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Title: Superconductive tunnel junction detector e.g. superconductive terahertz wave detector has metal film that is embedded on upper surface substrate, so that lower electrode is enclosed

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Abstract: NOVELTY - The detector has substrate (11) whose upper surface is provided with a superconductive tunnel junction element (13). The superconductive tunnel junction element is stacked with a lower electrode (31), tunnel barrier (33) and an upper electrode (35). A photon generated in the substrate is detected. A metal film (12) is embedded on the upper surface the substrate, so that the lower electrode is enclosed.

USE - Superconductive tunnel junction detector such as superconductive terahertz wave detector.

ADVANTAGE - The diffusion the photon can be reduced by the metal film embedded on the upper surface the substrate, so that greater number photons can reach the lower electrode. The detection efficiency the photon can be improved.

DESCRIPTION DRAWING(S) - The drawing shows a schematic view the substrate absorption-type element used with the superconductive tunnel junction detector. (Drawing includes non-English language text)

Substrate (11)

Metal film (12)

Superconductive tunnel junction element (13)

Lower electrode (31)

Tunnel barrier (33)

Upper electrode (35)

Drawing:

Derwent Class Code(s): U14 (Memories, Film and Hybrid Circuits, Digital memories)

Derwent Manual Code(s): U14-F02B

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