

TPS 535 - Thermopile Detector

Large Absorber Size



Description

The **TPS 535** thermopile sensor in a TO 5 type housing employs a chip of $1.2 \times 1.2 \text{ mm}^2$ absorber size and a $30 \text{ k}\Omega$ thermistor as temperature reference. The square window opening is equipped with a $5.5 \mu\text{m}$ longpass (standard) infrared filter. The sensor shows a flat sensitivity characteristic over the wavelength.

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

Features

- Large Absorber Size - High Signal Output
- Low Temperature Coefficient of Sensitivity
- Applications: Ear Thermometer, Gas Detectors (with Additional Infrared Bandpass Filter)

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Figure 1. Package Drawing

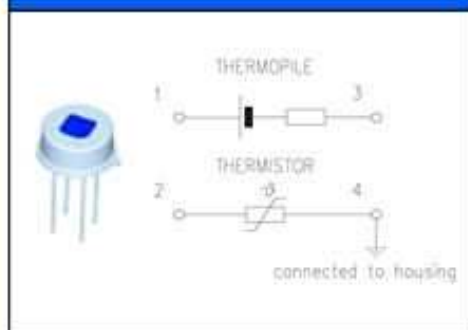


Figure 2.

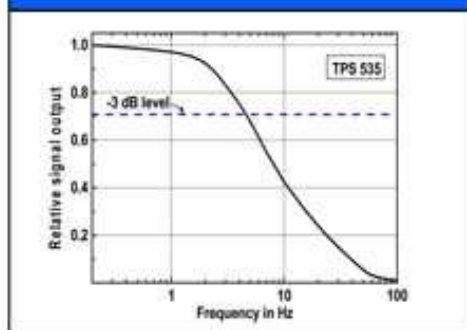


Figure 3.

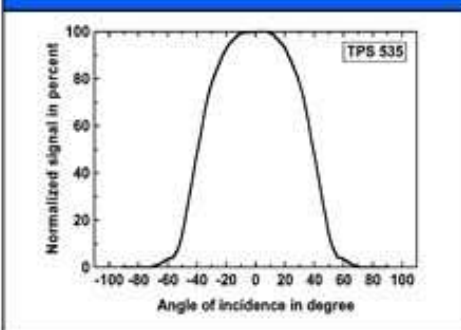


Figure 4. Top View Package Dimension

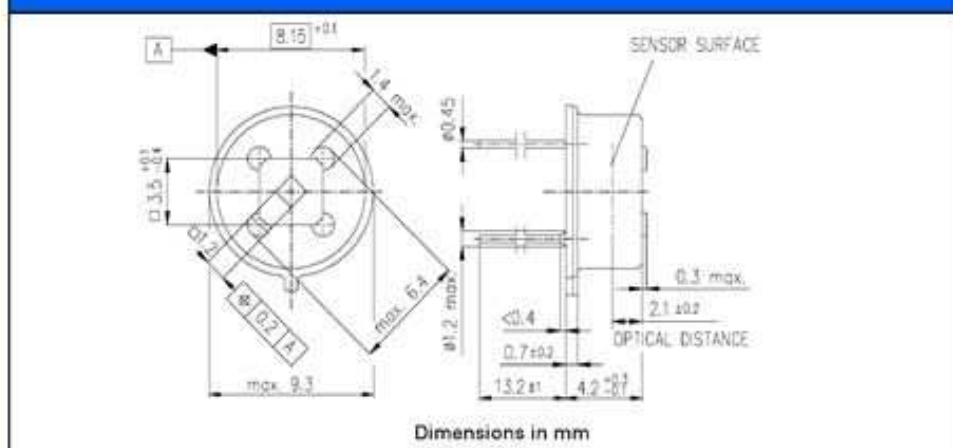


Figure 5. Bottom View

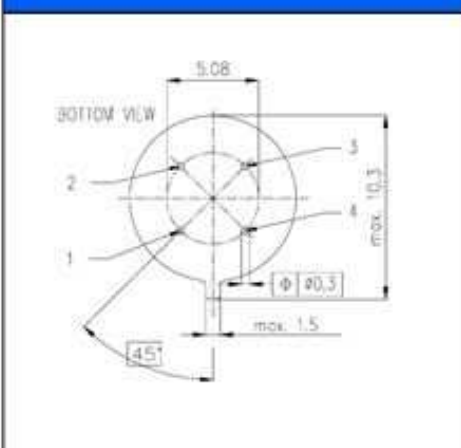


Table 1. TPS 534

Parameter	Typical	Units	Condition
Sensitive area	1.2 x 1.2	mm ²	absorbing area
Window size	3.5 x 3.5	mm	
DC sensitivity	20	V/W	500K BB 5 ... 14μm
Resistance	40	kΩ	
Noise	25	nV/√Hz	r.m.s. 300K
NEP	1.26	nW/√Hz	500K BB 5 ... 14μm
D*	0.96 x 10 ⁸	cm√Hz/W	500K BB 5 ... 14μm
TC of sensitivity	-0.01	%/K	
TC of resistance	0.02	%/K	
Time constant	35	ms	
Operating temperature	-40 to 100	°C	non permanent
Storage temperature	-40 to 100	°C	non permanent
Thermistor resistance	30	kΩ	25°C
beta	3964	K	25°C/100°C
Field of view	80	°	at 50% points

For more information email us at generalinquiries@excelitas.com or visit our website at www.excelitas.com

All values are nominal; specifications subject to change without notice.

North America:
Excelitas Technologies
16800 Trans-Canada Highway
Kirkland, Quebec J7V 8P7 Canada
Toll Free: (877) 734-OPTO (6786)
Phone: +1-450-424-3300
Fax: +1-450-424-3411

Europe:
Excelitas Technologies
Wenzel-Jaksch-Str. 31
D-65199 Wiesbaden, Germany
Phone: +49-611-492-430
Fax: +49-611-492-165

Asia:
Excelitas Technologies
47 Ayer Rajah Crescent #06-12
Singapore 139947
Phone: +65-6770-4366
Fax: +65-6775-1008

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