Abstracts

Reflection by a Sinusoidally Modulated Surface Reactance at Oblique Incidence

S.R. Seshadri. "Reflection by a Sinusoidally Modulated Surface Reactance at Oblique Incidence." 1981 Transactions on Microwave Theory and Techniques 29.6 (Jun. 1981, Part I [T-MTT]): 594-600.

The reflection characteristics of the TM and the TE surface waves by a weak sinusoidal modulation of the surface reactance are investigated for the oblique incidence in which the wavevectors are not aligned with the grating vector. A superposition of TM and TE wave fields is needed for the fulfillment of the required boundary conditions. For both the TM and the TE surface waves, the Brewster phenomenon of total transmission occurs at the angle of incidence theta=theta/sub B/ = 45°. A modulation in the surface reactance, in general, causes the TE surface waves to be more efficiently reflected than the TM surface waves.

❑ Return to main document.