CLAIMS

1. An integrated circuit device (100) comprising a semiconductor substrate layer (10) and at least one active layer (20) including electronic components and supported by said semiconductor substrate layer (10), wherein~~characterized in that~~ the semiconductor substrate layer (10) and the at least one active layer (20) are sandwiched between two protective layers (30A, 30B) acting as physical obstacles to prevent the passage of radiations and electrically connected to a detection circuit (40) for monitoring an electrical information of the protective layers (30A, 30B) and detecting a physical attack of at least one of the two protective layers (30A, 30B), based on the monitored electrical information, characterized in that the detection circuit (40) is configured to measure a relative value between respective electrical values of the two protective layers (30A, 30B).

2. The device according to claim 1, characterized in that the detection circuit (40) is integrated within the at least one active layer (20).

3. The device according to claim 1 or 2, further comprising an electronic protection circuit (50) configured to generate a signal for executing an electronic protection countermeasure, when a physical attack is detected by the detection circuit (40).

4. The device according to claim 3, characterized in that the electronic protection circuit (50) is integrated within the at least one active layer (20).

5. The device according to any of claims 1 to 4, characterized in that the two protective layers (30A, 30B) are configured to prevent the passage of radiations of the group including laser radiations, electromagnetic emanations from the at least one active layer, electromagnetic radiations produced by an external source.

6. The device according to any of claims 1 to 5, characterized in that the two protective layers are made of metal, or a metal alloy, or a semi-conductor material.

7. The device according to any of claims 1 to 6, characterized in that at least one of the protective layers (30A, 30B) is a full plate.

8. The device according to any of claims 1 to 7, characterized in that the at least one of the protective layers (30A, 30B) is made of a bent continuous wire forming parallel lines.

9. The device according to any of claims 1 to 8, characterized in that each of the two protective layers (30A, 30B) comprises a mosaic of elementary plates electrically connected to the detection circuit (40).

~~10. The device according to any of claims 1 to 9, characterized in that the detection circuit (40) is configured to measure a relative value between respective electrical values of the two protective layers (30A, 30B).~~

~~11.~~10. The device according to any of claims 1 to 9~~10~~, characterized in that the detection circuit (40) is configured to measure a capacitance between the two protective layers (30A, 30B), as said electrical information of the two protective layers (30A, 30B).

~~12.~~11. The device according to any of claims 1 to 9~~10~~, characterized in that the detection circuit (40) is configured to measure a difference of electrical resistances between the two protective layers (30A, 30B), as said electrical information of the two protective layers (30A, 30B).

~~13.~~12. The device according to any of claims 1 to 11~~12~~, characterized in that the detection circuit (40) is configured to detect a deviation of the monitored electrical information from a reference value, out of a tolerance range.

~~14.~~13. The device according to any of claims 1 to 12~~13~~, characterized in that the two protective layers (30A, 30B) are joined to the semiconductor substrate layer (10) and the at least one active layer (20), through two respective joining layers (31A, 31B) functioning as electrical insulators.

~~15.~~14. A product including an integrated circuit device according to any of claims 1 to 13~~14~~.