Abstracts

Ferroelectric Phase Shifters for VHF and UHF (Nov. 1962 [T-MTT])

M. Cohn and A.F. Eikenberg. "Ferroelectric Phase Shifters for VHF and UHF (Nov. 1962 [T-MTT])." 1962 Transactions on Microwave Theory and Techniques 10.6 (Nov. 1962 [T-MTT]): 536-548.

The analysis, construction, and performance of compact surface wave ferroelectric phase shifters suitable for operation in the 100-to 1000-MC frequency range are described. Although this ferroelectric loaded parallel-plane structure is a very low impedance structure, a satisfactory terminal impedance matching technique has been devised. Kilovolt level voltages are needed; but since the current required to maintain or rapidly shift phase is low, the overall control power requirements are at least an order of magnitude less than those for comparable ferrite phase shifters. One of these room temperature operable phase shifters provided 348° of phase shift at 207 Mc. It had an insertion loss which varied from 3.7 to 2.2 db over a zero- to 4000-volt range of applied dc control voltage.

❑ Return to main document.