Abstracts

Leaky coaxial cable with adjustable coupling loss for mobile communications in complex environments

Jun Hong Wang. "Leaky coaxial cable with adjustable coupling loss for mobile communications in complex environments." 2001 Microwave and Wireless Components Letters 11.8 (Aug. 2001 [MWCL]): 346-348.

A new kind of leaky coaxial cable composed of an axially-slotted line covered with periodic metallic patches is proposed. The basic cable sets up a surface wave and does not radiate itself, but excites the patch apertures into radiation. The direction of the radiation field can be changed by adjusting the size and period of the patches according to the environmental application. A combined method that involves FDTD iteration and integration of the equivalent surface magnetic current is introduced in order to determine the radiation field accurately.

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