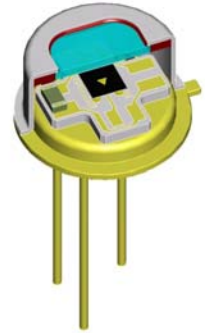


## LME-302-#

pyroelectric detector

### Description:

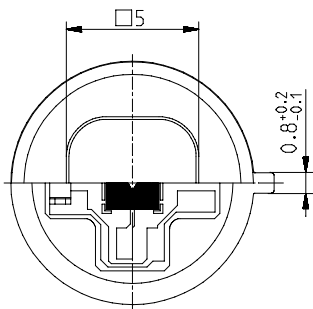
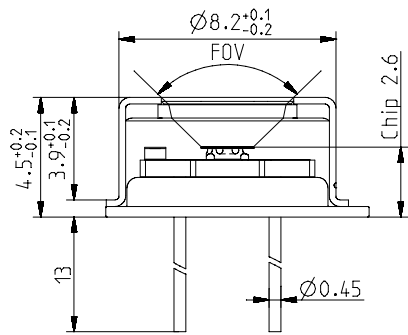
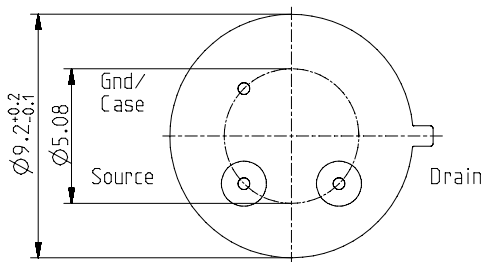
single channel; TO39 housing; medium chip size; low Micro; JFET; voltage mode;



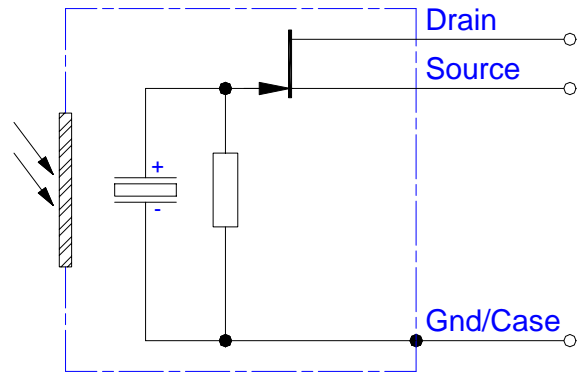
### HOUSING:

### PIN ASSIGNMENT:

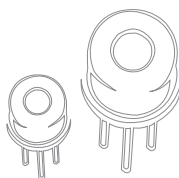
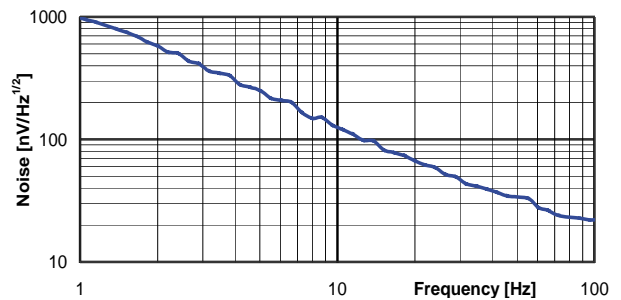
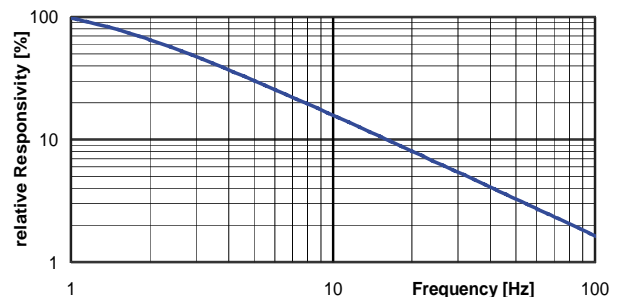
TO39 3Pin  
Bottom view



Top view



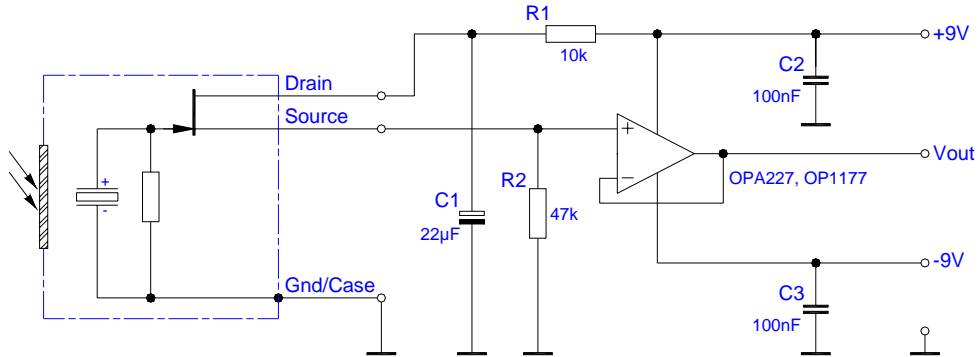
### FREQUENCY RESPONSE:



## LME-302-#

pyroelectric detector

### TEST CIRCUIT:



### PARAMETERS:

|  |     |   |
|--|-----|---|
| Aperture size  | nom | 5.0 mm sq.  |
| Element size / type  | nom | 2.0x2.0 mm <sup>2</sup> 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)<br>{500K, 10 Hz, 25 °C, without window} | min | 340 V/W   |
| Noise density (rms)<br>{10 Hz, BW 1 Hz, 25 °C}                     | max | 150 nV/(sqrt[Hz])   |
| Detectivity<br>{500K, 10 Hz, 1 Hz, 25 °C, without window}          | min | 4.5E+08 cm(sqrt[Hz])/W  |
| Acceleration response {5 ... 200Hz}                                | typ | 2 µV/g; g = 9.81 m/s <sup>2</sup>   |
| Offset voltage {opt. Drain current = 10 ... 100µA}                 | 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<br>circular filters: ø6.5 mm ±0.1 mm<br>standard thickness: 0.50 mm +0.2/-0.1 mm<br>thickness range 0.70 ... 1.10 mm on request |
| Field of View  | min | CaF <sub>2</sub> or BaF <sub>2</sub> ; 0.4 mm thick: 80°<br>Silicon substrate; 0.5 mm thick: 90°  |