

LME-500-#

pyroelectric detector

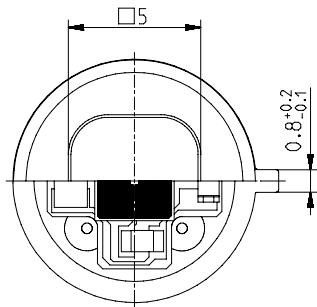
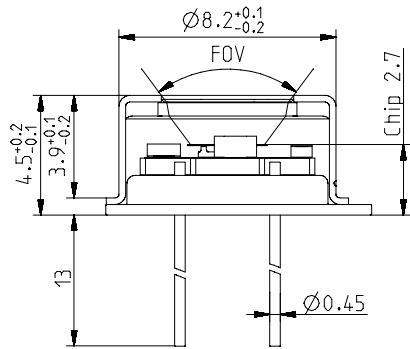
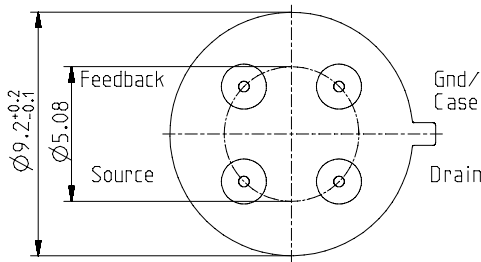
Description:

single channel; TO39 housing; large chip size; low Micro; JFET; current mode; feedback 24GOhm;



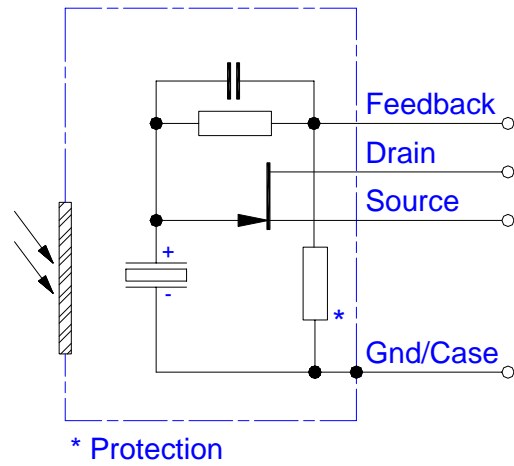
HOUSING:

TO39 4Pin
Bottom view



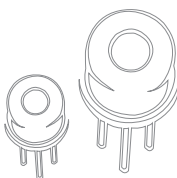
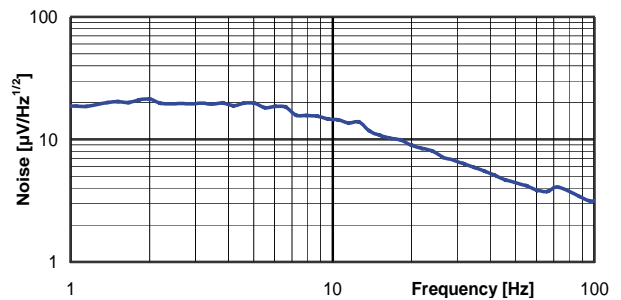
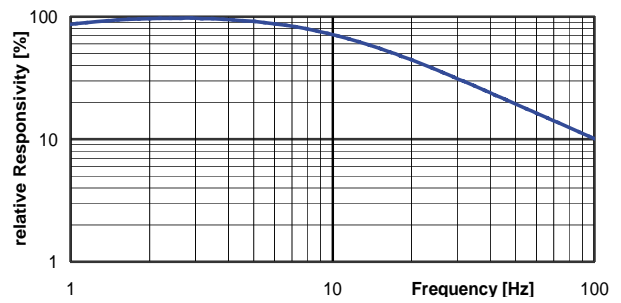
Top view

PIN ASSIGNMENT:



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

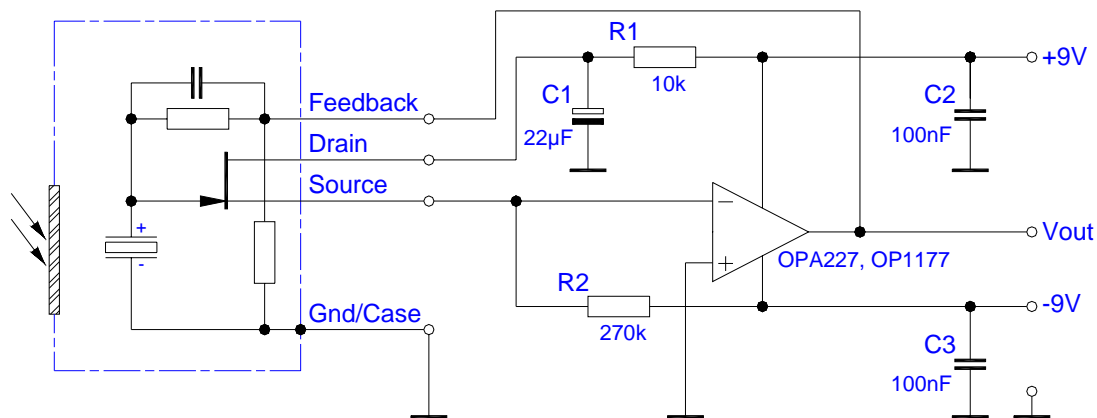
FREQUENCY RESPONSE:



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TEST CIRCUIT:



PARAMETERS:

Aperture size	nom	5.0 mm sq.
Element size / type	nom	3.0x3.0 mm ² lithium-tantalate with black layer
Thermal time constant	typ	200 ms
Feedback resistor	nom	24 GOhm ±10%
Feedback capacitor	nom	470 fF ±100 fF
Polarity	nom	negative signal by positive IR flux change
Voltage responsivity (rms) {500K, 10 Hz, 25 °C, without window}	min	22,000 V/W
Noise density (rms) {10 Hz, BW 1 Hz, 25 °C}	max	20 µV/(sqrt[Hz])
Detectivity {500K, 10 Hz, 1 Hz, 25 °C, without window}	min	3.3E+08 cm(sqrt[Hz])/W
Acceleration response {5 ... 200Hz}	typ	300 µV/g; g = 9.81 m/s ²
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 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: 60° Silicon substrate; 0.5 mm thick: 70°

