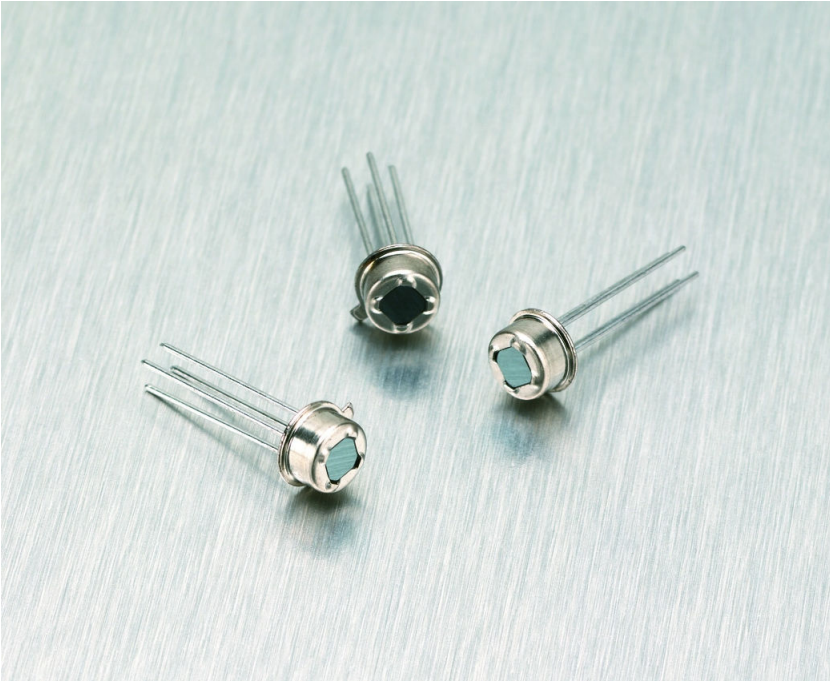


TPS 333 - Thermopile Detector

Miniature Sensor Housing



Description

The **TPS 333** is an extremely small thermopile detector employing a chip of $0.7 \times 0.7 \text{ mm}^2$ absorber size and a $100 \text{ k}\Omega$ thermistor as a temperature reference.

The square window opening is equipped with a $5.5 \mu\text{m}$ longpass (standard) infrared filter. The detector shows a constant sensitivity characteristics over the wavelength.

Features

- Miniature Sensor Housing: TO 18
- Thermistor Temperature Reference Included
- Large Signal; Low Temperature coefficient of sensitivity
- Ideally Suited for Ear Thermometers, Miniature Pyrometers

Figure 1. Package Drawing

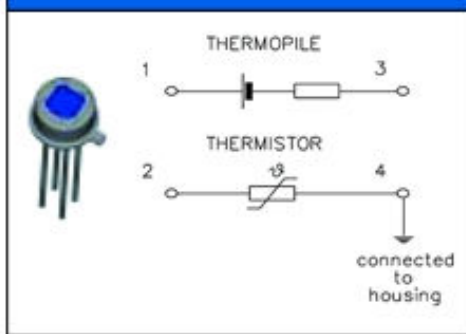


Figure 2.

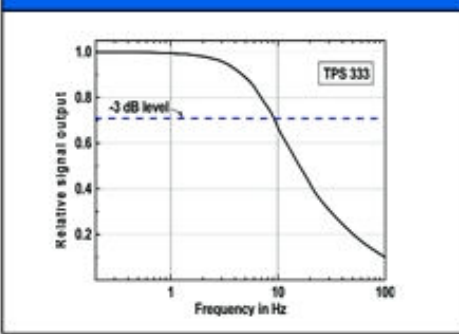


Figure 3.

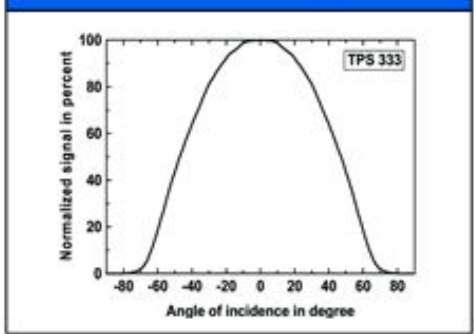


Figure 4. Top View Package Dimension

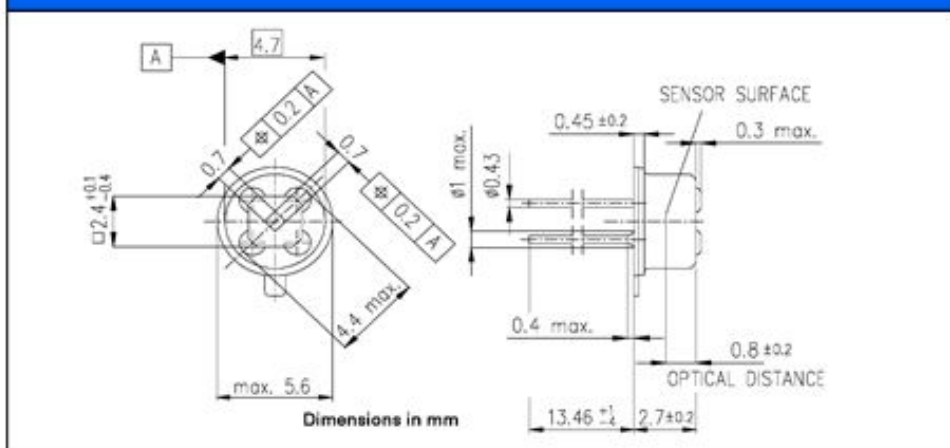


Figure 5. Bottom View

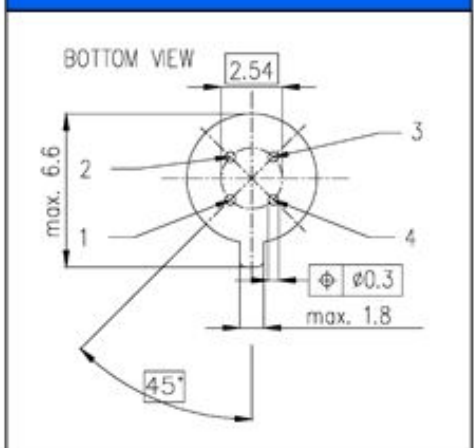


Table 1. TPS 333

Parameter	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	
Operating temperature	-40 to 100	°C	non permanent
Storage temperature	-40 to 100	°C	non permanent
Thermistor resistance	100	kΩ	25°C
beta	3964	K	25°C/100°C
Field of view	100	°	at 50% points

For more information email us at generalinquiries@excelitas.com or visit our website at [excelitas.com](http://www.excelitas.com)
 All values are nominal; specifications subject to change without notice.

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