CLAIMS

1. A variable inductor device including:

a first planar loop comprising a first planar face and a material that supports electromagnetic coupling;

a second planar loop comprising a second planar face and a material that supports electromagnetic coupling;

the first planar loop separable from the second planar loop to vary the inductance of the variable inductance device; and

the first and second planar faces overlapping each other in a closed configuration of the device,

wherein the first planar loop is separable from the second planar loop by pivoting about a hinge point.

2. The variable inductor device of claim 1, wherein the first and second planar loops are selectively separable with respect to one another between open and closed positions, the closed position corresponding to the closed configuration of the device, the open position corresponding to a desired inductance value of the variable inductor device.

3. The variable inductor device of claim 2, wherein the open and closed positions correspond to a separation angle between the first and second planar loops in the range zero (0) to twenty (20) degrees.

4. The variable inductor device of claim 1, wherein substantially an entirety of the first planar loop overlaps the second planar loop in the closed position.

5. The variable inductor device of claim 4, wherein substantially an entirety of the first planar loop overlaps substantially an entirety of the second planar loop in the closed position.

6. The variable inductor device of claim 1, further comprising a hinge at which one of the first and second planar loops is hinged relative to the variable inductor device, or to the other planar loop.

7. The variable inductor device of claim 6, wherein the hinge is provided at a termination point of the first and second planar loops.

8. The variable inductor device of claim 6, wherein the hinge is provided at an RF power terminal of the variable inductor device.

9. The variable inductor device of claim 3, wherein the closed configuration of the variable inductor device corresponds to a base or minimum inductance value of the variable inductor device.

10. The variable inductor device of claim 9, wherein an open configuration of the variable inductor device corresponds to a maximum inductance value of the variable inductor device.

11. The variable inductor device of claim 10, wherein the maximum inductance value is greater than the base or minimum inductance value by a factor of three (3) to seven (7) times greater.

12. A variable inductor device including:

a first planar loop comprising a first planar face and a material that supports electromagnetic coupling;

a second planar loop comprising a second planar face and a material that supports electromagnetic coupling;

a hinge provided at a termination point of the first and second planar loops; and

the first planar loop separable from the second planar loop by pivoting about the hinge to vary the inductance of the variable inductance device.

13. The variable inductor device of claim 12, wherein the first and second planar faces overlap each other in a closed configuration of the device.

14. The variable inductor device of claim 13, wherein the first and second planar loops are selectively separable with respect to one another between open and closed positions, the closed position corresponding to the closed configuration of the device, the open position corresponding to a desired inductance value of the variable inductor device.

15. The variable inductor device of claim 14, wherein the open and closed positions correspond to a separation angle between the first and second planar loops in the range zero (0) to twenty (20) degrees.

16. The variable inductor device of claim 14, wherein substantially an entirety of the first planar loop overlaps the second planar loop in the closed position.

17. The variable inductor device of claim 16, wherein substantially an entirety of the first planar loop overlaps substantially an entirety of the second planar loop in the closed position.

18. The variable inductor device of claim 12, wherein an RF power terminal is provided at another hinge of the variable inductor device.

19. The variable inductor device of claim 15, wherein a closed configuration of the variable inductor device corresponds to a base or minimum inductance value of the variable inductor device.

20. The variable inductor device of claim 19, wherein an open configuration of the variable inductor device corresponds to a maximum inductance value of the variable inductor device.

21. The variable inductor device of claim 20, wherein the maximum inductance value is greater than the base or minimum inductance value by a factor of three (3) to seven (7) times greater.

22. The variable inductor device of claim 1 or claim 12, further comprising an actuator to move at least one of the first and second planar loops.