

Abstracts

New type of millimeter wave antenna by using the high permittivity LSE NRD guide

F. Kuroki, M. Yamaguchi, Y. Minamitani and T. Yoneyama. "New type of millimeter wave antenna by using the high permittivity LSE NRD guide." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1205-1208 vol.2.

A technique for construction of a millimeter-wave antenna has been developed based on high permittivity LSE-NRD guide technology. The novelty of the present technique lies in the use of a simple radiator, which consists of tapered dielectric strip with the length of about a guided wavelength and a broad radiation pattern. A new type of fan beam antenna for marine radar use has been fabricated by locating the radiator in the focal point of the cylindrical parabolic reflector. A good fan beam pattern with half-power beam widths of 4 in the horizontal plane and 38 in the vertical plane can be obtained.

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