

# Abstracts

## Investigations of Broad-Band, Linear Phase Shifters Using Optimum Varactor Diode Doping Profiles

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*R.K. Mains, G.I. Haddad and D.F. Peterson. "Investigations of Broad-Band, Linear Phase Shifters Using Optimum Varactor Diode Doping Profiles." 1981 Transactions on Microwave Theory and Techniques 29.11 (Nov. 1981 [T-MTT]): 1158-1164.*

The problem of obtaining linear phase shift of microwave signals over a broad frequency range and its dependence on varactor properties is addressed. An important application of the linear phase shifter, the microwave frequency translator, is investigated in detail and various circuit configurations and varactor doping profiles are examined relative to their performance including suppression of undesired frequency components and bandwidth. Hyperabrupt or Read-type varactor diodes are found to be very useful in this application.

 [Return to main document.](#)