

Two Channel Thermopile Detector TS2x180S-A-S1.5

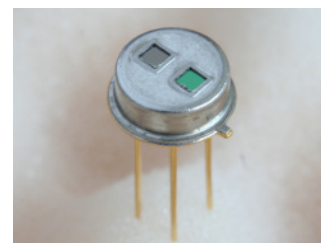
Thermopile dual-detector based on thin film technology with low time constant and narrow band filters for gas analysis.

Active Area	2 x (0.8 x 0.8)	mm ²
Aperture	2 x (1.5 1.5)	mm ²
Number of Thermocouples per Channel	180	
Time Constant $t_{(0-63\%)}^1$	12±5	ms
DC Output Voltage ¹	typ. 1.5	mV
DC Sensitivity ¹	typ. 62	V/W
Temperature Coefficient of Sensitivity ²	-0.45±0.08	%/K
Noise Voltage ³	typ. 34	nV/Hz ^{1/2}
Noise Equivalent Power NEP ¹	typ. 0.55	nW/Hz ^{1/2}
Specific Detectivity D* ¹	typ. 1.45 x 10 ⁸	cmHz ^{1/2} /W
Resistance of Thermopile ³	70 ± 30	kΩ
Temperature Coefficient of Resistance ²	-0.06±0.04	%/K
Thermistor	1 – PTC 1 kΩhm 2 – NTC 30 kΩhm 3 – NTC 100 kΩhm Technical specifications see document "thermistors".	
Filling Gas	N ₂	
Filters	All Micro-Hybrid standard narrow band pass filters can be combined. Customized filters on request. For more information please see document "standard filters".	
Operation Temperature	-20 ... +85	°C
Mass	1	g
Housing	T039 (modified)	

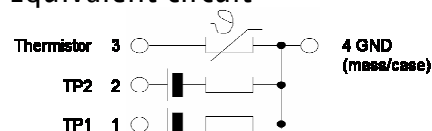
¹ on air without windows, Blackbody T=500 K; E=38 W/m²

² temperature range from +25 to +75°C

³ at T_{amb}=25 °C



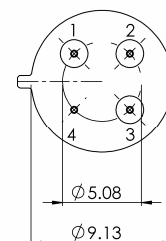
Equivalent Circuit



Bottom View

Pin Assignment:

- Pin 1 Output TP1
- Pin 2 Output TP2
- Pin 3 Thermistor
- Pin 4 Mass (GND)



Ordering Information:

TS2x180S-A-S1.5 – Thermistor (F) – Backfill Gas (GG) – Filters (H/H)

e.g. TS2x180S-A-S1.5-1-N2-E1/F1

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