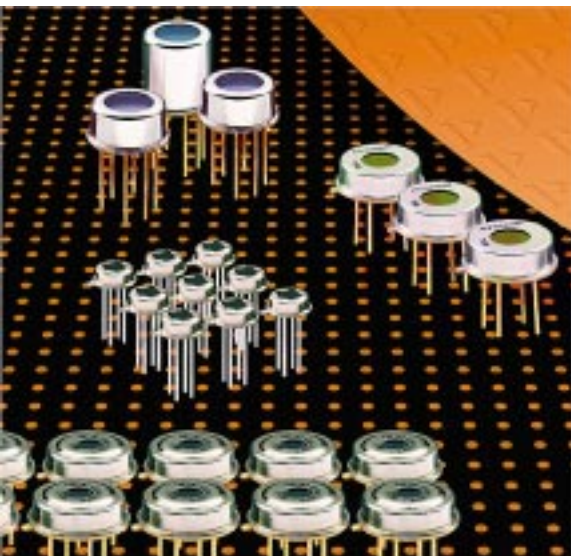


Thermopile Infrared Detectors

Thermopile Detector **TPS 333**



Miniature sensor housing: TO 18

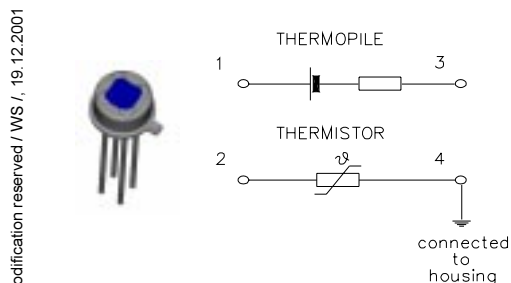
Thermistor temperature reference included

Large signal; low temperature coefficient of sensitivity

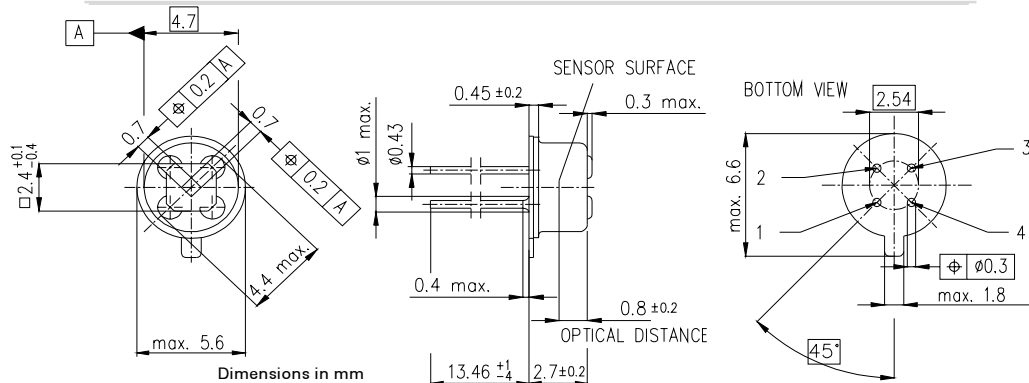
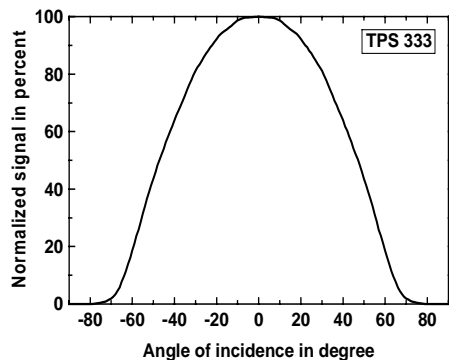
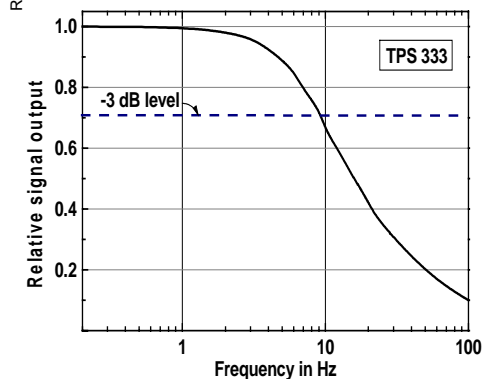
Ideally suited for ear thermometers, miniature pyrometers

The **TPS 333** is an extremely small thermopile detector employing a chip of 0.7 x 0.7 mm² 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
Sensitive area	0.7 x 0.7		mm ²	absorbing area
Window size	2.4 x 2.4		mm ²	
DC sensitivity	35		V/W	500K BB 5...14μm
Resistance	75		kΩ	
Noise	38		nV/√Hz	r.m.s. 300K,
NEP	1.2		nW/√Hz	500K BB 5...14μm
D*	0.6 x 10 ⁸		cm/√Hz/W	500K BB 5...14μm
TC of sensitivity	0.02		%/K	
TC of resistance	0.02		%/K	
Time constant	25		ms	
Storage temperature	-40	100	°C	non permanent
Operating temperature	-40	100	°C	non permanent
Thermistor resistance	100		kΩ	25°C
beta	3964		K	25°C/100°C
Field of view	100		°	at 50% points



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