

LME-302-#

pyroelectric detector

Description:

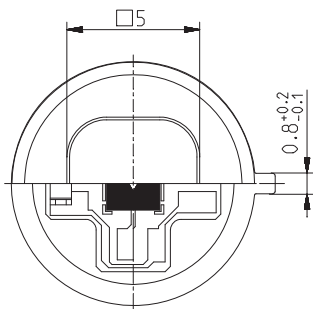
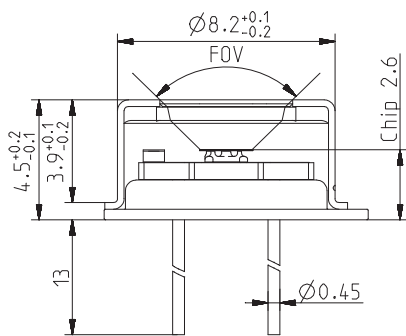
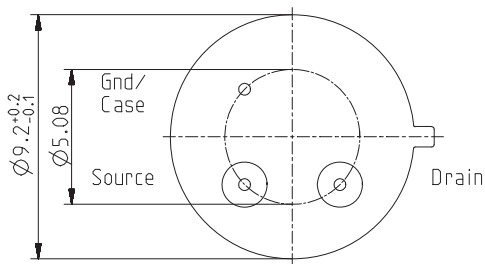
single channel; TO39 housing; medium chip size; low Micro; JFET; voltage mode;



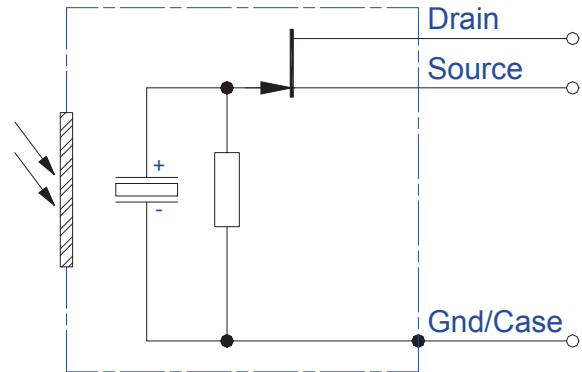
HOUSING:

PIN ASSIGNMENT:

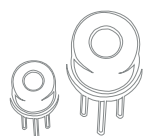
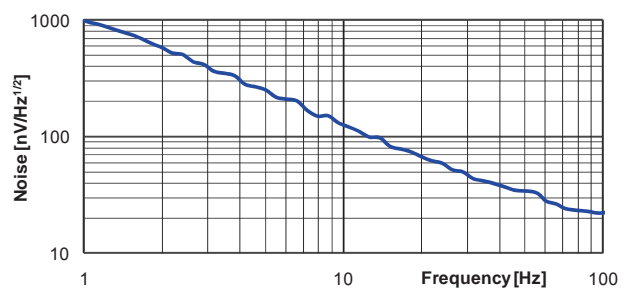
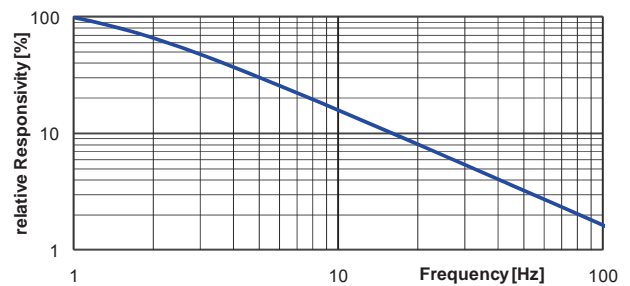
TO39 3Pin
Bottom view



Top view



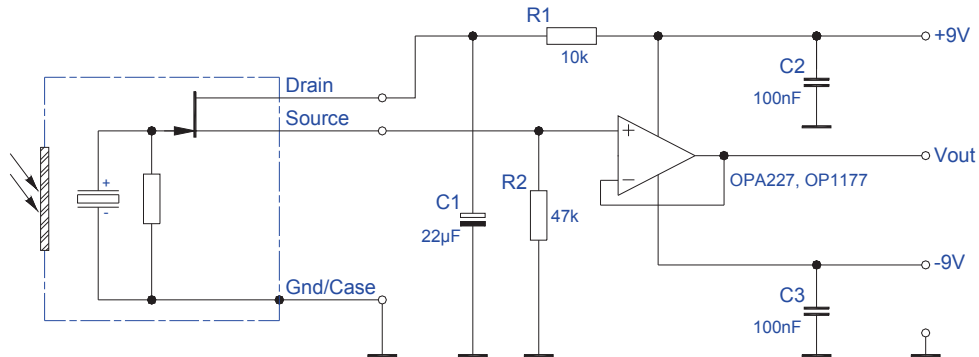
FREQUENCY RESPONSE:



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TEST CIRCUIT:



PARAMETERS:

| | | |
|--|-----|---|
| Aperture size | nom | 5.0 mm sq. |
| Element size / type | nom | 2.0x2.0 mm ² lithium-tantalate with black layer |
| Thermal time constant | typ | 150 ms |
| Electrical time constant | typ | 5 s |
| Polarity | nom | positive signal by positive IR flux change |
| Voltage responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window} | min | 340 V/W |
| Noise density (rms) {10 Hz, BW 1 Hz, 25 °C} | max | 150 nV/(sqrt[Hz]) |
| Detectivity {500 K, 10 Hz, 1 Hz, 25 °C, without filter/window} | typ | 6.0E+08 cm(sqrt[Hz])/W |
| Acceleration response {5 ... 200 Hz} | typ | 2 µV/g; g = 9.81 m/s ² |
| 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 x 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 | CaF ₂ or BaF ₂ ; 0.4 mm thick: 80° Silicon substrate; 0.5 mm thick: 90° |

