

## LIE-200-#

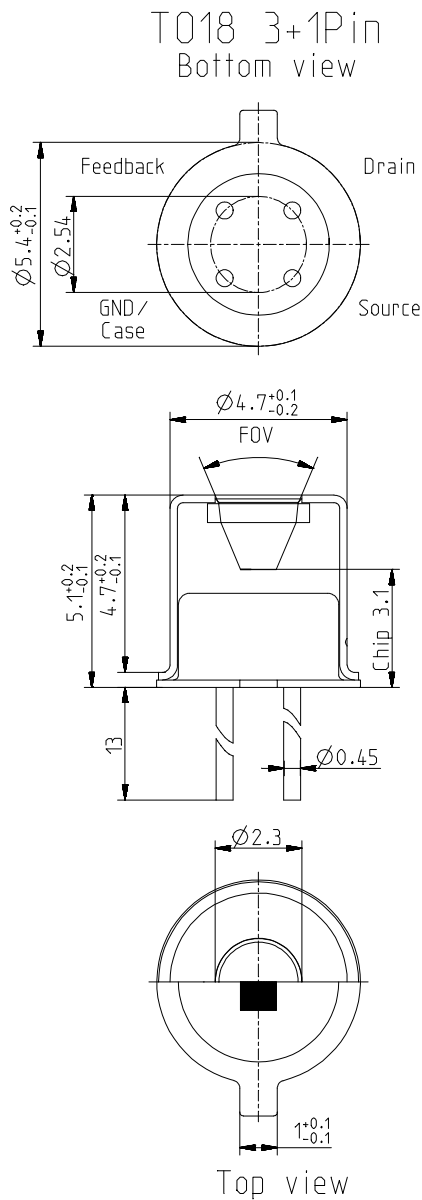
## Single channel pyroelectric detector

### Description:

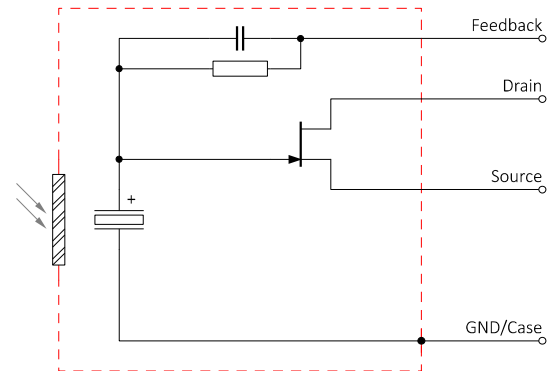
single channel; TO18 housing; small chip size;  
JFET; current mode; feedback 1 GOhm;



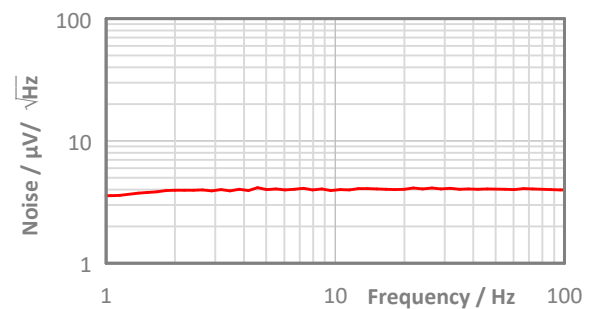
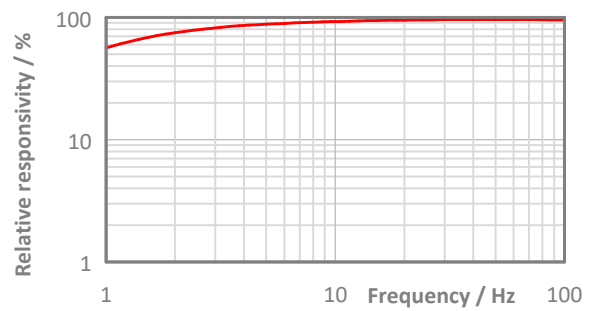
### Housing:



### Pin Assignment:



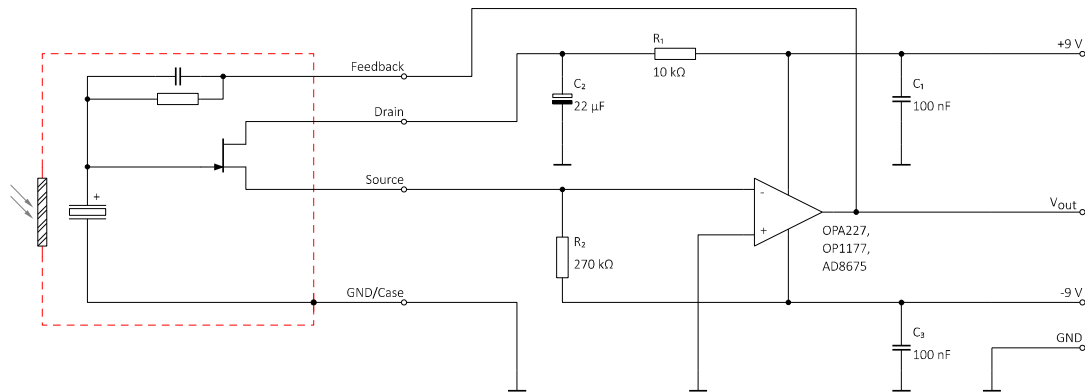
### Frequency Response:



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### Test Circuit:



### Parameters:

|  |     |  |
|--|-----|--|
| Aperture size  | nom | ∅ 2.3 mm   |
| Element size / type  | nom | 1.4 × 1.0 mm <sup>2</sup> lithium-tantalate with black layer   |
| Thermal time constant  | typ | 150 ms   |
| Feedback resistor  | nom | 1 GΩ ±10 %   |
| Feedback capacitor   | nom | 470 fF ±100 fF   |
| Polarity   | nom | Negative signal by positive IR flux change   |
| Voltage responsivity (rms)<br>{500 K, 10 Hz, 25 °C, without filter/window} | min | 1,400 V/W  |
| Noise density (rms)<br>{10 Hz, BW 1 Hz, 25 °C}                             | max | 5.0 μV/√Hz   |
| Detectivity<br>{500 K, 10 Hz, BW 1 Hz, 25 °C, without filter/window}       | typ | 5.5E+07 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 filter  |     | All InfraTec windows and filters are available (except KBr and CsI). Customized filters upon request.                              |
| Filter sizes   | nom | Rectangular filters: (2.70 × 2.70) mm +0/-0.05 mm<br>Circular filters: ∅3.3 mm ±0.1 mm<br>Standard thickness: 0.50 mm +0.2/-0.1 mm |
| Field of View  | min | CaF2 or BaF2; 0.4 mm thick: 40°<br>Silicon substrate; 0.5 mm thick: 45°  |

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