO 5 type housing employs a chip of 1.2 x 1.2 mm<sup>2</sup> absorber size and a 30 kΩ thermistor as temperature reference. The round window opening is equipped with a 5.5 μm longpass (standard) infrared filter. The sensor shows a flat sensitivity characteristics over the wavelength.

Remark: The TPS 534 can also be equipped with infrared bandpass filters for NDIR gas detection.



Parameters	TPS	534	typical	units	condition
<b>Sensitive area</b>	1.2 x 1.2			mm <sup>2</sup>	absorbing area
<b>Window size</b>	3.8			mm	diameter
<b>DC Sensitivity</b>	20			V/W	500K BB, 5...14μm
<b>Resistance</b>	40			kΩ	25°C
<b>Noise</b>	25			nV/√Hz	r.m.s. 300K, 1Hz
<b>NEP</b>	1.26			nW/√Hz	500K BB, 5...14μm
<b>D*</b>	0.96 x 10 <sup>8</sup>			cm√Hz/W	500K BB, 5...14μm
<b>Time constant</b>	35			ms	
<b>tc of responsivity</b>	-0.01			%/K	
<b>tc of resistance</b>	0.02			%/K	
<b>Operating Temperature</b>	-40	100			non permanent
<b>Storage Temperature</b>	-40	120			non permanent
<b>Thermistor Resistance</b>	30			kΩ	25°C
<b>Beta</b>	3964			K	25°C / 100°C
<b>Field of view</b>	80			°	at 50% points

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