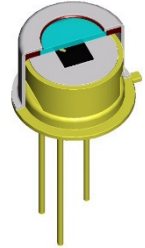


LIE-332-#

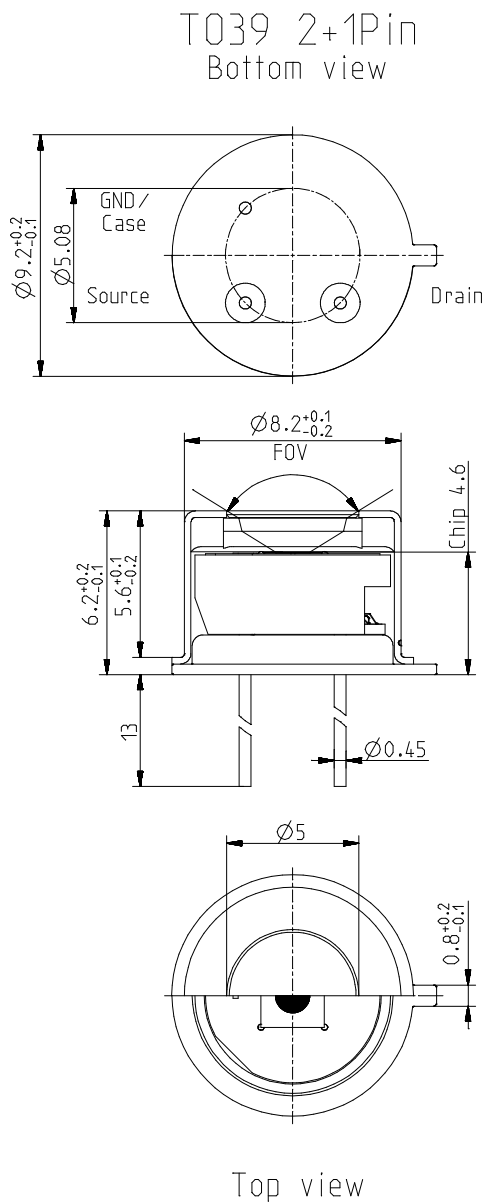
Special single channel pyroelectric detector

Description:

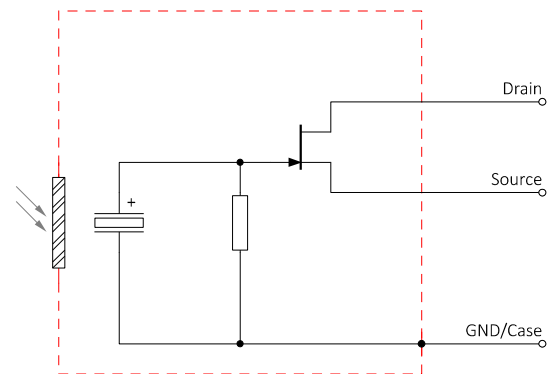
single channel; TO39 housing; small chip size;
 JFET; voltage mode;
 long time constant, metal black coating



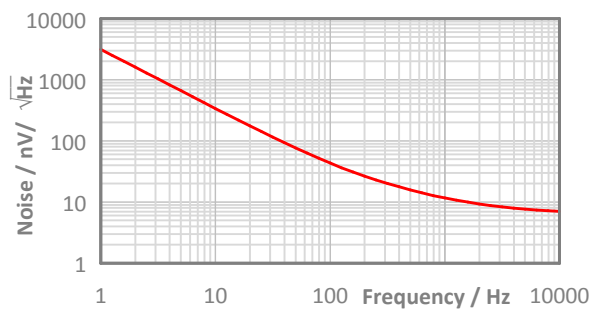
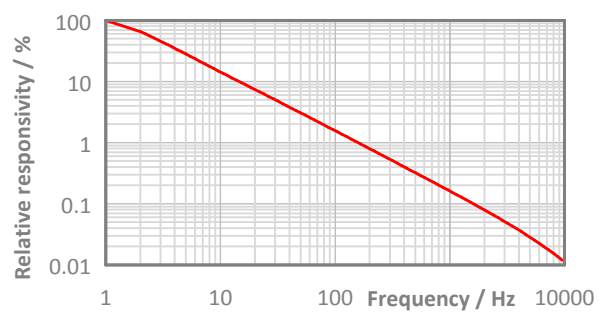
Housing:



Pin Assigment:



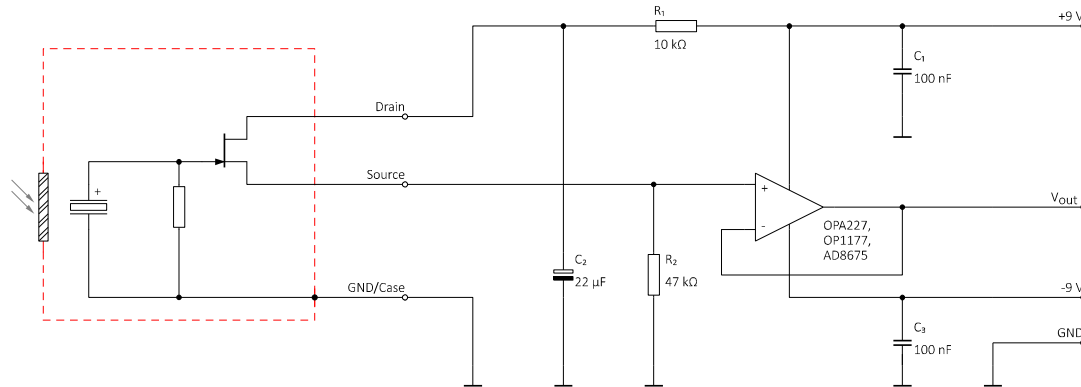
Frequency Response:



LIE-332-#

Special single channel pyroelectric detector

Test Circuit:



Parameters:

| | | |
|---|-----|--|
| Aperture size | nom | ø5.0 mm |
| Element size / type | nom | ø1.3 mm lithium-tantalate with metal black layer |
| Thermal time constant | typ | 200 ms |
| Electrical time constant | typ | 2 s |
| Polarity | nom | Positive signal by positive IR flux change |
| Voltage responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window} | min | 1,200 V/W |
| Voltage responsivity (rms) {500 K, 100 Hz, 25 °C, without filter/window} | min | 120 V/W |
| Noise density (rms) {10 Hz, BW 1 Hz, 25 °C} | max | 400 nV/√Hz |
| Noise density (rms) {100 Hz, BW 1 Hz, 25 °C} | max | 60 nV/√Hz |
| Detectivity {500 K, 10 Hz, 1 Hz, 25 °C, without filter/window} | typ | 4.5E+08 cmVHz/W |
| Detectivity {500 K, 100 Hz, 1 Hz, 25 °C, without filter/window} | typ | 2.8E+08 cmVHz/W |
| Detectivity {500 K, 1 kHz, 1 Hz, 25 °C, without filter/window} | typ | 1.4E+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 ... +60 °C |
| IR filter | | All InfraTec standard crystal windows (BaF2, CaF2, CsI, KBr, Sapphire) are available. 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 Maximum thickness: 0.85 mm |
| Field of View | min | CaF2 or BaF2; 0.4 mm thick: 85° |

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