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Inductor Coupling Coefficient (Closed Form): K

Symbol

Summary

K is used to represent the mutual coupling between inductors (INDK elements).

Parameters

Name	Description	Unit Type	Default
ID	Name	Text	K2
K	Coupling Coefficienct		0
*L1	Inductor 1 Value		L@1 nH
*L2	Inductor 2 Value		L@2 nH

** indicates a secondary parameter*

Implementation Details

K represents the mutual coupling between inductors. This element is for use between two INDK elements and should be connected to the "K" ports of those elements. The mutual inductance is calculated as:

$$M = K \cdot \sqrt{L1 \cdot L2}$$

where M is the mutual inductance, K is the coupling coefficient, L1 is the inductance connected at port 1, and L2 is the inductance connected at port 2.

Layout

This element does not have an assigned layout cell. You can assign artwork cells to any element. See "Assigning Artwork Cells to Layout of Schematic Elements" for details.

Recommendations for Use

Figure 1 shows how this element is typically used.

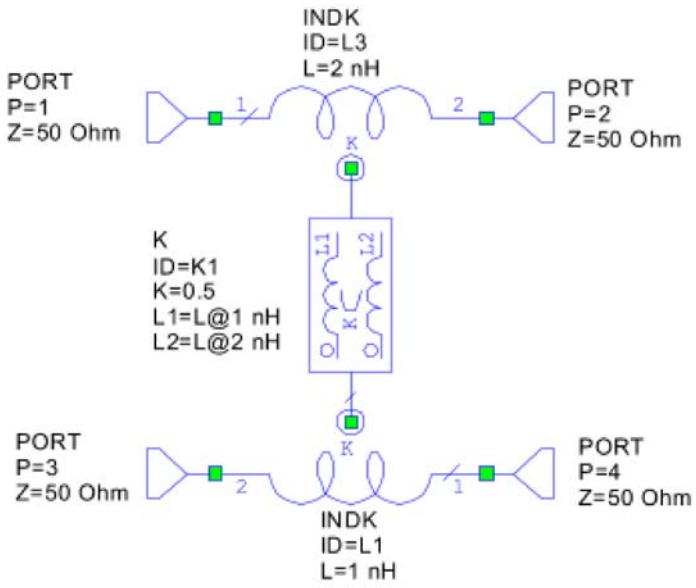

Figure 1. Typical use of the INDK and K elements to model mutual coupling between two inductors. The K element is used to model the mutual coupling between the two INDK elements by specifying the coupling coefficient, K, and the inductances of the two coupled inductors.

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