CLAIMS

What is claimed is:

1. A semiconductor device, comprising:

a first group of conductive lines extending in a first direction, each conductive line of the first group of conductive lines comprising a conductive contact on an enlarged portion of the respective conductive line at an end portion thereof; and

a second group of conductive lines extending in the first direction, each conductive line of the second group of conductive lines comprising a conductive contact comprising an enlarged portion and located between end portions thereof, each conductive line of the second group of conductive lines located adjacent to at least one conductive line of the first group of conductive lines.

2. The semiconductor device of claim 1,wherein about one-half of the conductive contacts of the first group of conductive lines are located at a first end of the conductive lines of the first group of conductive lines and about one-half of the conductive contacts of the first group of conductive lines are located at a second end of the conductive lines of the first group of conductive lines.

3. The semiconductor device of claim 1, further comprising pads at the end portions of the conductive lines of the first group of conductive lines.

4. The semiconductor device of claim 1, wherein the first group of conductive lines comprise about a same number of conductive lines of the second group of conductive lines.

5. The semiconductor device of claim 1, wherein the conductive contacts of the second group of conductive lines are laterally displaced from each other.

6. The semiconductor device of claim 1, wherein the conductive contacts of the first group of conductive lines are laterally displaced from each other.

7. The semiconductor device of claim 1, further comprising at least one opening at a peripheral region of the semiconductor device separating adjacent conductive lines.

8. The semiconductor device of claim 1,wherein the enlarged portions of the second group of conductive lines are located in an array region of the semiconductor device and the enlarged portions of the first group of conductive lines are located in a peripheral region of the semiconductor device.

9. The semiconductor device of claim 1, wherein adjacent conductive lines are separated by between about 10 nm and about 20 nm.

10. The semiconductor device of claim 1, further comprising a third group of conductive lines extending in a second direction substantially perpendicular to the first direction.

11. The semiconductor device of claim 1, wherein the conductive contacts of the first group of conductive lines are longitudinally offset and laterally offset from one another.

12. The semiconductor device of claim 1, wherein the conductive lines of the first group of conductive lines each comprises a narrow region proximate the enlarged portion of an adjacent conductive line of the first group of conductive lines.

13. The semiconductor device of claim 1, wherein the enlarged portion of each conductive line of the second group of conductive lines extends at an angle between about 10° and about 30° relative to a longitudinal axis of the respective conductive line.

14. The semiconductor device of claim 1, wherein the enlarged portions of the conductive lines of the second group of conductive lines comprise curved surfaces.

15. A method of forming a semiconductor device, the method comprising:

forming a first group of conductive lines extending in a first direction;

forming a conductive contact on each conductive line of the first group of conductive lines on an enlarged portion of the respective conductive line at an end portion thereof;

forming a second group of conductive lines extending in the first direction, forming the second group of conductive lines comprising forming each conductive line of the second group of conductive lines to be located adjacent to at least one conductive line of the first group of conductive lines; and

forming a conductive contact on each conductive line of the second group of conductive lines on an enlarged portion of the respective conductive line and between end portions thereof.

16. The method of claim 15, wherein forming a second group of conductive lines extending in the first direction comprises forming about the same number of second conductive lines as a number of the first conductive lines.

17. The method of claim 15, wherein forming a conductive contact on each conductive line of the first group of conductive lines on an enlarged portion of the respective conductive line at an end portion thereof comprises forming about one-half of the conductive contacts of the first conductive lines at a first end of each of the conductive lines and forming about one-half of the conductive contacts of the first conductive lines at a second, opposite end of the each of the conductive lines.

18. The method of claim 17, wherein forming about one-half of the conductive contacts of the first conductive lines at a first end of the conductive lines comprises forming the conductive contacts of the first conductive lines at the first end of the conductive lines to be laterally and longitudinally offset from at least one other of the conductive contacts of the first conductive lines at the first end.

19. The method of claim 15, wherein forming a conductive contact on each conductive line of the second group of conductive lines on an enlarged portion of the respective conductive line and between end portions thereof comprises forming the conductive contacts to be longitudinally offset from one another.

20. The method of claim 15, wherein forming a first group of conductive lines and forming a second group of conductive lines comprises:

forming lines of a photoresist material on the semiconductor device, each line of the photoresist material comprising an enlarged portion relative to other portions of the respective line of photoresist material;

forming spacers on sidewalls of the lines of the photoresist material;

removing the lines of the photoresist material;

forming a nitride material over the spacers;

removing a portion of the nitride material to form loops of the nitride material surrounding the spacers; and

transferring a pattern of the loops of the nitride material and the spacers to an underlying conductive material to form a pattern of conductive lines, at least some of the conductive lines comprising the first portion and the second portion connected by the enlarged portion.