

Abstract

An inductor and a method of providing an inductor

The present invention relates to the inductors, for example, flat ribbon inductors and methods of forming thereof. An aspect of the disclosure provides an inductor comprising:

5 a helical conductor a core having a core magnetic reluctance, the core comprising: a first core portion; a second core portion; and, a gap disposed between the first core portion and the second core portion and enclosed by the helical conductor, wherein the gap is configured to provide a gap magnetic reluctance wherein the gap magnetic reluctance is greater than the core magnetic reluctance; wherein the helical conductor has: a first region

10 of the conductor which encloses part of the core, wherein the first region comprises a first pitch; and, a second region of the conductor which encloses the gap wherein the second region comprises a second pitch, wherein the second pitch is greater than the first pitch; wherein, in use, the second region of the conductor is configured to reduce a magnitude of interaction between the second region of the conductor and an electromagnetic field

15 generated around the gap.

[Figure 3A]