

LRM-102-#

pyroelectric multispectral detector, small

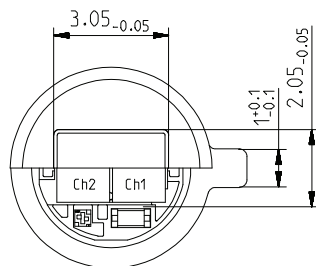
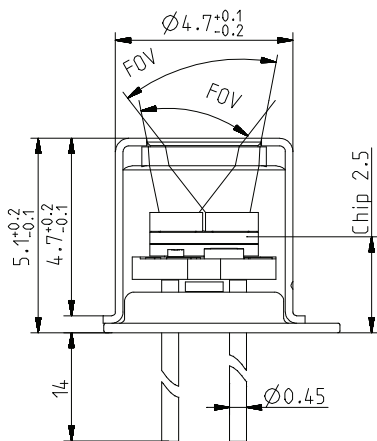
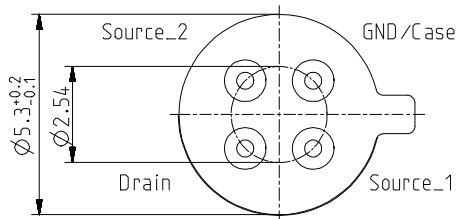
Description:

dual channel; TO46 housing; small chip size;  
JFET; voltage mode;



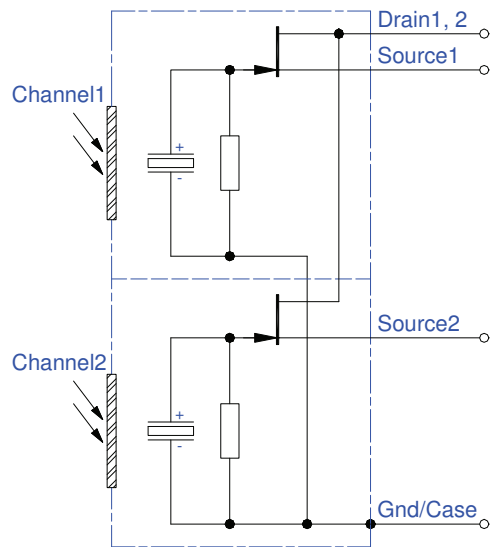
HOUSING:

T046 4Pin  
Bottom view



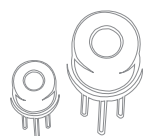
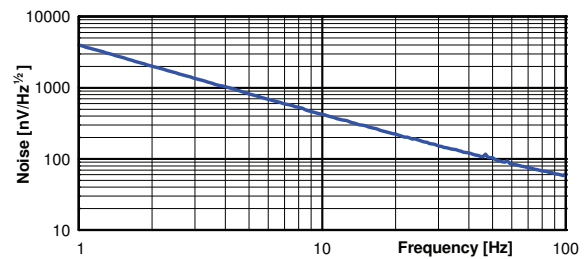
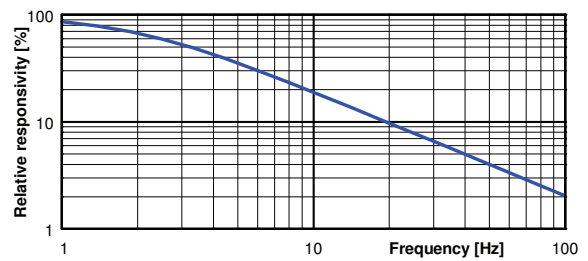
Top view

PIN ASSIGNMENT:



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

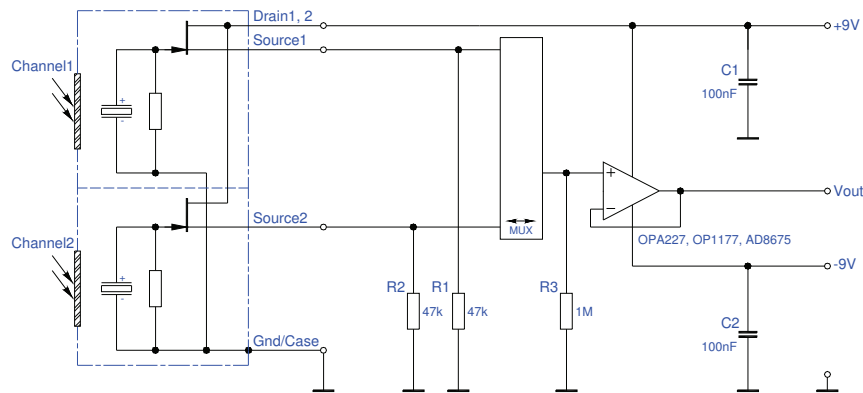
FREQUENCY RESPONSE:



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## TEST CIRCUIT:



## PARAMETERS:

Aperture size	nom	3.05 × 2.05 mm <sup>2</sup>
Element size / type	nom	1.2 × 0.8 mm <sup>2</sup> lithium-tantalate with black layer
Thermal time constant	typ	75 ms
Electrical time constant	typ	1.5 s
Polarity	nom	Positive signal by positive IR flux change
Voltage responsivity (rms) {500 K, 10 Hz, 25 °C, without filter/window}	min	1,100 V/W
Noise density (rms) {10 Hz, BW 1 Hz, 25 °C}	max	600 nV/ $\sqrt{\text{Hz}}$
Detectivity {500 K, 10 Hz, 1 Hz, 25 °C, without filter/window}	typ	4.0E+08 cm $\sqrt{\text{Hz/W}}$
Offset voltage {opt. Drain current = 10 ... 100 $\mu\text{A}$ }	nom	0.4 ... 1.5 V
Drain source voltage	max	18 V
Operating / Storage temperature	nom	-25 ... +85 °C
IR filter		Combinations of all InfraTec standard narrow band pass filters are available. Customized filters upon request.
Filter sizes	nom	Rectangular filters: (1.8 ±0.05 × 1.4 ±0.05) mm Circular filters: not applicable Standard thickness: 0.50 mm +0.2/-0.1 mm Thickness range 0.70 ... 1.10 mm on request
Aperture window		Selected by InfraTec for best channel filter matching
Aperture window sizes	nom	Rectangular filters: (3.3 +0/-0.05 × 2.3 +0/-0.05) mm Circular filters: $\varnothing$ 3.8 mm ±0.1 mm Standard thickness: 0.50 mm +0.2/-0.1 mm
Field of View	min	54° (with filter: silicon substrate; 0.5 mm thick; aperture: Si ARC; 0.5 mm thick)

This preliminary datasheet contains information regarding a product InfraTec is considering for production release. Due to this state all data are for information only.

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

