Abstracts

Field and Energy-Density Profiles in Layered Superconductor-Dielectric Structures

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The electromagnetic field profiles, energy densities for some layered superconductor-dielectric structures are calculated. Of particular interest is the situation when the superconducting film is thinner than the superconducting penetration depth. In these cases the primary energy storage mechanism in the superconductor is the inertial energy stored in the superconducting current rather than the magnetic field. An understanding of the arrangement of electromagnetic fields in layered superconductor-dielectric structures will aid in the development of circuits, devices which utilize these properties.

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