Abstracts

Suppression of coupled-slotline mode on CPW using air-bridges measured by picosecond photoconductive sampling

Jongjoo Lee, Heeseok Lee, Woopoung Kim, Jaehoon Lee and Joungho Kim. "Suppression of coupled-slotline mode on CPW using air-bridges measured by picosecond photoconductive sampling." 1999 Microwave and Guided Wave Letters 9.7 (Jul. 1999 [MGWL]): 265-267.

For the first time, the effect of air-bridges on the suppression of the unwanted coupled-slotline (CSL) mode on a coplanar waveguide (CPW) is experimentally observed up to 250-GHz bandwidth, based on the picosecond photoconductive sampling technique. The CSL mode is initially originated from the asymmetric pulse generation on the CPW using ultrashort laser pulses and photoconductive switches. We find that more than two crossover air-bridges are needed to remove the unwanted CSL modes. The parasitic capacitance for the crossover air-bridge over the CPW and the parasitic inductance for the ground connecting air-bridge along the CPW are crucial in determining the signal distortion.

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