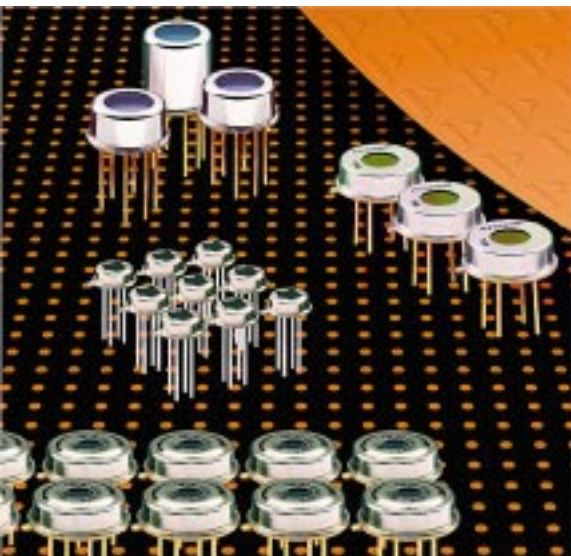


Thermopile Infrared Detectors

# Thermopile Detector **TPS 333**



**Miniature sensor housing: TO 18**

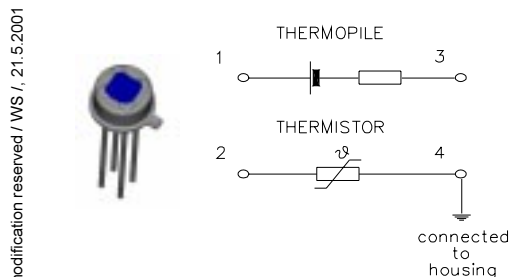
**Thermistor temperature reference included**

**Large signal; low temperature coefficient of sensitivity**

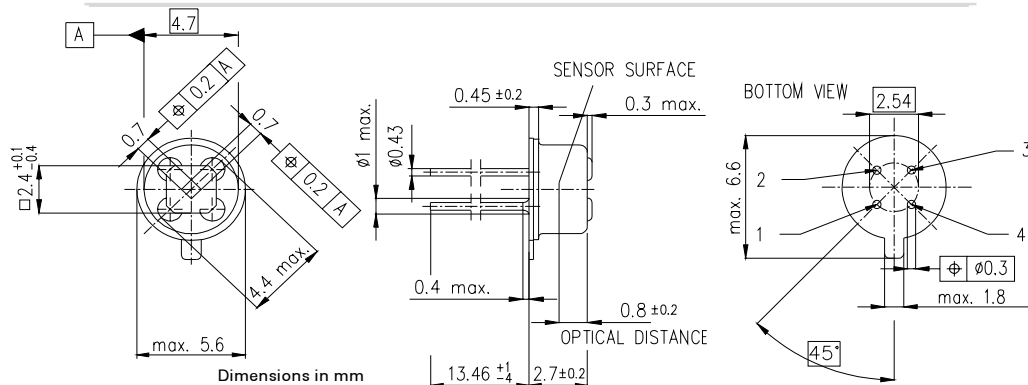
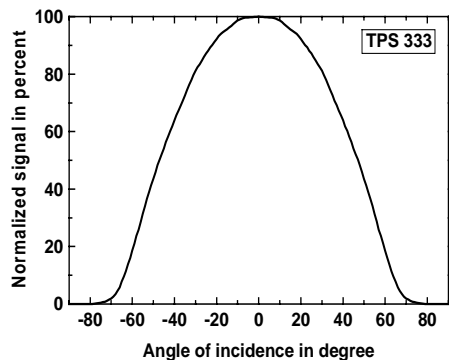
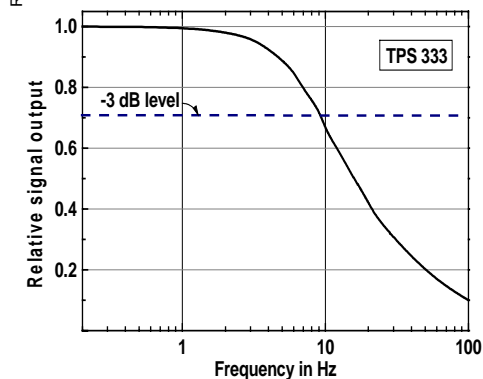
**Ideally suited for ear thermometers, miniature pyrometers**

The **TPS 333** is an extremely small thermopile detector employing a chip of 0.7 x 0.7 mm<sup>2</sup> absorber size and a 100 kΩ thermistor as temperature reference.

The square window opening is equipped with a 5.5 μm longpass (standard) infrared filter. The detector shows a constant sensitivity characteristics over the wavelength.



Parameters	TPS 333	typical	units	condition
<b>Sensitive area</b>	0.7 x 0.7		mm <sup>2</sup>	absorbing area
<b>Window size</b>	2.4 x 2.4		mm <sup>2</sup>	
<b>DC sensitivity</b>	35		V/W	500K BB 5...14μm
<b>Resistance</b>	75		kΩ	
<b>Noise</b>	38		nV/√Hz	r.m.s. 300K,
<b>NEP</b>	1.2		nW/√Hz	500K BB 5...14μm
<b>D*</b>	0.6 x 10 <sup>8</sup>		cm/√Hz/W	500K BB 5...14μm
<b>TC of sensitivity</b>	0.02		%/K	
<b>TC of resistance</b>	0.02		%/K	
<b>Time constant</b>	25		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>	60		°	at 50% points



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