Abstracts

35 GHz Rectenna Implemented with a Patch and a Microstrip Dipole Antenna

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35 GHz rectennas have been developed using a patch and a microstrip dipole antenna. The power conversion efficiencies from RF to DC were measured as 29% and 39% with an input power of 120 mW. The multi-reflection method developed for the analysis of a mixer was used to analyze the performance of a 35 GHz rectenna using a Ka-band mixer diode. Through this analysis, the effect of the reactive elements of the diode on the efficiency were investigated and the optimum operating circuit conditions and the maximum conversion efficiency were obtained.

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