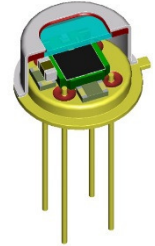


LIE-500-#

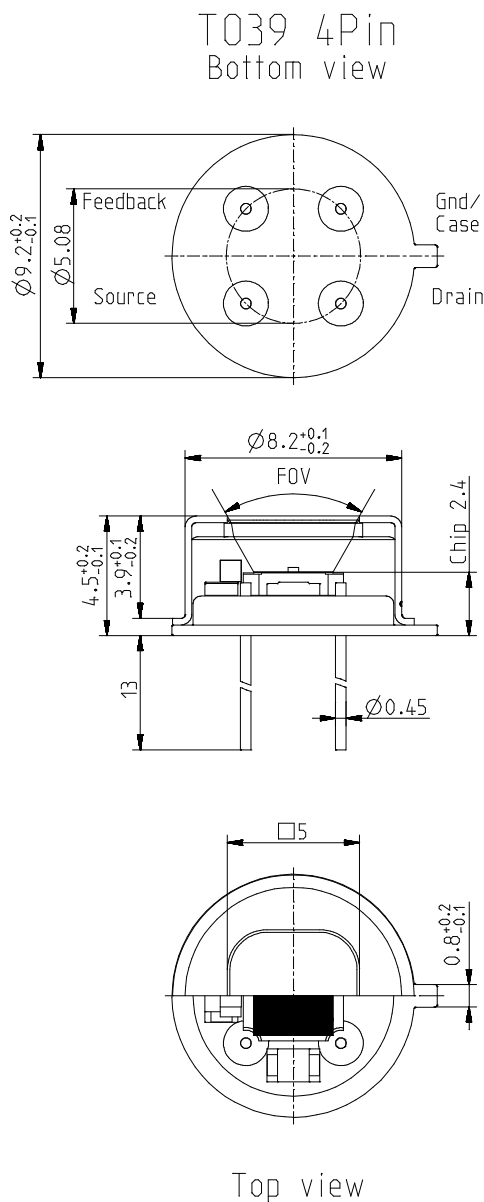
Single channel pyroelectric detector

Description:

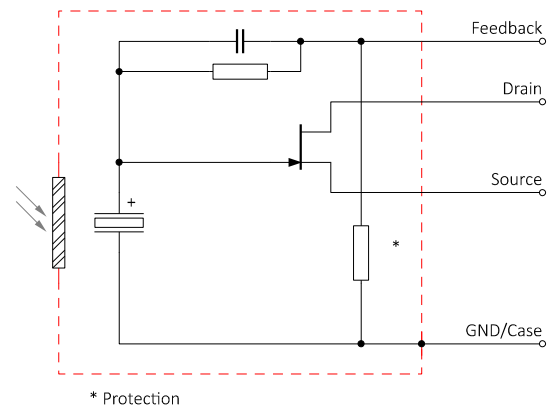
single channel; TO39 housing; large chip size;
JFET; current mode; feedback 5 GOhm;



Housing:

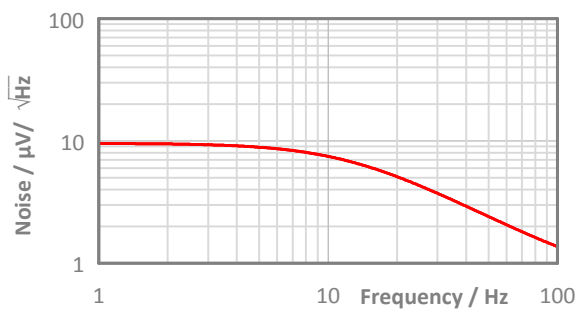
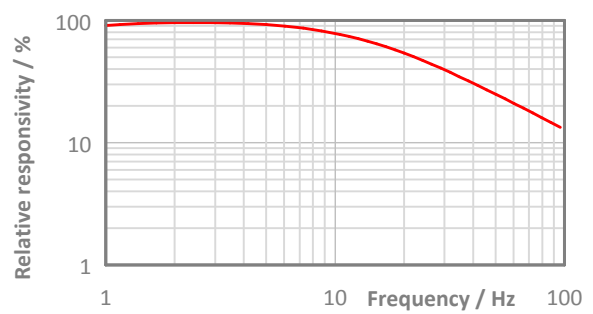


Pin Assigment:



Maximum current between Case and the "Case"-Pin 10 mA!

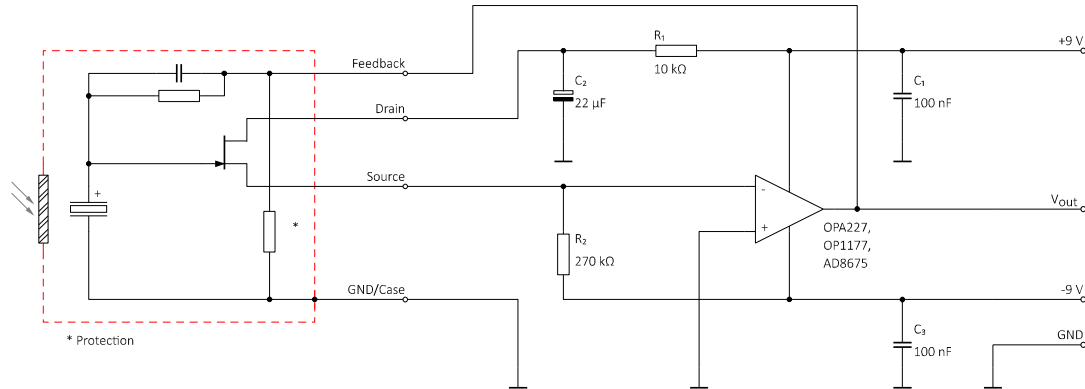
Frequency Response:



LIE-500-#

Single channel pyroelectric detector

Test Circuit:



Parameters:

| | | |
|----------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aperture size | nom | □ 5.0 mm |
| Element size / type | nom | 3.0 × 3.0 mm ² lithium-tantalate with black layer |
| Thermal time constant | typ | 200 ms |
| Feedback resistor | nom | 5 GΩ ±10 % |
| Feedback capacitor | nom | 2.20 pF ±0.25 pF |
| Polarity | nom | Negative signal by positive IR flux change |
| Voltage responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window} | min | 5,500 V/W |
| Noise density (rms) {10 Hz, BW 1 Hz, 25 °C} | max | 10 μV/√Hz |
| Detectivity {500 K, 10 Hz, 1 Hz, 25 °C, without filter/window} | typ | 2.7E+08 cmVHz/W |
| Offset voltage {opt. Drain current = 10 ... 100 μA} | nom | -0.4 ... -1.5 V |
| Drain source voltage | max | 18 V |
| 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: (5.25 × 5.25) mm +0/-0.05 mm Circular filters: ø6.5 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 | CaF2 or BaF2; 0.4 mm thick: 50° Silicon substrate; 0.5 mm thick: 60° |

InfraTec reserves the right to change these specifications at any time without notification.