Abstracts

Performance Predictions for Isolators and Differential Phase Shifters for the Near-Millimeter Wave Range

S.H. Talisa and D.M. Bolle. "Performance Predictions for Isolators and Differential Phase Shifters for the Near-Millimeter Wave Range." 1981 Transactions on Microwave Theory and Techniques 29.12 (Dec. 1981 [T-MTT] (1981 Symposium Issue)): 1338-1343.

An analytical and numerical study is presented for a five region planar canonical structure modeling quasi-optical integrated surface magnetoplasmon based nonreciprocal devices for the near-millimeter wave range. The model includes a slab of a high quality semiconducting material, such as n-GaAs, magnetized parallel to its surfaces and perpendicular to the direction of propagation. The analysis performed is exact. Sample results show the possibility of acceptable performance for isolators over a bandwidth of 45 GHz in the 500-GHz range and of differential phase shifter design over a bandwidth of 65 GHz in the 380-GHz range.

❑ Return to main document.