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A Simple Formula Obtained Using Tabu Search Algorithm for the Radiation Efficiency of a Resonant Rectangular Microstrip Antenna

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Abstract: A new simple formula for the radiation efficiency of a resonant rectangular microstrip patch antenna is presented. The formula is obtained by using a tabu search algorithm, which is a quite new optimization technique based on the principles of intelligent problem solving. The formula is valid for substrates with relative permittivities between 1 and 12.8 and for the complete range of thicknesses normally used. The results obtained by using this new simple formula are in conformity with those reported elsewhere. The formula can also be used in the calculation of the radiation efficiency of dipoles.
Key words: Microstrip antenna, rectangular, radiation efficiency, tabu search

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