Abstracts

Surface wave enhanced broadband planar antenna for wireless applications

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This letter explores the development of a new class of broadband antenna in which TE/sub 0/ surface-wave is used as the primary source of free space radiation. We demonstrate that antennas based on this concept can be designed to operate over a broad bandwidth, be extremely compact, and can be easily integrated with MIC and MMIC technology. Measurement of return loss and radiation pattern characteristics of the antenna described in this letter indicate a 47% operating bandwidth, covering a large part of the frequency spectrum assigned for U.S. as well as European high-speed wireless local area network (WLAN) applications, making it ideal for integration with WLAN modules.

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