Two Channel MEMS Pyrodetector for High Temperature Enviroments
PS2x1V1HT180 Preliminary

Fast High Temperature Dual Pyroelectric Detector with low microphone effect, low thermal time constant and low temperature dependency for NDIR gas analysis.

Type		PS2x1V1HT180	
Active Area A		2 x (0.8 x 0.8)	mm²
Aperture		2 x (1.5 x 1.5)	mm²
Mode		voltage	
Noise Density Voltage*1	typ.	60	nV/Hz$^{1/2}$
Crosstalk between Channels	typ.	0.5	%
Time Constant $t_{(0\text{-}63\%)}$ *3 thermal	typ.	17	ms
Time Constant $t_{(0\text{-}63\%)}$ *3 electrical	typ.	8	s
AC Responsivity S*1,2,3	typ.	175	V/W
Specific Detectivity D* *1,2,3	typ.	2.0E+08	cmHz$^{1/2}$/W
Noise Equivalent Power NEP *1,2,3	typ.	3.4E-10	W/Hz$^{1/2}$
Microphonic Voltage*1	typ.	2.9	µV/g
Filters		CO_2 / Ref.	
Drain Source Voltage	max.	+18	VDC
External Load		10	kOhm
Offset Voltage		1.5 ... 3.0	V
Operation Temperature		-55 … +180	℃
Mass		~1	g
Housing		TO39 (modified)	
Manufacturer Guarantee		2 years	

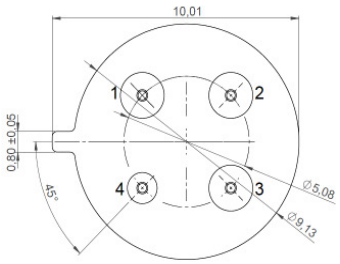
*1 at 25℃, 10Hz, band with 1Hz
*2 38µW/mm² at 500K black body
*3 without windows

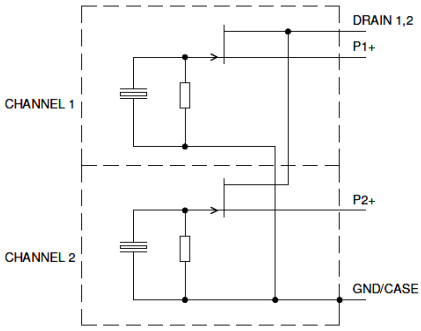
$$S = \frac{\tilde{U}}{\phi} \qquad NEP = \frac{\tilde{U}_{noise}}{S} \qquad D^* = \frac{\sqrt{A}}{NEP}$$

PS2x1V1 Two Channel Pyrodetector CO_2 / Ref			
Gas	Channel	Filter	
		CWL [µm]	HBW [µm]
CO_2	P1	4.265	0,110
reference	P2	4.000	0.080

Pin Assignment
Pin 1 P1+
Pin 2 Drain
Pin 3 P2+
Pin 4 GND

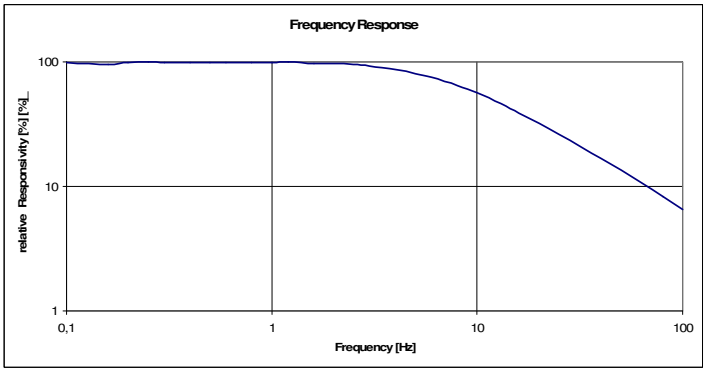
Bottom view

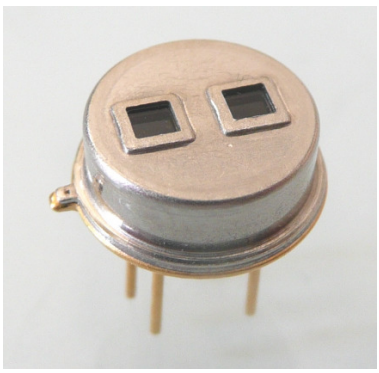


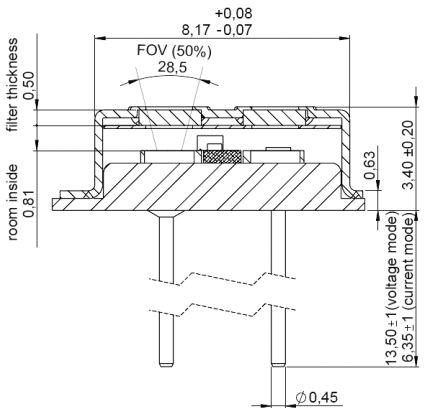


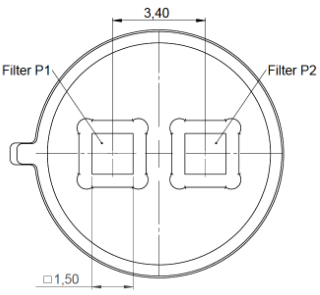
Order information:

PS2x1V1HT180 HT Dual Pyro Detector CO_2/Ref 4594.58-H.01









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