Datasheet Thermopile Module
Type HIS Ax1 Fx Tx 6PIN

Features and Benefits

- Thermopile sensor and integrated ASIC with analog outputs
- 6-pin metal housing TO5/TO39 giving access to programming options
- Operating range 4.5V to 5.5V , -40°C to 120°C
- Calibrated to selectable object temperature range
- Option to internal compensation of ambient temperature drift
- Integrated linear temperature reference

Ordering Information

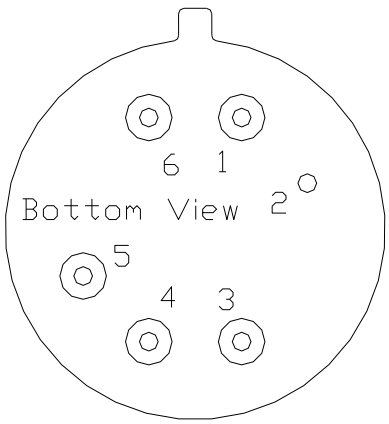
HIS -> Heimann thermopile sensor and ASIC in TO-5 housing with 6 pins
Ax1 -> „A" standard cap TO-39 ;
-> x:"C"/"U" thermopile signal internal temperature compensated / not compensated
-> „1" ASIC type HTIA
Fx -> selectable filter type (list)
Tx -> object temperature range selected by customer

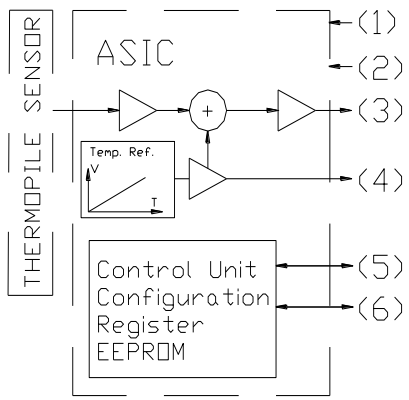
Sample: HIS AU1 F5.5 T100 6PIN

Filter Selection		
Filter Type	*Application*	*Specification*
F5.5	temperature detection	Long Wave Pass Cut On 5.5µm
F8-14	temperature detection	Bandpass HPP 8µm to 14µm

Pin Assignment

Pin	*Symbol*	*Description*
1	VDD	Positive supply voltage (+5V)
2	VSS	Negative supply voltage / Ground (0V)
3	AOT	Amplified analogue sensor output voltage
4	AOR	Analogue temperature reference output voltage
5	SCLK	Programming mode only – serial clock input
6	CM	Programming mode only - mode selection





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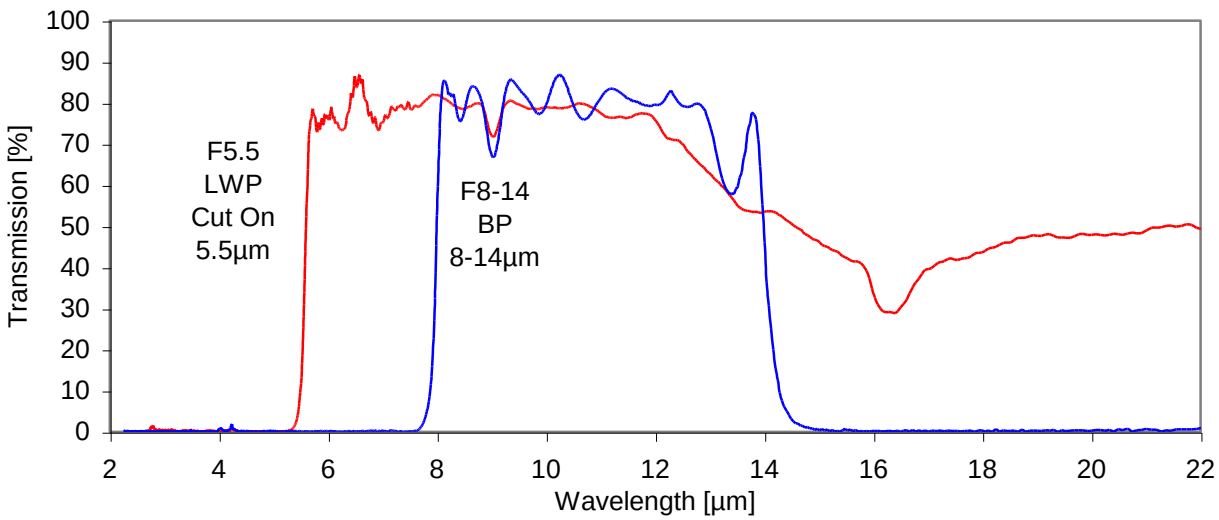
Operating Conditions

Parameter	*Typical Value*	*Unit*	*Condition*
Supply voltage VDD	5 (4.5 .. 5.5)	V	+Vs
Supply voltage VSS	0	V	-Vs , Ground
Supply current	1.5 (1 .. 2.2)	mA	Without load
PSRR	>40	dB	
Output voltage range	0.15 .. VDD-0.15	V	
Start up time after POR	Max. 0.5	sec	Electrical start up
Output resistance	< 10	Ohm	F < 100Hz
Output load	> 20	kOhm	For optimal operation
Sensor absorbing area	0.61 x 0.61	mm²	Sensor die TP1
Object temperature range	-30 .. +300	°C	Filter type F5.5
Object temperature range	-30 .. +500	°C	Filter type F8-14 (no internal temp. compensation)
Zero input sensor signal	1.225	V	On output AOT
Temp. ref. voltage at 25°C	1.225	V	On output AOR
Sensitivity temperature reference	15 (10 .. 16)	mV/°C	Output AOR, Linear, type "U" (Linear, type "C")
Field of view	70	degree	50% energy points
Operating temperature	-40.. 120	°C	

Filter Sample Curve



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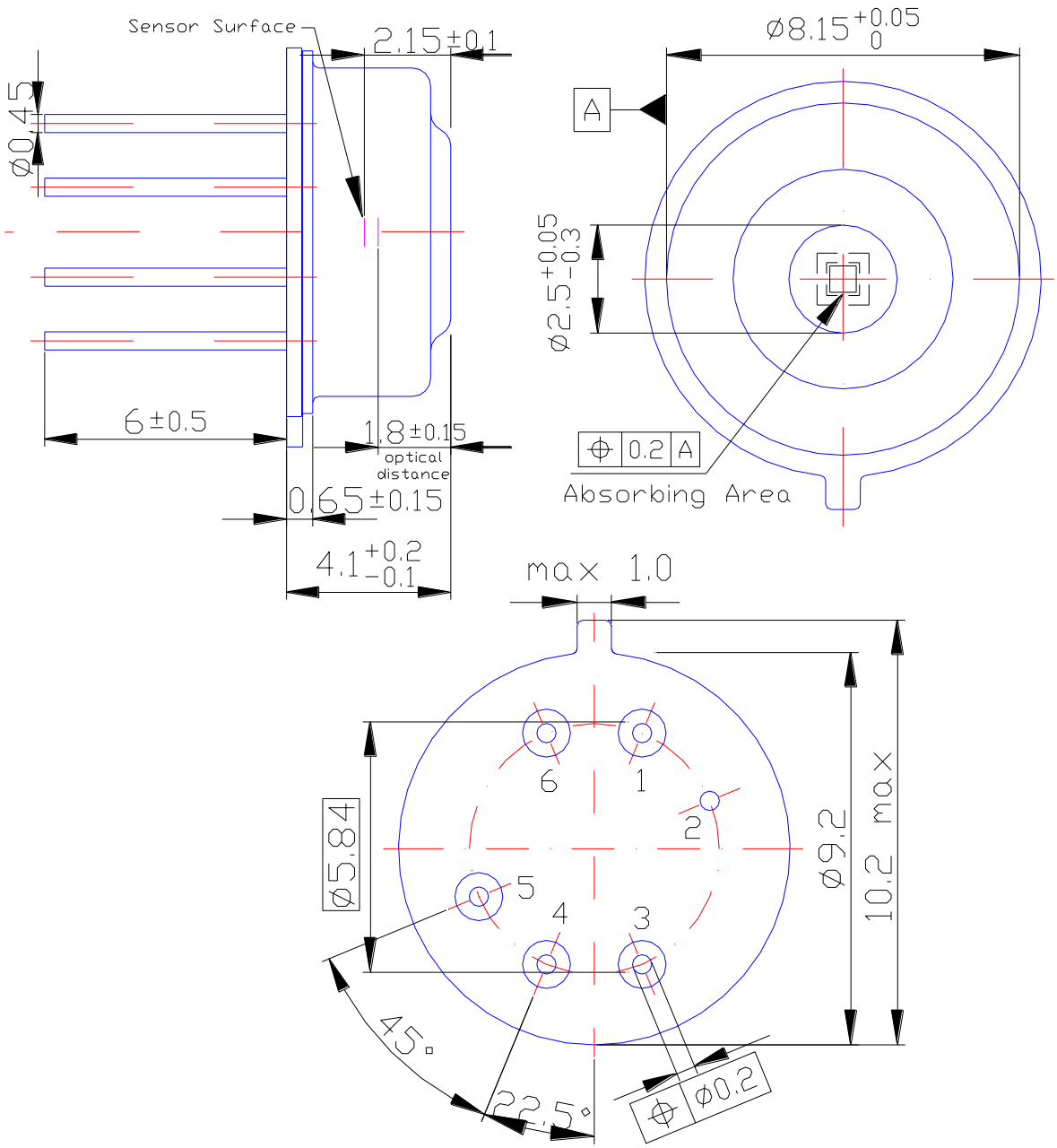
Dimensions



Liability

Changes or modifications at the product which haven't influence to the performance and/or quality of the device haven't to be announced to the customers in advance. Customers are requested to consult with Heimann Sensor representatives before the use of Heimann Sensor products in special applications where failure or abnormal operation may directly affect human lives or cause physical injury or property damage. The company or their representatives will not be responsible for damage arising from such use without prior approval.

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