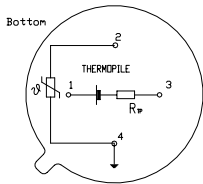


HTS Series

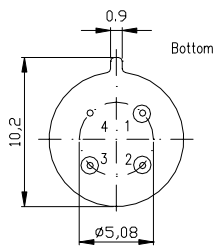
Thermopile Sensors for Remote Temperature Measurement and Gas Analysis

The HTS Series of CMOS compatible thermopile sensor chips in a TO39 size transistor housing, features good sensitivity, small temperature coefficient of sensitivity and high reproducibility and reliability. The smallest chip TP1 is well suited for temperature measurements which require a precise measuring spot whereas the chip type TP3 is optimized for highest signal.

Additionally Heimann Sensor can offer integrated thermopile sensors (HIS series) combining a thermopile sensor chip with an ASIC in a TO39 housing.



$$R_{therm.ref}(T) = R_{25} \cdot e^{\left[B \cdot \left(\frac{1}{T} - \frac{1}{T_{25}} \right) \right]}$$

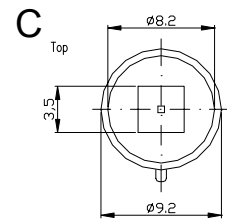
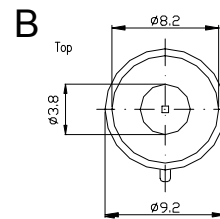
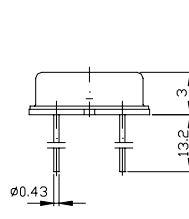
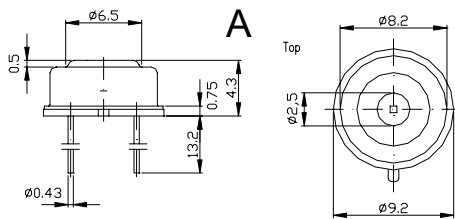


Ordering Information:

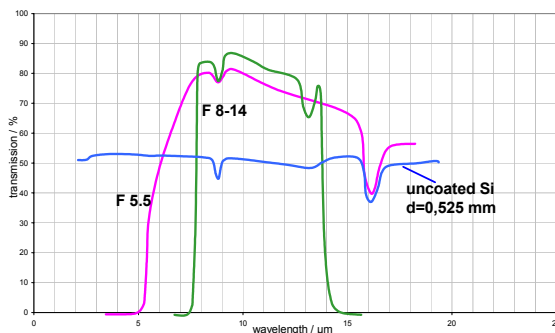
HTS / cap aperture / chip type /
w/wo thermistor / F desired filter
e.g.: HTS A11 F5.5

Parameter	HTS	HTS	HTS	Unit
	A11	B21 C21	B31 C31	
element size	0,61 ²	1,2 ²	2,1 ²	mm ²
voltage response ¹	13	39	74	V mm ² /W
sensitivity ¹	36	27	16	V/W
resistance R _{TP} ²	86	84	88	kOhm
TC of resistance R _{TP} ²	0.02	0.02	0.02	% / K
noise ²	38	37	38	nV/ Hz ^{1/2}
detectivity ^{1,2}	5.6 · 10 ⁷	8.7 · 10 ⁷	9.1 · 10 ⁷	cm Hz ^{1/2} / W
time constant	6	10	18	ms
thermistor reference ²	100	100	100	kOhm
temp. coeff. of thermistor B ³	3940	3940	3940	K
field of view ⁴	70	100	100	°
operating temperature	-20 ... 120			°C
storage temperature	-40 ... 120			°C

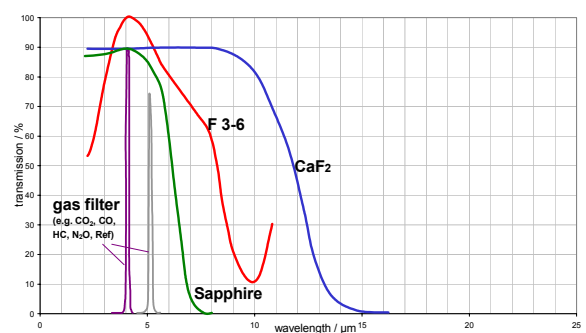
- 1) filter type F5.5, Tobj=100°C, DC
- 2) at Tamb=25°C
- 3) 25°C, 50°C
- 4) deg at 50% signal level



Filter types for temperature measurements



Filter types for Gas Analysis



Modifications reserved Rev.07 / 01.10.2004