Abstracts

Effects of System Parameter Variations on Microwave Intrusion Detector Performance

C.D. McGillem, H. Bostic, C. Frank, D. Gilbert and F. Hasseld. "Effects of System Parameter Variations on Microwave Intrusion Detector Performance." 1979 MTT-S International Microwave Symposium Digest 79.1 (1979 [MWSYM]): 557-559.

A mathematical model of a microwave fence used for intrusion detection is described. The model includes the effects of ground reflections by employing images of the antennas and of the target. The bistatic radar cross-section of opaque targets is employed with an appropriate directional gain function for bistatic angles near 180°. A comparison of analytical and experimental results is presented for a system operating at 37 GHz.

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