Abstracts

A novel dual frequency rectenna for high efficiency wireless power transmission at 2.45 and 5.8 GHz

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A dual frequency printed dipole rectenna has been developed at 2.45 and 5.8 GHz: (ISM bands) for the wireless power transmission. For operating at dual band, a new dual frequency uniplanar printed dipole antenna and a novel coplanar stripline (CPS) filter are developed. A device nonlinear analysis is used to select the diode with low junction capacitance to reduce the effect of frequency dependence. The measured conversion efficiencies achieved at free space are 84.4 and. 82.7% at 2.45 and 5.8 GHz, respectively. The measured results agree very well with the theoretical analysis.

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