



## SI007 SILICON DETECTOR FOR DOSIMETRY

### DESIGNATION

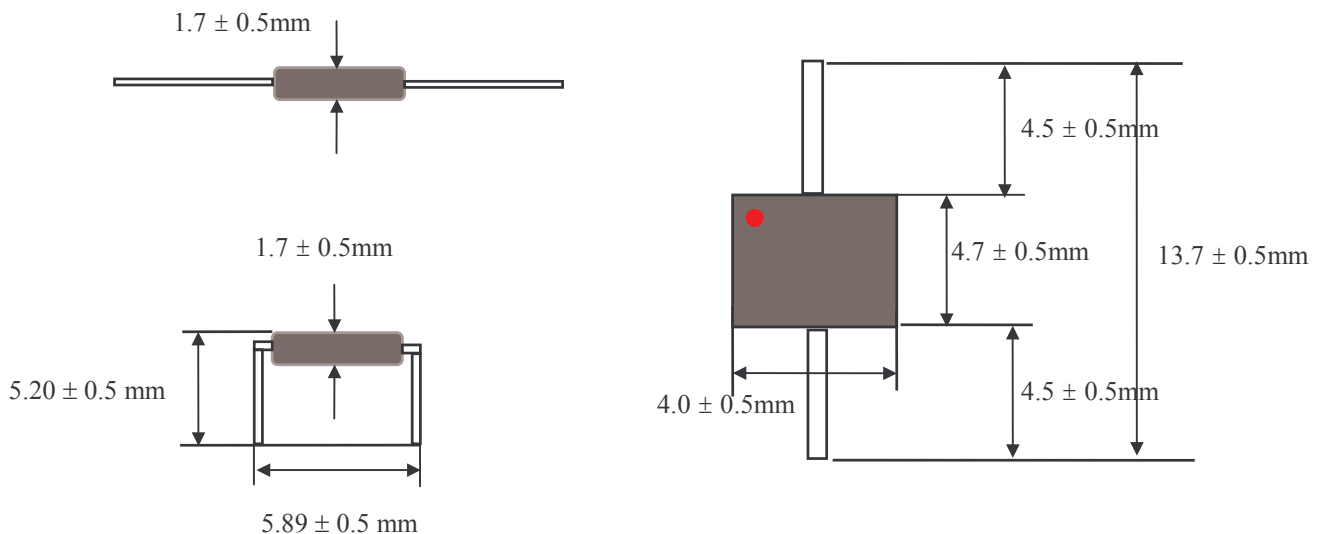
**References :** SI007-1 Silicon detectors with black epoxy coating, contact pin coming vertically.  
SI007-2 Silicon detectors with black epoxy coating, contact pin coming horizontally.  
SI007-3 Silicon detectors with energy filter and black epoxy coating, contact pin coming vertically.  
SI007-4 Silicon detectors with energy filter and black epoxy coating, contact pin coming horizontally.

### SHAPE AND SIZES

**Active area of the detector :** 7mm<sup>2</sup>  
**Final area of the detector :** About 25mm<sup>2</sup> (with filter + coating)  
**Mounting of the detector :** Mounted on a holder with two contact pins horizontally or vertically  
**Red point :** Positive (+)

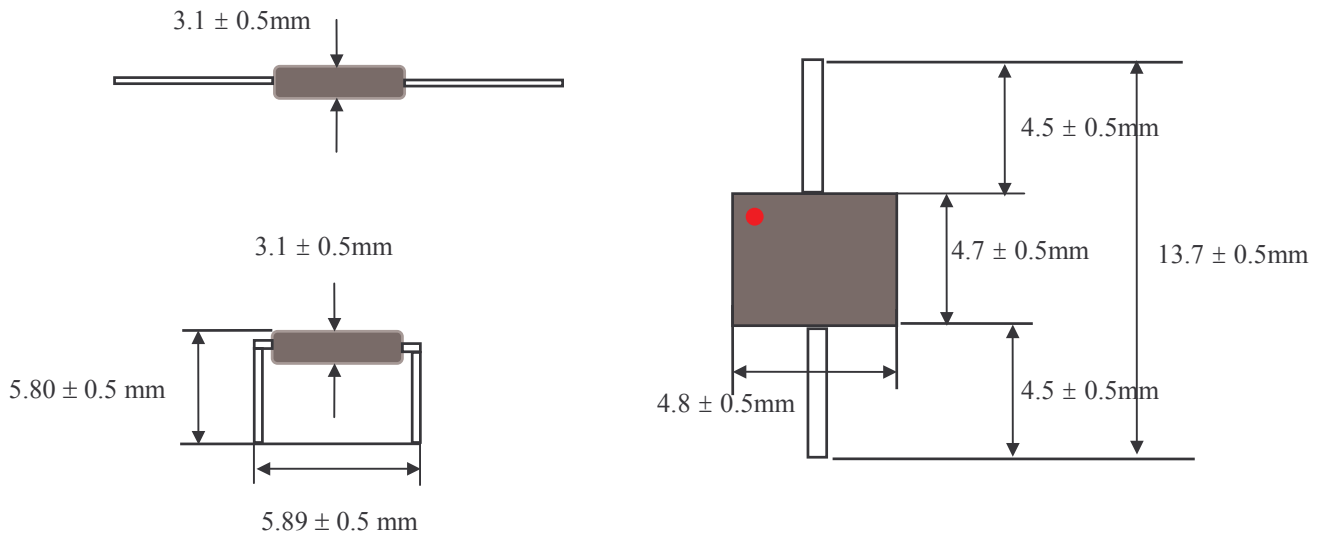
### **Dimensions :**

**SI007-1 + SI007-2:**



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**SI007-3 + SI007-4:**



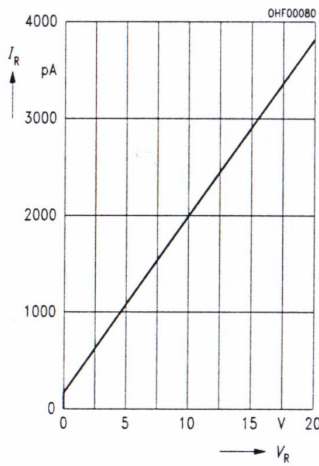
**CHARACTERISTICS**

<b>Energy response :</b>	- Linear $\pm 20\%$ from 60 keV to 1.5 MeV (concerning the diodes with energy filter: SI007-3 and SI007-4)  - from 20 keV for Si007-7 – Silicon detector (with energy filter and black epoxy coating, contact pin coming horizontally), which will be suitable for your application
<b>Bias voltage :</b>	3.6 V
<b>Leakage current :</b>	$< 3 \times 10^{-9}$ A at 3.6V
<b>Capacity at 3.6V :</b>	23 pF
<b>Reverse voltage (maximum) :</b>	32V
<b>Sensitivity :</b>	300 cps/s/Rad/H
<b>Operating and storage temperature range :</b>	-40 to +80°C
<b>Soldering temperature in a 2mm distance from the case (<math>t \leq 3s</math>) :</b>	230°C

**Dark current and capacitance :**

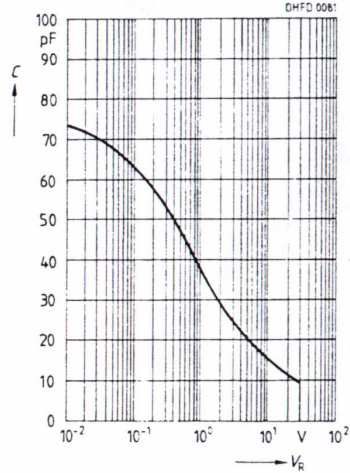
**Dark current**

$I_R = f(V_R), E = 0$



**Capacitance**

$C = f(V_R), f = 1 \text{ MHz}, E = 0$



**Dark current**

$I_R = f(T_A), V_R = 10 \text{ V}, E = 0$

