Abstracts

Fresnel Zone Plate Reflector Incorporating Rings

Y.J. Guo and S.K. Barton. "Fresnel Zone Plate Reflector Incorporating Rings." 1993 Microwave and Guided Wave Letters 3.11 (Nov. 1993 [MGWL]): 417-419.

A novel high-efficiency Fresnel zone plate reflector antenna is presented. The reflector consists of an inhomogeneous array of circular conducting rings printed on a grounded substrate. By adjusting the geometrical parameters of the rings and the distances between them, the reflector provides a space-varying phase correction required for focusing an incoming plane wave. Compared with a phase reversal zone plate, an average of 3-dB gain improvement and significant sidelobe reduction have been obtained.

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