

Abstracts

Analysis of a Printed Wire Loop Antenna

*H.A.N. Hejase. "Analysis of a Printed Wire Loop Antenna." 1994 *Transactions on Microwave Theory and Techniques* 42.2 (Feb. 1994 [T-MTT]): 227-233.*

The current distribution and radiation pattern of a printed thin-wire circular loop antenna are computed rigorously using an entire-domain moment method analysis. A computationally efficient algorithm using the FFT is implemented. The input impedance of the loop and the far-zone radiation pattern are computed as a function of the substrate dielectric constant and thickness and as a function of the loop circumference. The space-wave launching efficiency and z-directed power gain of the antenna are also computed as a function of the substrate thickness.

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