Abstracts

Line-to-ring coupling circuit model and its parametric effects for optimized design of microstrip ring circuits and antennas

Lei Zhu and K. Wu. "Line-to-ring coupling circuit model and its parametric effects for optimized design of microstrip ring circuits and antennas." 1997 MTT-S International Microwave Symposium Digest 1. (1997 Vol. I [MWSYM]): 289-292.

New de-embedding technique developed with a field-theoretical framework is applied to precisely characterizing line-to-ring coupling structure in the form of a circuit model. This circuit model is able to account for various dynamic parametric effects including frequency-related dispersion, radiation and leakage losses. Results are given for dispersive electrical characteristics of loose and enhanced line-to-ring coupling schemes in terms of susceptance-related J-inverter network. The accurate prediction confirmed by a set of experiments provides a guideline for optimally designing ring-resonators with the distributed transmission line model.

❑ Return to main document.