Abstracts

Theoretical and Experimental Characterization of Nonsymmetrically Shielded Coplanar Waveguides for Millimeter Wave Circuits (1989 Vol. III [MWSYM])

F. Alessandri, U. Goebel, F. Melai and R. Sorrentino. "Theoretical and Experimental Characterization of Nonsymmetrically Shielded Coplanar Waveguides for Millimeter Wave Circuits (1989 Vol. III [MWSYM])." 1989 MTT-S International Microwave Symposium Digest 89.3 (1989 Vol. III [MWSYM]): 1219-1222.

The nonsymmetrically shielded coplanar waveguide (NSCPW) is proposed as a quasi-TEM transmission line with advantageous characteristics for mm-wave circuit applications. The structure combines properties of the finline and the suspended stripline. In addition to a full wave theoretical analysis, an experimental technique has been developed which enables the evaluation of the transmission line spectrum in a wide frequency band (15:1) with a single transmission measurement. Results are shown to be in excellent agreement with theoretical predictions. Design curves are also presented.

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