

Thermopile Infrared Detectors

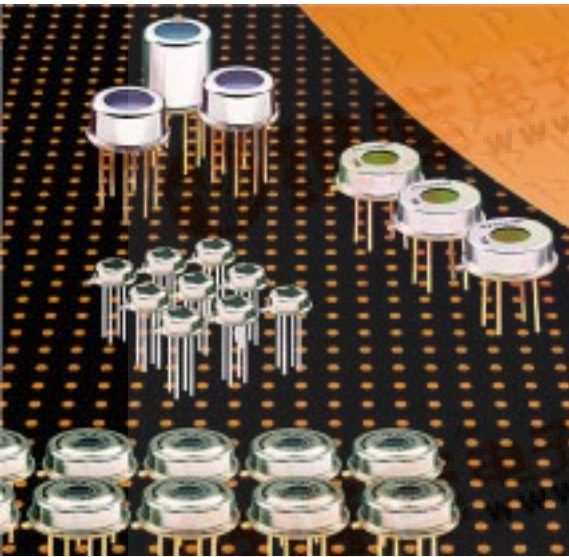
# Thermopile Detector TPS 535

Large absorber size – high signal output

Thermistor temperature reference included

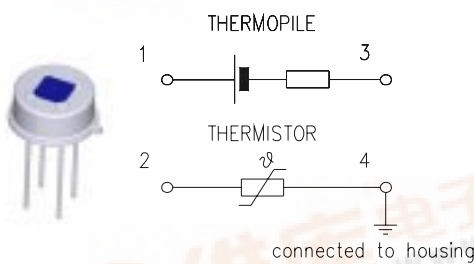
Low temperature coefficient of sensitivity

Applications: ear thermometer, gas detectors (with additional infrared bandpass filter)



The **TPS 535** 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 square window opening is equipped with a 5.5 μm longpass (standard) infrared filter. The sensor shows a flat sensitivity characteristics over the wavelength.

The **TPS 535** can also be equipped with infrared bandpass filters for NDIR gas detection.



Parameters	TPS 535		
	typical	units	condition
<b>Sensitive area</b>	1.2 x 1.2	mm <sup>2</sup>	absorbing area
<b>Window size</b>	3.5x3.5	mm	
<b>DC sensitivity</b>	20	V/W	500K BB 5..14μm
<b>Resistance</b>	40	kΩ	
<b>Noise</b>	25	nV/√Hz	r.m.s. 300K,
<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>TC of sensitivity</b>	-0.01	%/K	
<b>TC of resistance</b>	0.02	%/K	
<b>Time constant</b>	35	ms	
<b>Storage temperature</b>	-40	100	°C non permanent
<b>Operating temperature</b>	-40	100	°C 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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