

Abstracts

On the Existence of Leaky Waves Due to a Line Source Above a Grounded Dielectric Slab

E.S. Cassedy and M. Cohn. "On the Existence of Leaky Waves Due to a Line Source Above a Grounded Dielectric Slab." 1961 Transactions on Microwave Theory and Techniques 9.3 (May 1961 [T-MTT]): 243-247.

The existence of a particular type of leaky wave is verified experimentally. The leaky wave considered is that due to an electric line source above a dielectric slab. Since such a leaky wave cannot exist by itself, it must be detected in the presence of the remainder of the continuous spectrum and often in the presence of a surface wave (or waves). This was done by probing the fields and observing an interference pattern between the leaky wave and the existing surface wave, as predicted by the theory. These results emphasize a need to take leaky waves into account in the design of surface wave components and antennas.

 [Return to main document.](#)