Abstracts

Complete circuit model of microstrip-fed slot radiator: theory and experiments

Lei Zhu and Ke Wu. "Complete circuit model of microstrip-fed slot radiator: theory and experiments." 1999 Microwave and Guided Wave Letters 9.8 (Aug. 1999 [MGWL]): 305-307.

A complete circuit model is developed for accurate electrical representation and CAD of a generalized microstrip-fed slot radiator, regardless of its slot width. It is extracted from a special numerical scheme called "short and open calibration" (SOC) that allows one to calibrate (or de-embed) calculated results obtained from a full-wave method of moments (MoM). This model consists of a series complex impedance standing for the radiating slot and a pair of pure shunt capacitances. The proposed model gives, for the first time, some fundamental properties with regard to the slot width, which are well verified by our measurements for both narrow and wide slots.

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