

LIE-216-#

pyroelectric detector, small

Description:

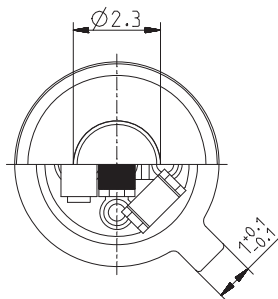
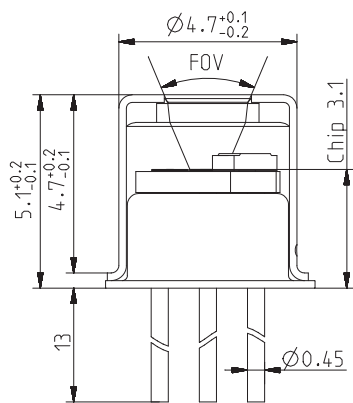
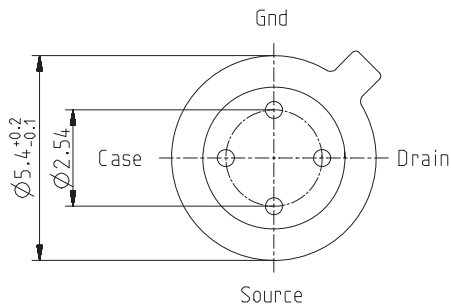
single channel; TO18 housing; small chip size; thermal compensation; JFET; voltage mode;



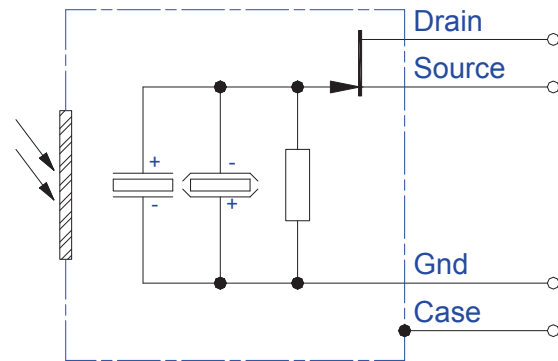
HOUSING:

PIN ASSIGNMENT:

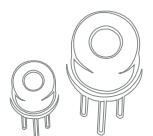
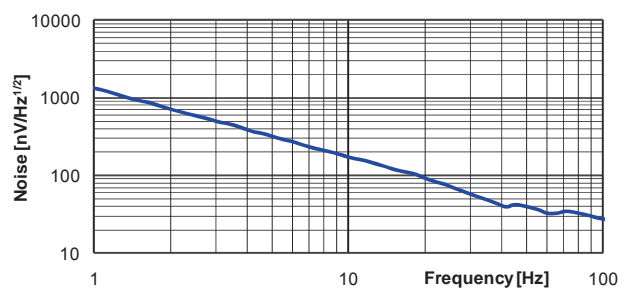
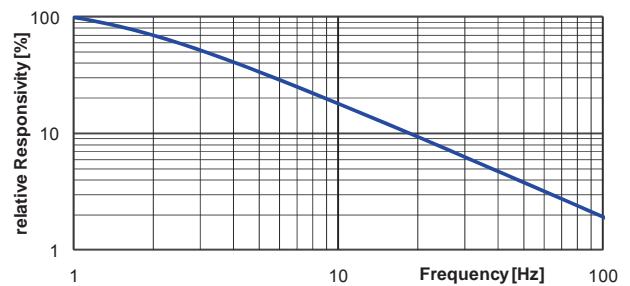
TO18 4Pin
Bottom view



Top view



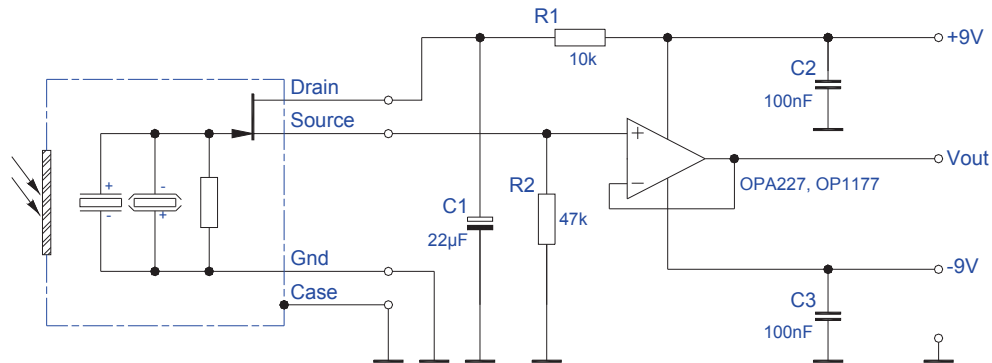
FREQUENCY RESPONSE:



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TEST CIRCUIT:



PARAMETERS:

Aperture size	nom	ø2.3 mm
Element size / type	nom	1.4x1.0 mm ² lithium-tantalate with black layer
Thermal time constant	typ	150 ms
Electrical time constant	typ	4 s
Polarity	nom	positive signal by positive IR flux change
Voltage responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window}	min	450 V/W
Noise density (rms) {10 Hz, BW 1 Hz, 25 °C}	max	220 nV/(sqrt[Hz])
Detectivity {500 K, 10 Hz, 1 Hz, 25 °C, without filter/window}	typ	3.0E+08 cm(sqrt[Hz])/W
Offset voltage {opt. Drain current = 10 ... 100 µA}	nom	0.4 ... 1.5 V
Drain source voltage	max	18 V
Potential of detector case	nom	selectable potential between -24 ... +24V to Ground {EMC requires low-impedance coupling}
Operating / Storage temperature	nom	-25 ... +85 °C
IR window		All InfraTec windows and filters are available (except KBr and CsI). Customized filters upon request.
Filter sizes	nom	rectangular filters: (2.70 x 2.70) mm +0/-0.05 mm circular filters: ø3.3 mm ±0.1 mm standard thickness: 0.50 mm +0.2/-0.1 mm thickness range 0.70 ... 1.10 mm on request
Field of View	min	CaF ₂ or BaF ₂ ; 0.4 mm thick: 40° Silicon substrate; 0.5 mm thick: 45°

Note: If visible light can penetrate the glass-metal seal in the detector socket, a small signal caused by light leakage may occur. InfraTec reserves the right to change these specifications at any time without notification.

