CLAIMS

1. A contact probe (10) for a testing head of an apparatus for testing electronic devices, said contact probe (10) comprising a body (10') extending along a longitudinal axis (H-H) between a first end portion (10a) and a second end portion (10b), said second end portion (10b) being adapted to contact pads (11) of a device under test, said contact probe (10) being characterized in that it comprises a first section (S1), which extends along said longitudinal axis (H-H) from said first end portion (10a) and is made of an electrically non-conductive material, and a second section (S2), which extends along said longitudinal axis (H-H) from said second end portion (10b) up to said first section (S1), said second section (S2) being electrically conductive and extending over a distance less than 1000 μm.

2. The contact probe (10) according to claim 1, characterized in that it has an overall length comprised between 3 mm and 10 mm, said length being measured along said longitudinal axis (H-H).

3. The contact probe (10) according to claim 1 or 2, characterized in that said second section (S2) is entirely made of a conductive material and is connected to said non-conductive first section (S1), or in that said second section (S2) is made of the same electrically non-conductive material of said first section (S1) and is coated by a conductive coating material.

4. The contact probe (10) according to claim 1 or 2, characterized in that said first section (S1) is made of a semiconductor material and said second section (S2) is made of the same semiconductor material of said first section (S1), said semiconductor material at said second section (S2) being doped so that said second section (S2) is electrically conductive.

5. A testing head (20) for an apparatus for testing electronic devices, comprising at least one guide (21) provided with a plurality of guide holes (22) for housing a respective plurality of contact probes (10), said testing head (20) being characterized in that said contact probes (10) are made according to any one of the preceding claims, said at least one guide (21) comprising electrical connection means adapted to be electrically contacted by said second section (S2) of said contact probes (10).

6. The testing head (20) according to claim 5, characterized in that said at least one guide (21) is a lower guide arranged at said second section (S2) of said contact probes (10).

7. The testing head (20) according to claim 5 or 6, characterized in that said electrical connection means comprise conductive tracks (23) extending from said guide holes (22).

8. The testing head (20) according to claim 7, characterized in that said conductive tracks (23) are arranged on a face (Fa, Fb) of said at least one guide (21) and/or are embedded in said at least one guide (21).

9. The testing head (20) according to claim 7 or 8, characterized in that said conductive tracks (23) are connected to respective pads (25) made on said at least one guide (21).

10. The testing head (20) according to any one of the claims from 7 to 9, characterized in that at least two contact probes (10) are electrically connected by at least one of said conductive tracks (23) and/or by a circuit component.

11. The testing head (20) according to any one of the claims from 5 to 10, characterized in that said electrical connection means comprise at least one conductive portion (24) which includes and electrically connects the holes of at least one group (22') of said guide holes (22) to each other, said group (22') housing a corresponding group of said contact probes (10).

12. The testing head (20) according to claim 11, characterized in that said at least one conductive portion (24) is arranged on a face (Fa, Fb) of said at least one guide (21) or is embedded in said at least one guide (21).

13. The testing head (20) according to claim 11, characterized in that said conductive portion (24) is in the form of a plurality of conductive layers (24a-24n), each of said conductive layers (24a-24n) including and electrically connecting the holes of a respective group (22a-22n) of said guide holes (22) to each other, each of said conductive layers (24a-24n) being adapted to contact said second section (S2) of a corresponding group of said contact probes (10), wherein contact probes of each corresponding group are adapted to carry a same type of signal.

14. The testing head (20) according to any one of the claims from 5 to 13, characterized in that at least a portion of the inner surface of said guide holes (22) is covered by a conductive portion (22w) connected to said electrical connection means, said second section (S2) of said contact probes (10) being adapted to electrically contact said conductive portion (22w) of said guide holes (22).

15. The testing head (20) according to any one of the claims from 5 to 14, comprising further contact probes (10bis) adapted to carry a signal from a device under test directly to a support plate (13) associated with said testing head (20), said further contact probes (10bis) being adapted to carry power signals and/or ground signals and/or low frequency signals between said device under test and said support plate (13).