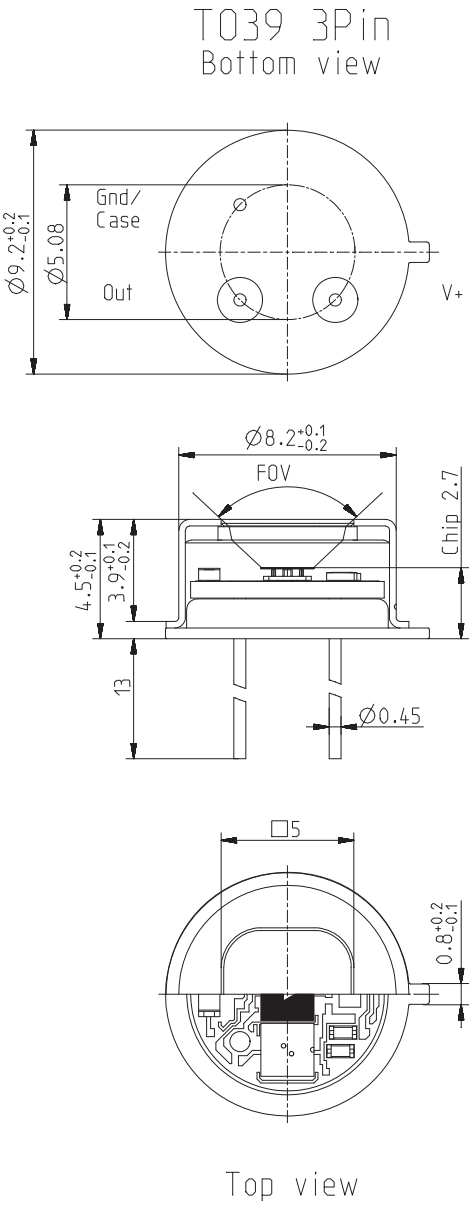
LME-336-# NEW

pyroelectric detector

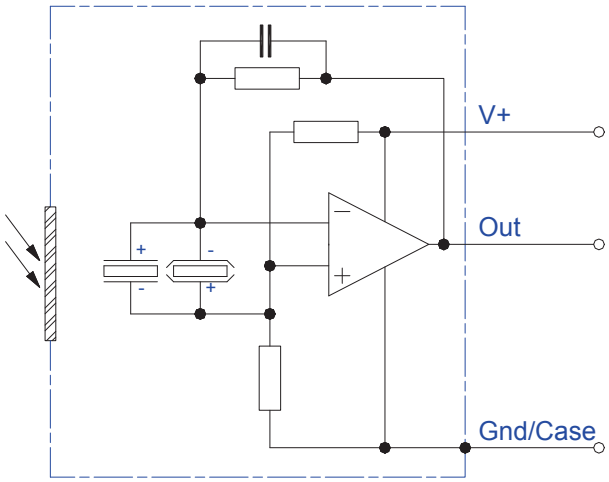
Description:

single channel; TO39 housing; medium chip size; thermal compensation; low Micro; OpAmp; current mode; feedback 100GOhm;
ultra low power consumption, single supply

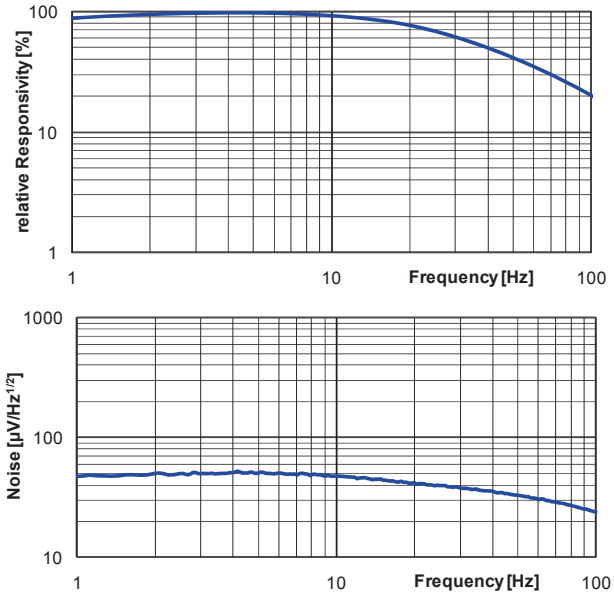
HOUSING:



PIN ASSIGNMENT:



FREQUENCY RESPONSE:



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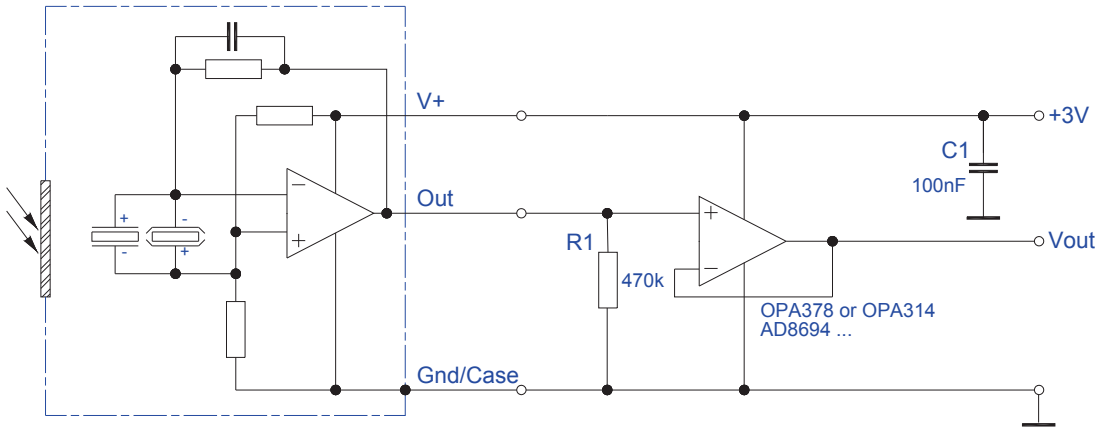
TEST CIRCUIT:



PARAMETERS:

Aperture size	nom	5.0 mm sq.
Element size / type	nom	2.0x2.0 mm² lithium-tantalate with black layer
Thermal time constant	typ	300ms
Feedback resistor	nom	100 GOhm ±20 %
Feedback capacitor	nom	0.2 pF ±0.1 pF
Polarity	nom	negative signal by positive IR flux change
Voltage responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window}	min	85,000 V/W
Noise density (rms) {10 Hz, BW 1 Hz, 25 °C}	max	57 µV/(sqrt[Hz])
Detectivity {500 K, 10 Hz, 1 Hz, 25 °C, without filter/window}	typ	4.0E+08 cm(sqrt[Hz])/W
Acceleration response {5 ... 200 Hz}	typ	250 µV/g; g = 9.81 m/s²
CMOS operational amplifier	nom	OpAmp3
Operating supply voltage V+		2.7 ... 10 V
Recommended supply voltage V+	nom	V+ = +3 V
Supply current {output load 1 MOhm}	max	30 µA
Offset voltage {25 °C; output load 1 MOhm}		V+/2 ±10%
Optimal output load	nom	330 kOhm
Absolute output current	max	1 mA
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	CaF2 or BaF2; 0.4 mm thick: 80° Silicon substrate; 0.5 mm thick: 90°