

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202131015202 A

(19) INDIA

(22) Date of filing of Application :31/03/2021

(43) Publication Date : 02/12/2022

(54) Title of the invention : DOUBLE WOUND PLANAR SPIRAL MICROSTRIP INDUCTOR, AND ANALYTICAL AND ELECTRICAL CIRCUIT MODEL THEREOF.

(51) International classification :G06F0030367000,
H01F0027280000,
G06F0030330000,
G06F0017000000,
H01F0017000000

(31) Priority Document No :NA
(32) Priority Date :NA
(33) Name of priority country :NA
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Abstract Title: DOUBLE WOUND PLANAR SPIRAL MICROSTRIP INDUCTOR, AND ANALYTICAL AND ELECTRICAL CIRCUIT MODEL THEREOF. The present invention provides a double wound planar spiral inductor system to realize fully planar inductors without underpass or overpass. Single wound planar spiral inductors are not suitable for placement in many RF circuits, where one terminal needs to be grounded. In this case, either that terminal has to underpass or overpass in the inductor. On this the present invention discloses equivalent circuit modelling of the inductor consisting of the series inductance, mutual inductance, series resistance, and parasitic capacitances. Two types of parasitic capacitance in the equivalent circuit model, one is a capacitance between the two adjacent metal tracks of the inductor, and the second is substrate capacitance between the metal track and ground plane, are reported here.

No. of Pages : 29 No. of Claims : 6