Abstracts

A Waveguide Reciprocal Latching Ferrite Phase Shifter

I. Bardash and J.J. Maune. "A Waveguide Reciprocal Latching Ferrite Phase Shifter." 1968 G-MTT International Microwave Symposium Digest and Technical Program 68.1 (1968 [MWSYM]): 274-281.

The development of the non-reciprocal latching ferrite phase shifter may be considered to be one of the major factors in the realization of phased array radar systems. Its non-reciprocal characteristics however make it impractical for use with certain systems such as high p.r.f. and short range radars. A waveguide reciprocal latching ferrite phase shifter has been developed for use at C-band and X-band frequencies which has many of the attractive properties of its predecessor plus reciprocity. Several types of reciprocal latching ferrite phase shifters have been built in the past. The one that will be described here consiets of a longitudinally magnetized ferrite double toroid centrally located in waveguide. Low loss, low reflection operation is achieved by utilizing flux-transfer magnetization and relying on the minor hysteresis remnant properties of the ferrite for maintaining the applied phase settings.

❑ Return to main document.