

Spurious leaky mode solutions and experimental verification of the second leaky wave

J. Zehentner, J. Machac, J. Mrkvica, P. Vacek and J. Polivka. "Spurious leaky mode solutions and experimental verification of the second leaky wave." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1261-1264 vol.3.

This presents the revelation of spurious leaky mode solutions of the dispersion equation, and experimental confirmation of the occurrence of the second leaky wave on the slotline. The appearance of the spurious improper nonphysical solution instead of the true improper physical mode propagation constant is explained. A spontaneous jump of the dominant bound wave solution to an unwanted higher order bound wave solution is reported. Existence of the predicted second leaky surface wave excited on the slotline has been confirmed in two operation modes by two measuring methods.

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