CLAIMS

1. An multi-chip module, comprising:

a substrate;

a base film disposed on the substrate;

chips pressed into the base film, wherein top surfaces of the chips are coplanar;

an interconnect layer present on the substrate over the chips, wherein the interconnect layer comprises back-end-of-line (BEOL) metal wiring; and

solder bumps present on the interconnect layer in contact with the metal wiring;

wherein the chips have varying thickness, wherein the chips are pressed into the base film to different depths such that top surfaces of the chips are coplanar, and wherein the base film comprises a combination of spin-on-glass and a doped polymer.

2. The module of claim 1, wherein the chips comprise upward facing metal landing pads, and wherein the BEOL metal wiring contacts the upward facing metal landing pads.

3. The module of claim 1, wherein the BEOL metal wiring provides bridge connections between the chips.

4. A method of forming a multi-chip module, the method comprising:

depositing a base film onto a substrate;

placing chips on the substrate over the base film;

pressing the chips into the base film using a presser such that top surfaces of the chips are coplanar; wherein the chips have varying thicknesses, and wherein the chips are pressed into the base film to different depths such that top surfaces of the chips are coplanar;

curing the base film;

forming an interconnect layer on the substrate over the chips, wherein the interconnect layer comprises BEOL metal wiring; and

forming solder bumps on the interconnect layer in contact with the metal wiring;

wherein the base film comprises a combination of spin-on-glass and a doped polymer.

5. The method of claim 4, wherein curing the base film comprises annealing the substrate at a temperature of from 100º C. to 500º C. and ranges therebetween, for a duration of from 1 hour to 5 hours and ranges therebetween.

6. The method of claim 4, wherein the presser comprises a planar surface spanning all of the chips.

7. The method of claim 4, wherein the chips comprise upward facing metal landing pads, and wherein the BEOL metal wiring contacts the upward facing metal landing pads.

8. The method of claim 4, wherein the BEOL metal wiring provides bridge connections between the chips.

9. The method of claim 4, further comprising:

dicing the substrate into multiple segments, wherein each of the multiple segments comprises at least two of the chips.