

349. Title:Ultrawideband antenna excited by a photomixer for terahertz band

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Abstract:An end-fire linear tapered slot antenna is presented in the terahertz band. The operation frequency goes from 0.6 THz to 2 THz, with symmetric radiation patterns from 1 THz to 1.7 THz, and gains up to 15 dB. The gaussianity of the beam is over 80% in the whole operation band and an efficiency at 1 THz of 85%. This antenna gives enough directivity avoiding the use of a typical substrate lens, which introduce 30% of losses. This new design is a good candidate for new applications in the THz range in Radioastronomy and Imaging.