Abstracts

A Discussion of Rotating Wave Fields for Microwave Applications

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Traveling wave and standing wave fields are central to microwave applications. This paper discusses a third category of fields: "rotating waves" which, while ocassionally utilized in the past, are not commonly used or understood. Rotating waves are composed of a particular linear combination of standing waves, but have field profiles more similar to traveling waves. A rotating wave can be pictured as a frozen field rotating in space. An analysis is presented of rotating waves in cylindrical cavity resonators. The TM/sub 110/ rotating mode for a cylindrical resonator is discussed in some detail.

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