A Lower Limit on the Interaction Between Symmetrical Odd-Mode Fringing Capacitances (Letters)

Let us denote the familiar odd-mode fringing capacitance which is plotted in graphs given by Getsinger by C_{f0}'. It is further defined by Fig. 1(b) in the limit as the magnetic wall tends to infinity on the right. We also denote the corresponding fringing capacitance of the symmetrical coaxial structure of Fig. 1(a) by C_{f0}. When the dimensions of Fig. 1(a) and (b) are such that s' = s, it is convenient to denote the difference between C_{f0}' and C_{f0} by Delta C_{f0}, and define it as the interaction between the symmetrical odd-mode fringing capacitances. Clearly, Delta C_{f0} has the property of approaching zero as w/ (b - t) --> 0 [w is defined in Fig. 1(a)]. Moreover, whenever Delta C_{f0} is known, C_{f0} is also known.

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