

Abstract Submitted
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Fabrication and characterization of rectangular thin film planar loops for transformer applications GREGORY A. TOPASNA, DANIELA M. TOPASNA, FRANK R. POWELL, Virginia Military Institute — This study focuses on optimizing the configuration and performance of a thin film planar loop that is flux linked to a short straight wire. Our calculations for the mutual inductance show its dependence on the geometry of the planar loop as well as on its location relative to the wire. We have fabricated and characterized various geometries and compared the data to the solutions predicted by our model. These results are used in designing the next generation of devices which will incorporate magnetic nanoparticles.

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