

CLAIMS

1. A method for manufacturing a module intended for a portable object having at least a contact function and a contactless function comprising at least the following steps:
- providing an assembly comprising a flexible carrier on which are arranged, on at least one of its faces, a conductive layer and, on at least an opposite face, a conductive region of contacts,
 - etching the conductive layer with a laser beam in order to define a shape configured to form one or more conductive surfaces to produce an antenna composed of a plurality of turns and conductive pads located at each end of the antenna,
 - using said laser beam to make, in the flexible carrier, one or more openings intended for connections between an integrated circuit and said contacts, without perforating the conductive region bearing the contacts,
 - depositing said integrated circuit on the face opposite the face bearing the contacts,
 - electrically connecting the integrated circuit to the conductive region bearing the contacts and/or to the conductive layer.
2. The method as claimed in claim 1, characterized in that the conductive layer is etched with said laser beam in order to produce conductive lands capable of being coupled or connected to the antenna arranged in the portable object.
3. The method as claimed in claim 1 or 2, characterized in that the contacts are produced beforehand by chemical etching.
4. The method as claimed in one of the preceding claims, characterized in that the conductive layer is produced beforehand by chemical etching.

5. The method as claimed in one of the preceding claims, characterized in that the integrated circuit is deposited directly on the flexible carrier and the integrated circuit is connected by connections via the openings.

5 6. The method as claimed in one of the preceding claims, characterized in that the integrated circuit is deposited on the conductive layer of the flexible carrier.

7. The method as claimed in one of the preceding claims, characterized in that aluminum is used to form the conductive region and/or the conductive layer.

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8. The method as claimed in one of the preceding claims, characterized in that a material chosen from the following list is used as the flexible carrier: PET, PI, PVC.

9. A module obtained by implementing the method as claimed in one of claims 1 to
15 8 and intended to be incorporated into a portable object, characterized in that it comprises at least the following elements:

- an assembly comprising a flexible carrier on which are arranged, on at least one of its faces, a conductive layer and, on at least an opposite face, a conductive region bearing contacts, the conductive layer being etched using a
20 laser beam in order to define a shape configured to form one or more conductive surfaces to produce an antenna comprising a plurality of turns made of aluminum and two connection pads,
- one or more openings intended for connections, said openings being obtained with said laser beam,
- 25 - an integrated circuit positioned on the face opposite the face bearing the contacts, said integrated circuit being electrically connected to the conductive layer and/or to the contacts.

10. The module as claimed in claim 9, characterized in that the integrated circuit is a
30 chip and in that the conductive region is formed of conductive lands capable of being coupled or connected to the antenna arranged in the portable object.

11. The module as claimed in claim 9 or 10, characterized in that the flexible carrier is made of a material chosen from the following list: PET, PI, PVC.