

BELL SEMICONDUCTOR LLC’S ANALYSIS OF INFRINGEMENT

NXP

U.S. Patent No. 7,535,330

Bell Semiconductor, LLC (“Bell Semic”) provides evidence of infringement of claims 1, 2, and 7 of U.S. Patent No. 7,535,330 (“the ’330 patent”) by NXP USA, Inc. (“NXP”). In support thereof, Bell Semic provides the following claim charts.

“Accused Products” as used herein refers to the NXP R10B1AA. These Accused Products include devices produced or sold by NXP that are or include Low Mutual Inductance Matched Inductors, with the understanding that infringement has also taken place through the manufacture, importation, offer for sale, and/or sale of products including such Accused Products. These claim charts demonstrate infringement by comparing each element of the asserted claims to corresponding components, aspects, and/or features of the Accused Products. These claim charts are not intended to constitute an expert report on infringement. These claim charts include information provided by way of example, and not by way of limitation.

The analysis set forth below is based only upon information from available resources regarding the Accused Products, as NXP has not yet provided any non-public information. An analysis of NXP’s (or other third parties’) technical documentation may assist in fully identifying all infringing features and functionality. Accordingly, Bell Semic reserves the right to supplement this infringement analysis once such information is made available to Bell Semic. Furthermore, Bell Semic reserves the right to revise this infringement analysis, as appropriate, upon issuance of a court order construing any terms recited in the asserted claims.

Unless otherwise noted, Bell Semic contends that NXP and customers of NXP directly infringe under 35 U.S.C. § 271(a) the ’330 patent by selling, offering to sell, making, using, and/or importing semiconductor products designed and/or produced at least in part by the Accused Products. Unless otherwise noted, Bell Semic further contends that the evidence below supports a finding of indirect infringement under 35 U.S.C. § 271(b) since January 30, 2022, the time when NXP had actual notice of NXP’s infringement of the ’330 patent.

NXP and/or its customers make, use, sell, import, or offer for sale in the United States, or have done the same in the past, without authority, and/or induce or have induced others to make, use, sell, import, or offer for sale in the United States, without authority, products, equipment, or services that infringe claims 1, 2, and 7 of the ’330 patent, including without limitation, the Accused Products or semiconductor products designed and/or produced at least in part using the Accused Products.

Unless otherwise noted, Bell Semic believes and contends that each element of each claim asserted herein is literally met through NXP’s provision of the Accused Products. However, to the extent that NXP attempts to allege that any asserted claim element is not literally met, Bell Semic believes and contends that such elements are met under the doctrine of equivalents. More specifically, in its investigation and analysis of the Accused Products, Bell Semic did not identify any substantial differences between the elements of the patent claims and the corresponding features of the Accused Products, as set forth herein. In each instance, the identified feature of the Accused Products performs at least substantially the same function in substantially the same way to achieve substantially the same result as the corresponding claim element.

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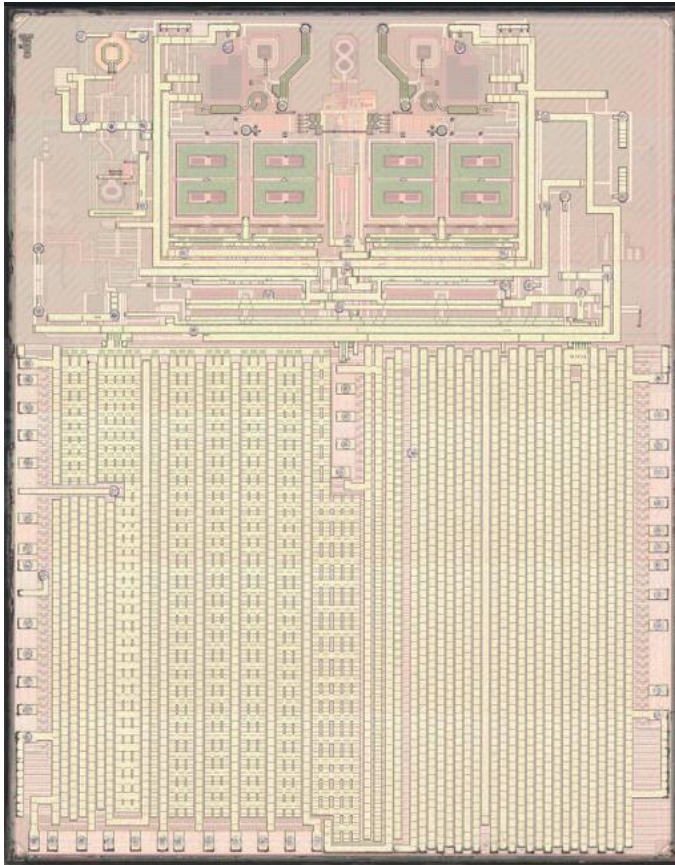
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To the extent the chart of an asserted claim relies on evidence about certain specifically-identified Accused Products, Bell Semic asserts that, on information and belief, any similarly-functioning instrumentalities also infringes the charted claim. Bell Semic reserves the right to amend this infringement analysis based on other products made, used, sold, imported, or offered for sale by NXP. Bell Semic also reserves the right to amend this infringement analysis by citing other claims of the '330 patent, not listed in the claim chart, that are infringed by the Accused Products. Bell Semic further reserves the right to amend this infringement analysis by adding, subtracting, or otherwise modifying content in the "Accused Products" column of each chart.

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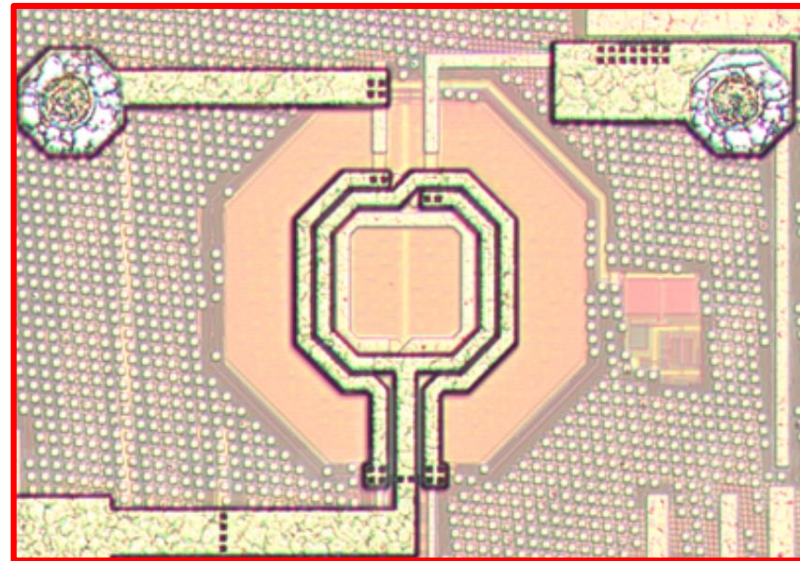
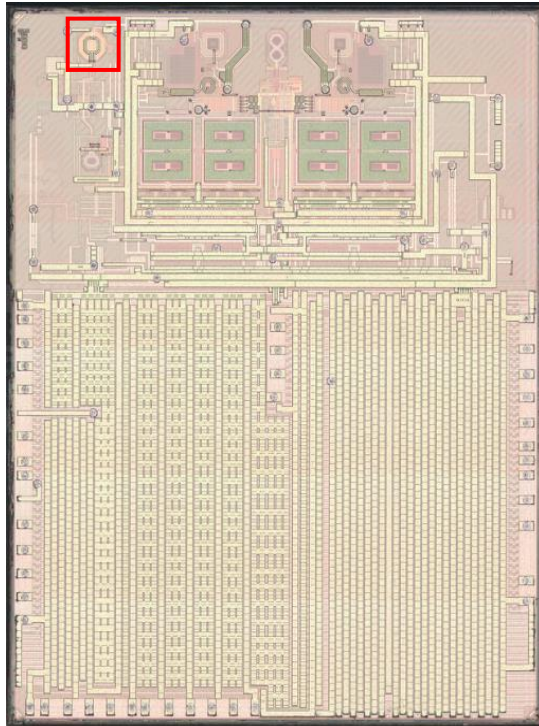
Claim 1	Accused Products
1. A multiple inductor array comprising:	To the extent the preamble is limiting, the NXP – R10B1AA is an Ultrawideband Transceiver package containing the chip 9SR100 as shown below:  R10B1AA SGN1624 E+D2020 044-021 NXP  M C B1 NXP 2019 9SR100 

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The image shows a top-down optical micrograph of the NXP chip 9SR100 in the R10B1AA device, clearly showing the multiple inductor array. The location of the inductor array is highlighted using a red box on the integrated circuit in the picture below:



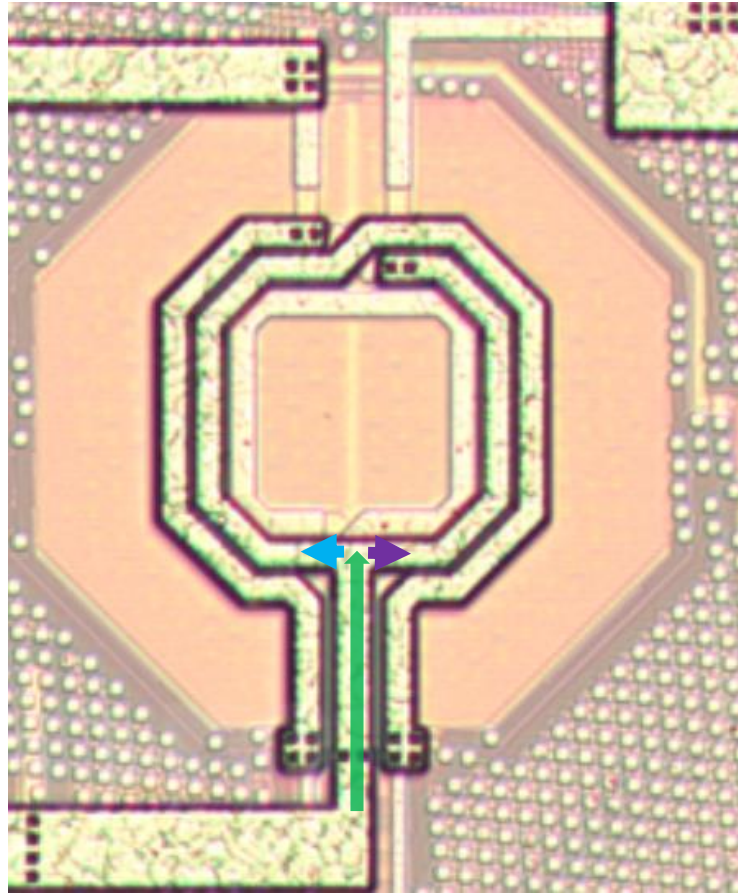
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a first node that receives a first current and a second current;

A first node (green arrow) that receives a first current (blue arrow) and second current (purple arrow) is shown below for the device:



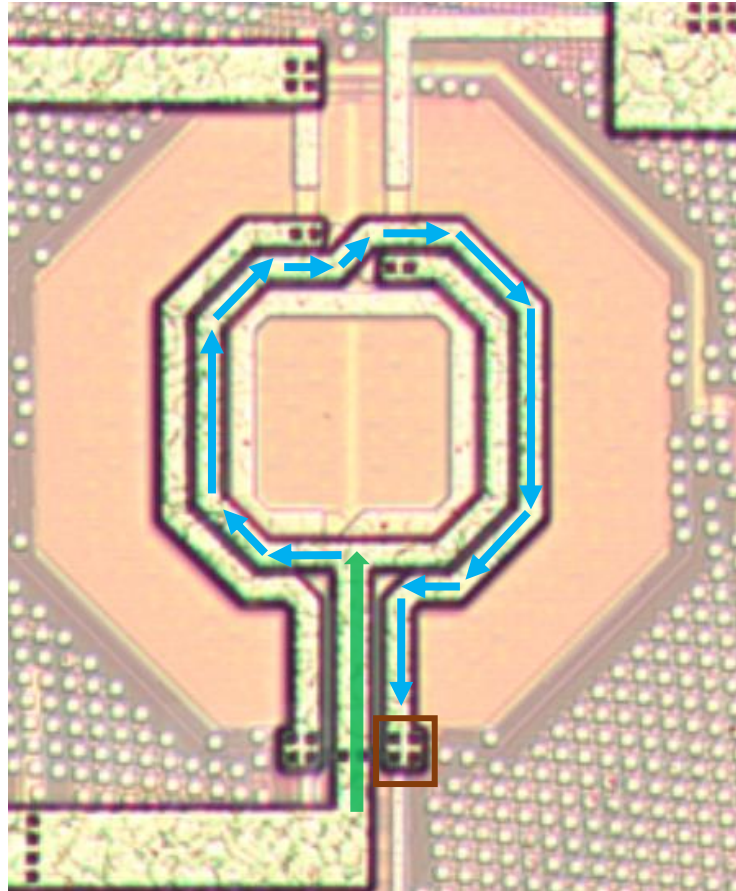
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a first inductor coil, coupled to the first node and to a second node,

A first inductor coil (blue arrows) is coupled to the first node (green arrow) and to a second node (brown box), as shown below:



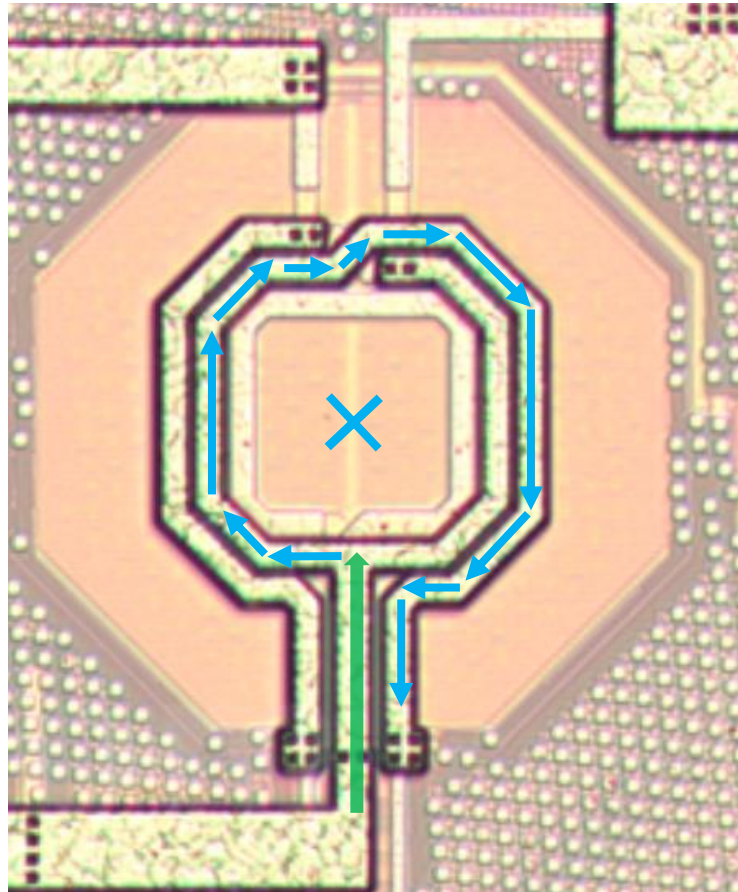
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that communicates the first current in a clockwise direction and generates a first magnetic field;

The first current in the first inductor coil travels in a clockwise direction, designated by the blue arrows, generating a first magnetic field, designated by convention using a blue X, or the trailing end of an arrowhead, that traverses into the paper, as shown below:



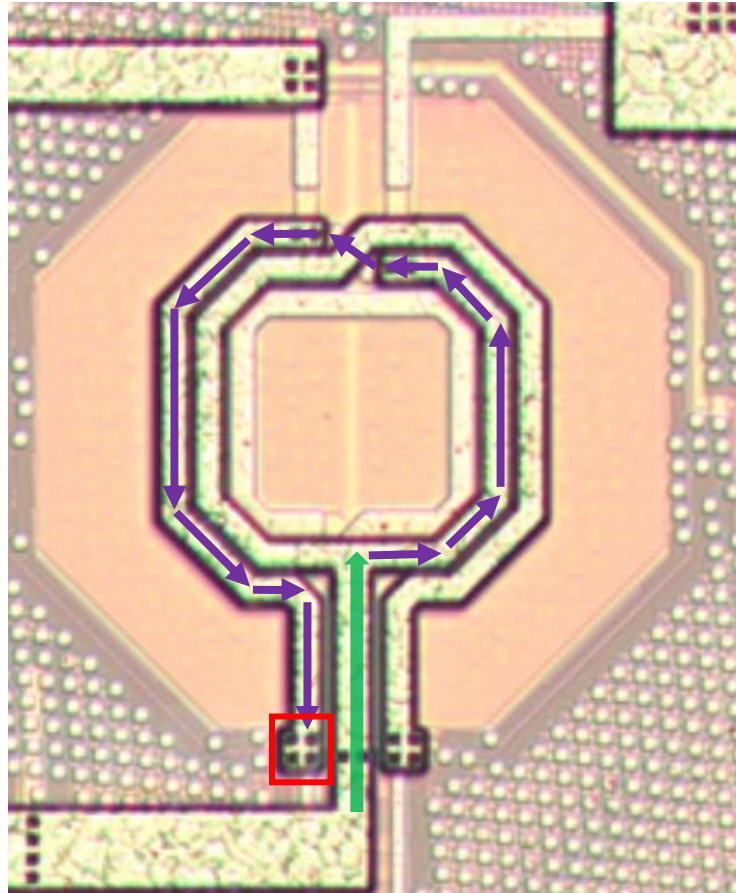
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a second inductor coil, coupled to the first node and to a third node,

A second inductor coil (purple arrows) is coupled to the first node (green arrow) and to a third node (red box), as shown below:



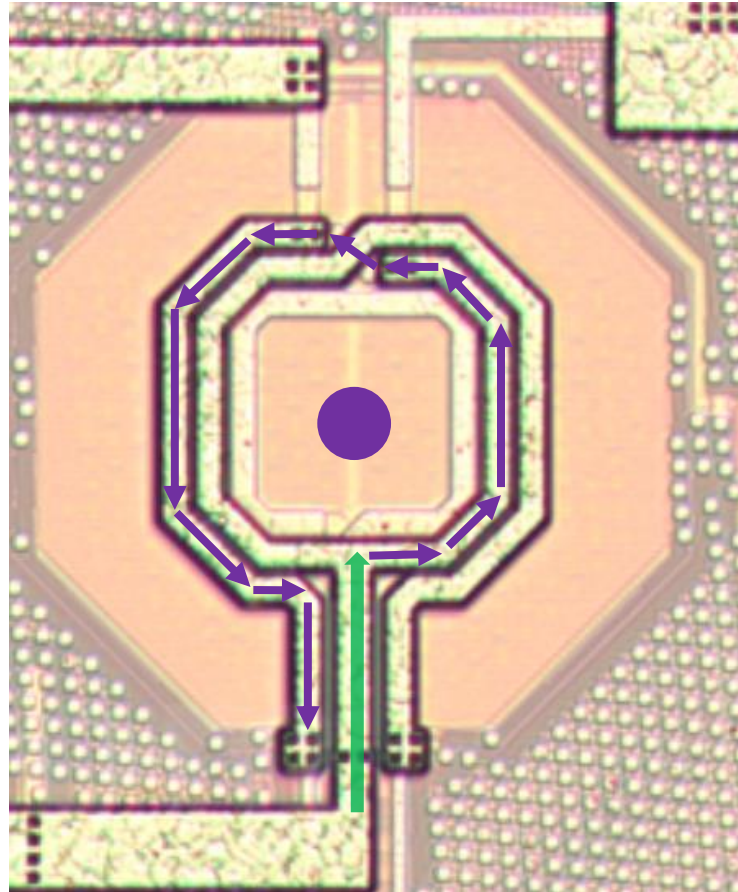
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that communicates the second current in a counter clockwise direction and generates a second magnetic field

The second current in the second inductor coil travels in a counter clockwise direction, designated by the purple arrows, generating a second magnetic field, designated by convention using a purple dot, or the advancing end of an arrowhead, that traverses out of the paper, as shown below:



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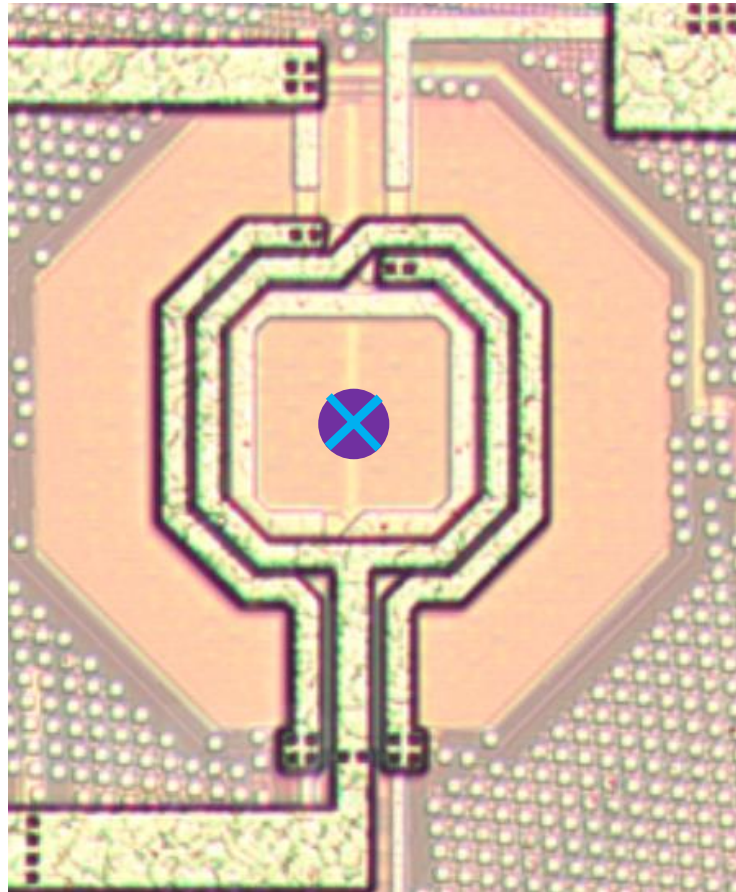
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having an opposing orientation to the first magnetic field;
and

wherein the first magnetic field and the second magnetic field at least partially cancel at an interference point.

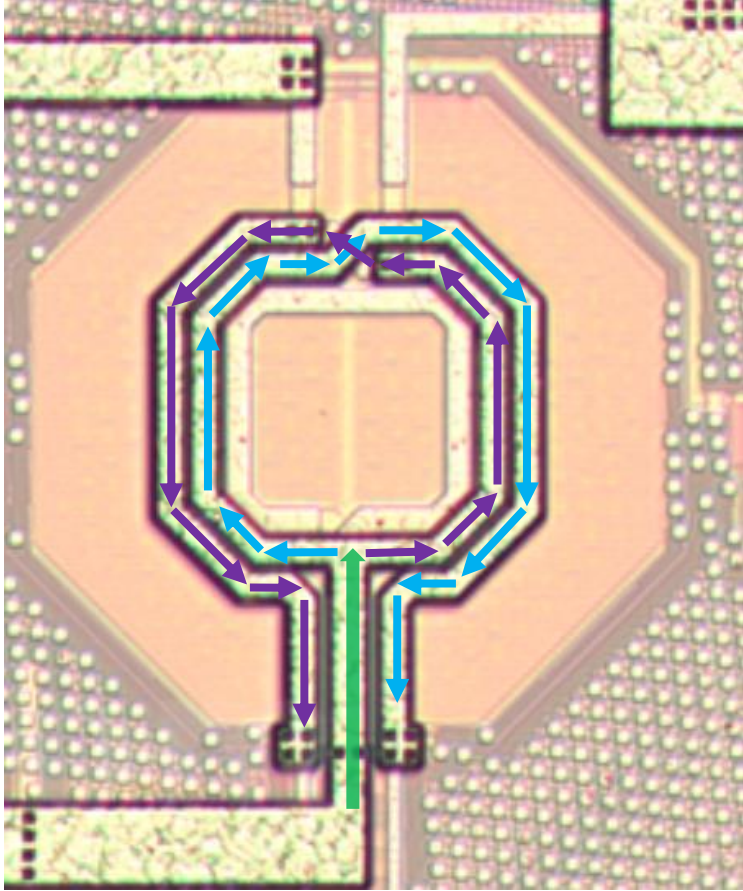
The second magnetic field (purple dot) has an opposing orientation to the first magnetic field (blue X). It is believed that the first and second magnetic fields at least partially cancel at an interference point between the inductor coils.



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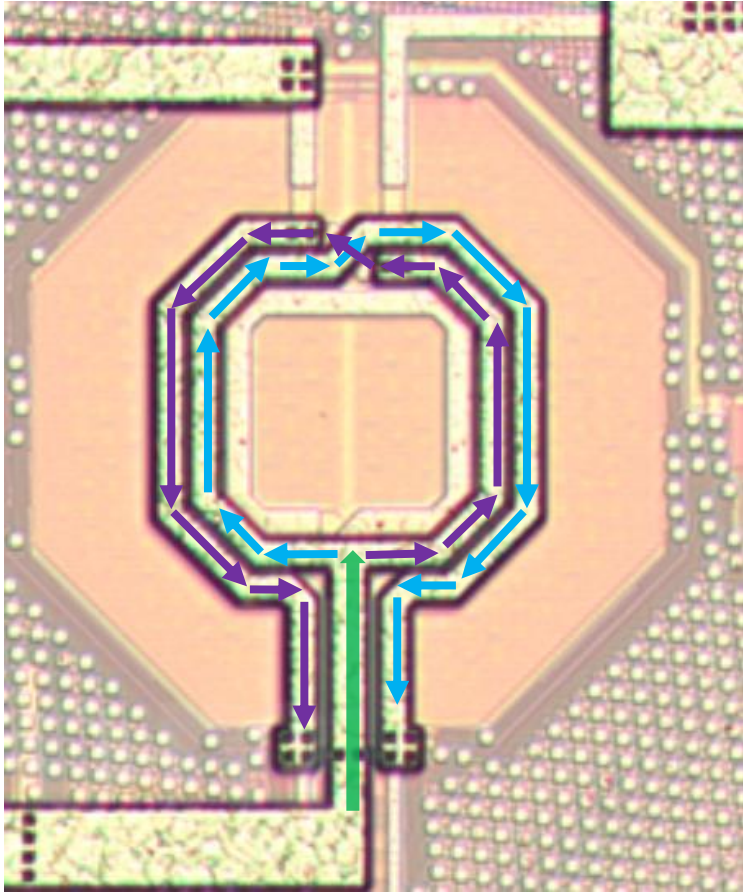
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Claim 2	Accused Products
2. The array of claim 1 wherein the first inductor coil and the second inductor coil are spiral structures.	The picture below shows the first inductor (blue arrows) and the second inductor (purple arrows) coils are spiral structures. 

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Claim 7	Accused Products
7. The array of claim 1 wherein the first and second currents flow in opposite directions.	For the inductor array, the first current (blue arrows) flows in a clockwise direction, and the second current (purple arrows) flows in a counter clockwise direction, hence the currents flow in opposing directions.  The image is a micrograph of a semiconductor device, specifically showing an inductor array. The array consists of a central square loop with rounded corners, surrounded by a larger square loop, also with rounded corners. The loops are formed by a series of small, rectangular segments. Blue arrows indicate a clockwise current flow in the inner loop, while purple arrows indicate a counter-clockwise current flow in the outer loop. A green arrow points upwards from the bottom of the central loop, indicating a connection to a power source or ground. The background of the micrograph shows a grid of small, circular features, likely solder bumps or vias, and some larger, rectangular structures.

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Caveat: The notes and/or cited excerpts utilized herein are set forth for illustrative purposes only and are not meant to be limiting in any manner. For example, the notes and/or cited excerpts, may or may not be supplemented or substituted with different excerpt(s) of the relevant reference(s), as appropriate. Further, to the extent any error(s) and/or omission(s) exist herein, all rights are reserved to correct the same.