Abstracts

A mm-wave tapered slot antenna with improved radiation pattern

S. Sugawara, Y. Maita, K. Adachi, K. Mori and K. Mizuno. "A mm-wave tapered slot antenna with improved radiation pattern." 1997 MTT-S International Microwave Symposium Digest 2. (1997 Vol. II [MWSYM]): 959-962.

We have proposed a new configuration of Tapered Slot Antenna (TSA) with an improved radiation pattern. The new design has a tapered section expressed by the Fermi-Dirac distribution function. At 60 GHz, the H-plane side lobe level of the antenna is 5-dB lower than that of conventional TSA's such as Linearly Tapered Slot Antennas. We also present a new technique for reducing the width of a TSA without degradation of radiation pattern.

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