

Claims:

1. A molding system for encapsulating electronic devices mounted on a substrate, the molding system comprising:

5 a first mold chase with a first mold chase surface and a second mold chase with a second mold chase surface opposite to the first mold chase surface, the first and second mold chase surfaces being operative to clamp onto the substrate and to apply a clamping pressure thereto;

10 a first sensor located at a first position for determining a first relative distance between the substrate and a mold chase facing the substrate at the first position;

a second sensor located at a second position for determining a second relative distance between the substrate and a mold chase facing the substrate at the second position; and

15 a first actuator coupled to a mold chase surface for clamping the substrate which is located adjacent to the first position and a second actuator coupled to the mold chase surface for clamping the substrate which is located adjacent to the second position, wherein the first and second actuators are operative to adjust a planarity of the first mold chase relative to the second mold chase by changing the first relative distance with respect to the second relative distance such that the mold chase surface clamping the
20 substrate applies a uniform clamping pressure onto the substrate.

2. The molding system as claimed in claim 1, further comprising a clamping member which is resiliently mounted adjacent to the first or second mold chase surface, the clamping member being arranged and configured to clamp at least partially onto the
25 substrate when the first and second mold chase surfaces clamp onto the substrate, the clamping member being adapted to be forcibly movable upon contact with the substrate relative to the first and second mold chase surfaces.

3. The molding system as claimed in claim 2, wherein each of the sensors is
30 operative to detect a distance between a respective position on the clamping member and the sensor.

4. The molding system as claimed in any one of the preceding claims, wherein the first and second mold chases are quadrangular in shape and the molding system

comprises a total of four sensors, each sensor being located adjacent to a corner of a mold chase surface.

5 5. The molding system as claimed in claim 4, wherein the molding system further
comprises a total of four actuators, each actuator being located adjacent to a respective
sensor.

10 6. The molding system as claimed in any one of the preceding claims, wherein the
first and second sensors are resiliently mounted onto a clamping plate that is configured
to be movable towards the substrate to compress a molding cavity when the first and
second mold chase surfaces clamp onto the substrate.

15 7. The molding system as claimed in claim 6, wherein the first and second actuators
are coupled to the clamping plate.

8. The molding system as claimed in claim 6 or claim 7, wherein the clamping plate
is coupled to the first mold chase, and the first and second actuators are coupled to the
second mold chase.

20 9. The molding system as claimed in any one of the preceding claims, wherein each
actuator is operative to move a portion of one mold chase nearer to or further from a
corresponding portion of the other mold chase.

25 10. The molding system as claimed in any one of the preceding claims, wherein each
actuator is operative to adjust the first or second relative distance to tilt the first or
second mold chase surface relative to the substrate so that the first and second relative
distances are the same, and the surface of the substrate is parallel to a mold chase
surface that is facing the substrate.

30 11. The molding system as claimed in any one of the preceding claims, further
comprising one or more molding cavities in the first or second mold chase, or in the first
and second mold chases, and a plurality of runners connecting the or each molding
cavity to a plurality of mold supply pots.

35 12. The molding system as claimed in claim 11, wherein each molding cavity is
situated between at least two mold supply pots and a separate runner connects each
mold supply pot to the molding cavity.

13. The molding system as claimed in claim 11 or claim 12, wherein each of the plurality of runners has substantially the same length.

14. The molding system as claimed in any one of claims 11 to 13, wherein the or
5 each molding cavity is circular in shape and the plurality of runners is distributed symmetrically on opposite sides of the molding cavity along a circumference thereof.

15. A method for encapsulating electronic devices mounted on a substrate, the method comprising the steps of:

10 clamping onto and applying a clamping pressure to the substrate with a first mold chase surface of a first mold chase and a second mold chase surface of a second mold chase that is opposite to the first mold chase surface;

determining a first relative distance between the substrate and a mold chase facing the substrate with a first sensor located at a first position;

15 determining a second relative distance between the substrate and the mold chase facing the substrate with a second sensor located at a second position;

adjusting the first relative distance with respect to the second relative distance with a first actuator located adjacent to the first position and a second actuator located adjacent to the second position; and thereafter

20 introducing liquefied molding compound onto the substrate to encapsulate the electronic devices.

16. The method for encapsulating electronic devices as claimed in claim 15, further comprising the steps of, after introducing liquefied molding compound onto the substrate:

25 determining the first relative distance between the substrate and a mold chase facing the substrate with the first sensor;

determining the second relative distance between the substrate and the mold chase facing the substrate with the second sensor;

30 adjusting the first relative distance with respect to the second relative distance with the first and second actuators; and

allowing the liquefied molding compound to cure.