

Abstracts

Noise temperature of a lossy flat-plate reflector for the elliptically polarized wave-case

T.Y. Otoshi and C. Yeh. "Noise temperature of a lossy flat-plate reflector for the elliptically polarized wave-case." 2000 Transactions on Microwave Theory and Techniques 48.9 (Sep. 2000 [T-MTT] (Mini-Special Issue on Research Reported at the 8th Topical Meeting on Electrical Performance of Electronic Packaging (EPEP) 1999)): 1588-1591.

This paper presents the derivation of equations necessary to calculate noise temperature of a lossy flat-plate reflector. Reflector losses can be due to metallic surface resistivity and multilayer dielectric sheets, including thin layers of plating, paint, and primer on the reflector surface. The incident wave is elliptically polarized, which is general enough to include linear and circular polarizations as well. The derivations show that the noise temperature for the circularly polarized incident wave case is simply the average of those for perpendicular and parallel polarizations.

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