# Abstracts

## Application of ferroelectrics in phase shifter design

*A. Kozyrev, V. Osadchy, A. Pavlov and L. Sengupta. "Application of ferroelectrics in phase shifter design." 2000 MTT-S International Microwave Symposium Digest 00.3 (2000 Vol. III [MWSYM]): 1355-1358.*

The theoretical aspects of the design of optimal construction of microwave ferroelectric phase-shifter are discussed. The 30 GHz phase-shifter based on grounded coplanar waveguide with layered structure is under investigation. As a result expressions to determine the optimal construction of CPW ferroelectric phase-shifter and the suitable composition of ferroelectric film are derived. Continuous 0-360 degree phase shift and maximum insertion losses of 8 dB have been experimentally demonstrated by Ka-band ferroelectric phase-shifter. Further optimization of suitable ferroelectric film composition and phase-shifter sizes makes it possible to achieve a figure of merit /spl sim/80 deg/dB.

❑ Return to main document.