413*a* and **413***b*, shorter bond wires **426***a* and **426***b* may be used to connect die wire bond pads **414***a* and **414***b* to substrate dams **450***a* and **450***b*, respectively. Furthermore, since substrate ground pad regions **413***a* and **413***b* are closer to die **408**, substrate signal pads **406***a* and **406***b* may also be moved closer to die attach region **411** and die **408** and, therefore, shorter bond wires **428***a* and **428***b* may be used to connect die wire bond pads **416***a* and **416***b* to substrate signal pads **406***a* and **406***b*, respectively. As described above, shorter bond wires **426***a*, **426***b*, **428***a* and **428***b* results in reduced inductance. Reduced inductance through ground path bond wires, e.g., bond wires **426***a* and **426***b*, is particularly advantageous for die **408** employing power amplifiers. As a further feature of structure **400**, wherein substrate ground pads **413***a* and **413***b* and substrate signal pads **406***a* and **406***b* are moved closer to die **408**, decreased package size and reduced manufacturing costs are also achieved.

According to another feature of structure **400**, landing areas **404***a* and **404***b* are elevated above surface of substrate die attach pad **402** by height **437** of dams **450***a* and **450***b*, respectively. As a result, landing areas **404***a* and **404***b*, where bond wires **426***a* and **426***b* are bonded, are closer to respective die wire bond pads **414***a* and **414***b* even in a dimension perpendicular to dimension **439**. Therefore, even shorter bond wires **426***a* and **426***b* may be used to connect die wire bond pads **414***a* and **414***b* to dams **450***a* and **450***b*, respectively. Elevated landing areas **404***a* and **404***b* in structure **400** further compensate for the problems associated with increased die **408** thickness and the placement of die wire bond pads **414***a* and **414***b* away from the edge of die **408**, which would ordinarily require longer bond wires **426***a* and **426***b*. However, because landing areas **404***a* and **404***b* are closer to respective die wire bond pads **414***a* and **414***b* by height **437**, shorter bond wires **426***a* and **426***b* may be used, despite any increase in die **408** thickness and/or the placement of die wire bond pads **414***a* and **414***b* away from the edge of die **408**. Yet another feature of structure **400** is the elimination of ground loops, e.g. ground loop **242***a* in FIG. **2**B, associated with the ground current path as shown in FIG. **2**B. Since openings are not implemented in structure **400**, ground current path follows direct path **444***a* and **444***b* as shown in FIG. **4**, which is more efficient and thus more desirable.

From the above description of exemplary embodiments of the invention it is manifest that various techniques can be used for implementing the concepts of the present invention without departing from its scope. Moreover, while the invention has been described with specific reference to certain embodiments, a person of ordinary skill in the art would recognize that changes could be made in form and detail without departing from the spirit and the scope of the invention. For example, it is manifest that in one embodiment, the features of structures **200**, **300** and **400** can be combined. In this particular embodiment, both openings and dams, as described above, are provided in a single structure, where, for example, dams can be fabricated over substrate ground pads, and openings can be provided between a die attach region of a die attach pad and the substrate ground pads. The described exemplary embodiments are to be considered in all respects as illustrative and not restrictive. It should also be understood that the invention is not limited to the particular exemplary embodiments described herein, but is capable of many rearrangements, modifications, and substitutions without departing from the scope of the invention.

Thus, a semiconductor die package with reduced inductance and reduced die attach adhesive flow out has been described.

The invention claimed is:

1. A structure comprising:

a substrate having a top surface;

a die attach pad situated on said top surface of said substrate, said die attach pad having a die attach region and at least one substrate ground pad region electrically connected to said die attach region, said die attach pad further including a die attach stop between said die attach region and said at least one substrate ground pad region, wherein said die attach stop comprises an opening defined in said die attach pad between said die attach region and said at least one substrate ground pad region, wherein a depth of said opening is approximately equal to a height of said die attach pad;

a heat spreader situated on a bottom surface of said substrate, said substrate including at least one via for providing a connection between said at least one substrate ground pad region to said heat spreader;

wherein said die attach stop controls and confines die attach adhesive flow out.

2. The structure of claim **1**, wherein said die attach stop comprises a dam situated over and electrically coupled with said at least one substrate ground pad region.

3. The structure of claim **2** wherein said dam comprises a top surface and a wall, said wall extending from said top surface of said darn to said at least one substrate ground pad region, said die attach stop comprising said wall.

4. The structure of claim **2** further comprising a heat spreader situated on a bottom surface of said substrate, said substrate including at least one via for providing a connection between said at least one substrate ground pad region to said heat spreader.

5. A structure comprising:

a substrate having a top surface;

a die attach pad situated on said top surface of said substrate, said die attach pad having a die attach region and at least one substrate ground pad region electrically connected to said die attach region, said die attach pad further including a die attach stop between said die attach region and said at least one substrate ground pad region, wherein said die attach stop comprises an opening defined in said die attach pad between said die attach region and said at least one substrate ground pad region, wherein a depth of said opening is approximately equal to a height of said die attach pad;

a semiconductor die fixed to said die attach region by a die attach adhesive;

a heat spreader situated on a bottom surface of said substrate, said substrate including at least one via for providing a connection between said at least one substrate ground pad region to said heat spreader;

wherein said die attach stop controls and confines die attach adhesive flow out.

6. The structure of claim **5** wherein said die attach stop comprises a dam situated over and electrically coupled with said at least one substrate ground pad region.

7. The structure of claim **6** wherein said dam comprises a top surface and a wall, said wall extending from said top surface of said dam to said at least one substrate ground pad region, said die attach stop comprising said wall.